

イラン・イスラム共和国  
職業訓練庁 (TVTO)

# イラン国 職業訓練管理強化プロジェクト

業務完了報告書（第3年次）／  
プロジェクト事業完了報告書

平成 23 年 1 月  
(2011 年)

独立行政法人  
国際協力機構 (JICA)

株式会社 パデコ

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## プロジェクト対象地位置図





TVTC を訪問するプロジェクトチーム



第一回パイロット訓練コース



第一回パイロット訓練コース



指導員訓練



第一回修了者への証書授与式



第一回コースのフォローアップ調査



第二回パイロット訓練コース



産業別訓練諮問準備委員会会議

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## 略 語

略語	英語表記	日本語表記
CBT	Competency Based Training	CBT（コンピテンシー・ベースト・トレーニング）
CDC	Curriculum Development Center	カリキュラム開発センター
GOI	Government of Islamic Republic of Iran	イラン・イスラム共和国政府
IRG	Industry Reference Group	産業別訓練諮問準備委員会
ITC	Instructor Training Center	指導員訓練センター
JCC	Joint Coordinating Committee	合同調整委員会
JFY	Japanese Fiscal Year	日本会計年度
JICA	Japan International Cooperation Agency	国際協力機構
JPT	JICA Project Team	JICA プロジェクトチーム
KOICA	Korean International Cooperation Agency	韓国国際協力団
M&E	Monitoring and Evaluation	モニタリング評価
PDM	Project Design Matrix	プロジェクト・デザイン・マトリクス
TVT	Technical and Vocational Training	職業技術訓練
TVTC	Technical and Vocational Training Center	職業訓練センター
TVTO	Technical and Vocational Training Organization	職業訓練庁
UOC	Unit of Competence	コンピテンシー単位



## 要 約

イラン・イスラム共和国は、若年層の高い失業率が社会問題化している。これに対して同国は「第4次（2005～2009年）経済社会文化開発計画（国家開発5ヶ年計画）」にて、資源依存型の国家経済から脱却し、労働者の技能水準の国際レベルへの引き上げや、現行の職業技術訓練（TVT）メカニズムを改革して若年層の雇用機会創出に結び付けるべきとしている。労働社会問題省（MOLSA）傘下の職業訓練庁（Technical and Vocational Training Organization: TVTO）は、職業訓練（TVT）の計画実施及び国際水準の技術資格制度の推進を任務とし、全国に549ヶ所の技術訓練センター（Technical and Vocational Training Center: TVTC）を擁し、年間約180万人（直営と管轄下の民間訓練センターの合計）に対して職業訓練を行う。このようなTVTOの重要性を鑑み、イラン政府はJICAに組織運営の改善、中でも労働市場ニーズに対する迅速・柔軟性を高めるための技術支援を国際協力機構（Japan International Cooperation Agency: JICA）に要請した。2007年4月に討議議事録（Record of Discussion: R/D）、議事録（Minutes of Meeting: M/M）が締結署名され、これに基づき、2008年11月JICAはJICAプロジェクトチーム（技術協力プロジェクトチーム：JPT）を派遣した。

本報告書はこの技術協力「イラン職業訓練管理能力強化プロジェクト」のイランにおける協力期間（2008年11月から2010年12月）において達成された現地作業内容とその過程、成果について報告するものである。報告書はプロジェクト概要（第1章）、投入実績（第2章）、プロジェクトの活動（第3章）、プロジェクトの成果（第4章）に基づき、今後の対応についての提言（第5章）、関連資料はまとめた別添の構成となる。

### 第1章 プロジェクト概要

当初計画（PDM ver.0）では、上位目標に「特に若年層及び女性の失業率が改善される」、プロジェクト目標として「TVTOの訓練マネジメントサイクルが改善される」が据えられていた。これに対しJPTは、コンピテンシー・ベースト・トレーニング（CBT）の導入を実施方針として提言し、2008年12月にTVTOに承認された。

イランの職業訓練は、現在は訓練提供側が訓練内容を設定する供給主導型であり、これが産業界のニーズとミスマッチを起こしている。こうしたミスマッチを避けるため、このCBTシステムでは関連する産業界と職業訓練セクターの代表から成る委員会を設置して、コンピテンシー基準を共同開発することを基本とする。これはCBTが、訓練生は必要なコンピテンシー（知識と技術）を効果的に身につけて職能をすみやかに発揮することができる、「職務志向（job-oriented）」な訓練であるべきとの概念に拠る。またCBTで実施する技能アセスメントでは、その訓練生が、産業界が求める水準での、必要な知識と技術に習熟したかが要諦となる。CBTは既に、オーストラリア、カナダ等各国で展開されている。

プロジェクトはそのPDMはプロジェクト期間中に二度改変し、また度重なるイラン側実施体制の変更に見舞われたが、この実施方針としてのCBT導入はイラン側に支持され続けた。当初、TVTO本部訓練局を担当局としTVTC第四訓練センターをパイロットコース実施場所としたが、プロジェクト終了時には担当局は調査計画局、パイロット実施場所はカラジ市の指導員訓練センター（ITC）となった。

## 第2章 投入実績

二年間のプロジェクト期間で、日本、オーストラリア 2 か国計 7 名の技術協力専門家が現地作業と国内作業合わせて 68.9 人月投入された。TVTO からのカウンターパート(CP)は、度重なる実施体制変更のために総計 29 人となったが、3 名の自動車整備分野指導員が、2 年間を通して CP であり続けた。合同調整委員会 (JCC) 会議を含めた会議記録 (議事録は別添 K)、プロジェクト実施に係った現地経費、機材調達実績も本章に記載する。

## 第3章 プロジェクトの活動

CBT の導入に必要なマニュアル (別添 N) を作成し、将来的な全国展開計画 (第 5 章) を提案することを念頭に置き、2 年間の活動を行った。

プロジェクトでは基幹活動として、自動車修理・整備分野のパイロット訓練コースを 2 回実施したが、その礎として、これまで CBT の概念に触れたことがない TVTO 職員に対して CBT 導入ワークショップを開催した。当初、導入ワークショップはプロジェクト開始時に 1 度実施する予定であったが、実施体制変更のたびに開催することとなった。プロジェクト期間を通して CP となった 3 名の自動車整備指導員はこの第一回ワークショップに参加し、基礎を築いた。

二回のパイロット訓練コースを実施するためのニーズ調査をするにあたり、イランの自動車修理・整備産業界の人材と産業別訓練諮問準備委員会 (IRG) を設置し、全協力期間中計 7 回の全体会議や個別インタビュー、企業訪問などを実施した。パイロット訓練コースが企業ニーズに適った設計となるよう適切な助言を IRG メンバーから得る為、メンバーの選抜は企業規模や職務経験など様々の点を考慮して行った。このニーズ調査では、他国 (オーストラリア) が既に開発済みの訓練基準と訓練カリキュラムを導入して、それをイラン国に合わせて適格化することによって人・資金の節約をするファストトラックアプローチが採用された。

コースの実施準備から実施までは、CBT での自動車整備・修理コース実施経験豊富なオーストラリア人の自動車整備専門家が指導にあたった。またこのコース運営のモニタリング・評価をモニタリング・評価専門家の指導の下に CP が行い、コースの継続改善モデルの開発を行った。特に第二回コースの準備・実施では、関連企業 (自動車整備部門) 代表との協力関係強化が大きな成果であった。指導員による会議、企業訪問、インタビューなどを、年間を通じた定期的な働きかけにより IRG の各メンバーは CBT アプローチに関する理解を深め、カリキュラム開発等に適切かつ有効な助言を發揮した。また、パイロット訓練コース期間中の企業内実習の機会を 2 社から 3 週間に亘って提供され、訓練生にも高い評価を受けた。なお、この第二回パイロット訓練コースでは、オーストラリアの自動車整備 2 号資格に必要な 21 のコンピテンシー単位のうち 10 単位を対象としてコースを実施し、残る 11 単位についての完成を、第 5 章では提案している。

本章最終節では、活動を通じた教訓を幾つか紹介する。

#### 第4章 プロジェクトの成果

プロジェクトの円滑な運営及びプロジェクト終了後の持続性の双方の観点から、カウンターパートへの技術移転は技術協力プロジェクトにとって重要であるため、第3章の活動を通してカウンターパートが何をできるようになったかを記載する。

プロジェクト終了直前の2010年11月には終了時評価が行われたが、協力相手機関からは課題は残すものの全般に肯定的な評価を得た。第二回パイロット訓練コースで完了できなかった残る11単位についての完成を第5章では提言の一部としているが、終了時評価後にこれの一部が既に実施機関（ITC）により開始されており、それを簡単に紹介する。

#### 第5章 今後の対応についての提言

CBTアプローチを採用する場合の改革へのロードマップを段階別（開発期、パイロット期、本格実施期）に示した。各期間は平均2年間と想定して2011年から2023年までの全体像を、続いて各普及ステップと組織体制について提言している。具体的には、まず初めにオーストラリアの自動車整備修理訓練パッケージ2号資格相当のカリキュラム開発と導入を完成させる。続いて同3～5号の開発・実施を行う。この後、優先度の高い職業訓練分野の資格から順に開発・実施を行う、といった内容である。この計画を実現させるための必要要件として、他国の訓練基準を参照し基準策定のプロセスをショートカットで行うファストトラックアプローチ、資格制度の統合、コース実施の品質保証、指導員の能力強化、について指摘した。

以上のプロジェクトプロセスやその成果、教訓・提言内容については、マニュアル（別添N）披露会や第三回合同調整委員会（JCC）、その他のセミナー・ワークショップ、ビデオ番組作成等の機会を通して、TVTO側の様々なレベルのカウンターパート（管理職、専門家、指導員）に対して繰り返し説明を行った。



## はじめに

イラン・イスラム共和国（以下「イ」国）は、平均年齢 24.7 歳で人口の 40%が 15 歳以下という、極めて若年人口が多い人口構成となっており、近年漸増傾向にある高い失業率が社会問題化している。同国はイラン革命（1979 年）以後の 1980 年代に出生率が急激に上がり、その後 1990 年前半より家族計画政策に一転し人口増加率の大幅な減少（1986 年の 3.1%から 2005 年の 1.4%）に功を奏したものの、若青年層の就労は政策課題となっている。イラン統計局発表によれば、2008 年の全体失業率が 9.6%、中でも若年層（15～24 歳）の失業率は 20.3%（なお 2010 年時点で全体失業率は 12.9%に増悪）と特に高い。

「第 4 次（2005～2009 年）経済社会文化開発計画（国家開発 5 ヶ年計画）」にて、イラン政府は資源依存型の国家経済から脱却して「国際経済との相互作用の中でも知識ベースの経済成長を遂げる」ことを冒頭に掲げている。計画は、安定したイラン経済を構築するためにも人材育成は重要課題であるとし、イラン労働者の技能水準の国際レベルへの引き上げや、現行の職業技術訓練（TVT）メカニズムを改革して若年層の雇用機会創出に結び付けるべきとしている。

労働社会問題省（MOLSA）は高い失業率への対策という観点から、①若年層を対象とした雇用機会の創出、②失業率の低減（2009 年までに 8.4%まで下げるという目標）、③低所得者層のための職業訓練プログラムの構築を掲げている。

職業訓練庁（Technical and Vocational Training Organization: TVTO）は労働社会問題省傘下の政府機関として、職業訓練（TVT）の計画実施及び国際水準の技術資格制度の推進を任務としている。報告によれば全国に 588 ヶ所の技術訓練センター（Technical and Vocational Training Center: TVTC）を擁し、年間約 180 万人（直営と管轄下の民間訓練センターの合計）に対して職業訓練を行う。このような TVTO の重要性を鑑み、イラン政府は JICA に組織運営の改善、中でも労働市場ニーズに対する迅速・柔軟性を高めるための技術支援を要請した。

JICA は TVTO の協力の下、事前評価調査及び関係者との協議を実施した。調査結果を踏まえて両機関はマスタープラン、実施体制、職掌について合意し 2007 年 4 月には討議議事録（Record of Discussion: R/D）、議事録（Minutes of Meeting: M/M）が締結署名された。この合議内容に基づき、翌 2008 年 11 月 JICA は JICA プロジェクトチーム（技術協力プロジェクトチーム）を派遣した。

本報告書は本案件のイランにおける技術協力期間（2008 年 11 月から 2010 年 12 月）において達成された現地作業内容とその過程、成果について報告するものである。





## 第1章 プロジェクト概要

本章では、プロジェクト・デザイン・マトリクス (PDM) にある当初計画の概要、想定された成果、実施体制、実施方針等のプロジェクト全容について概観する。当初計画である PDM バージョン 0 の内容は、TVTO 側からの要請により日本の評価団との合議の末、2 度改訂されており、この変更についても詳説する。また、当初の作業スケジュールと実際の工程との比較も行う。

### 1.1 プロジェクト・デザイン・マトリクス (PDM Version 0) の概要

本プロジェクトはイラン、日本両政府の 2007 年 4 月の協力合意に基づいて計画実施されている（合意文書のうち、R/D は別添 A、M/M は別添 B 参照）。PDM バージョン 0 の内容を以下に要約する（バージョン 0 全体については別添 C 参照）。

#### プロジェクト期間と実施地域

プロジェクト期間は 2008 年 11 月から 2010 年 12 月までの 2 年 1 ヶ月とし、イラン政府がプロジェクト終了後に実施可能なモデルを開発する計画であったので、対象地域は一義的にはテヘランであるが全イランを想定した。これはテヘランでの教訓が全地域に適用可能であるとの仮定に基づく。

#### プロジェクト目標

(1) 上位目標：特に若年層及び女性の失業率が改善される。

プロジェクトゴールはプロジェクト終了後 3～5 年以内に実現しうるであろう達成事項である。バージョン 0 ではこのゴールを「特に若年層及び女性の失業率が改善される」と設定し、失業率の改善が本ゴールの達成検証指標とされている。

(2) プロジェクト目標：TVTO の訓練マネジメントサイクルが改善される。

#### プロジェクト成果

プロジェクト成果として設置されたのは以下の四項目である。

成果 1： TVTO が労働市場の訓練ニーズをより効果的に調査できる

成果 2： TVTO が労働市場のニーズ分析の結果を下にして、訓練コース基準とカリキュラムを開発・再検討・改正が出来る

成果 3： TVTO がモニタリング評価システムの改善をする

成果 4： TVTO がパイロット訓練コースの検討を元にして運営改善計画を策定する

プロジェクト全期間（26 ヶ月）を日本政府の会計年度<sup>1</sup>に合わせて3年次に分割した。終了は当初計画通り、2010年12月である。

- ✓ 初年次：2008年11月 - 2009年3月
- ✓ 第2年次：2009年5月 - 2010年3月
- ✓ 第3年次：2010年5月 - 2010年12月

## 1.2 実施方針（CBTアプローチ）

JICA プロジェクトチーム（JICA Project Team: JPT と以下略す）は前節で述べたプロジェクトゴール達成のためのアプローチとしてコンピテンシー・ベースト・トレーニング（Competency Based Training: CBT と以下略す）を導入した。

職業訓練セクターにとって世界各国で共通な課題とは、産業セクターの就職ニーズに合致した職業訓練をどうやって提供するか、という点である。

産業技術の急激な変化に伴い、（公的）職業訓練システムは（未熟練の）新卒者・新規就職者にとってだけでなく、現職・熟練者の技能向上にも対応するような訓練の提供が求められている。しかし実際には、このような訓練コースの設計や実施には幾つかの理由で非常な困難を伴う。何よりもまず、効果的な職業訓練とは需要・ニーズ主導型であるべきである。つまり、訓練基準は産業界が必要とする内容であるべきで、イランで現在行われているように訓練提供側が（一方的に）設定する供給主導型であってはならない。

産業界との具体的な協議なしに訓練基準を定めてしまうのではなく、産業界の適切な人材が、訓練機関の人員と緊密に連携し、訓練基準や就職に真に必要なとされる資格認証の設定などについてまとまった助言を行う必要がある。つまり、産業界が継続的かつ積極的に訓練機関と協力をを行い、訓練のデザインから実施に至る枠組みを構築するべきである。

「需要主導（産業界志向）」の実現が困難なもう一つの理由は、産業界が必要とするコンピテンシー及び技能水準を満たすだけの高い能力を備えた指導員や資機材の不足があげられ、またそれに伴う財源の確保も課題となる。

CBT は既に、オーストラリア、カナダ、イギリス、アイルランド、シンガポール、ニュージーランドなど各国で展開されている。CBT が職業訓練を実施するための最も有力かつ有効なアプローチであると一般に理解されているのは、特に職業ニーズとの相関性が高いためである。現在ではほとんどの産業セクターで採用されている。

CBT においては、訓練生は必要なコンピテンシー（知識と技術）を効果的に身につけて職能をすみやかに発揮することができる、「職務志向（job-oriented）」な訓練だとも言える。また CBT で実施する技能アセスメントでは、その訓練生が、産業界が求める水準での、必要な知識と技術に習熟したかが要諦となる。

訓練提供側と産業界のミスマッチを避けるため、CBT システムでは関連する産業界と職業訓練セクターの代表から成る委員会を設置して、コンピテンシー基準を共同開発する。公的・私立・産業界立を問わず、訓練機関は、訓練基準（コンピテンシー単位とも呼ばれる）を満たす為に、国家機関からの認証を満たすカリキュラム（訓練リソース）開発やその他の要件の整備をする必要がある。

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<sup>1</sup> 日本国政府の会計年度は4月開始、3月締めである。

訓練生が特定のコンピテンシー単位（訓練モジュール）を習得するために必要な時間数について、CBTアプローチは柔軟であり、これは訓練機関にとっても訓練生にとっても有益である。（時間数が資格取得のための必須条件でないため）CBTシステムは現職者が在職しながらにして最新の技能を修得するのにも適している。

コンピテンシー単位は複数の産業界にまたがるごく共通なものから非常に特殊なものまで幅広くある。例えばオーストラリアは、CBTアプローチを早くから導入した成功例とされているが、同国では、コミュニケーション技術のようなコンピテンシーがどの訓練コースにもあり、基礎製図関連のコンピテンシーはどの工業訓練コースにも入っている。これら共通コースは職業訓練実施機関によって提供される一方、先進的で高価な機材を使う非常に特殊なコンピテンシーは産業界が提供している。官民連携により、官民全体での職業訓練費用を減らし、柔軟な職業訓練システムを実現している。

職業訓練提供側がCBTシステムを構築する、即ち産業界との協力関係を結ぶ利点を要約すると：1) 産業界のニーズに沿った訓練基準を開発することができる；2) 訓練用の資機材を常に自前で買い替えなければならないコストが削減でき、3) 企業協力が得られれば最新型の資機材を使用した訓練が実施可能となる、4) 企業から指導講師を招いて最新の知識・技能を研修に組み込むことが可能となる、などである。他方、企業にとってCBTシステム構築に協力する利点として：1) 採用前から、訓練生の能力を把握でき優秀な人材発掘を行うことが可能、2) 雇用者の能力開発の自社負担コストを低減できる、3) 社のブランドイメージの向上、などが挙げられるだろう。

以上の観点から、JPTはプロジェクト開始当初に、イランの職業訓練システム改善のために最適な方法はCBTアプローチであると提言し、2008年12月にTVTOがこれを承認した。

### 1.3 プロジェクト・デザイン・マトリクス (PDM) 改訂

PDMは計2回（中間レビュー調査<sup>2</sup>時及び終了時評価<sup>3</sup>時）改訂された。2007年作成の初版であるバージョン0（別添C）は中間レビュー時にバージョン1（別添D）となり、実態に即した内容に改訂され、また数値を定めていなかった指標を設定した。これが再度、終了時評価時にバージョン2（別添E）へプロジェクトの状況に照らして改訂した。主な修正項目について表1.1に示す。また中間レビュー調査団議事録は別添Fに、終了時評価議事録は別添Gに所収した。

<sup>2</sup> 中間レビューは2009年12月6日より16日までの期間でイランでの現地調査を行った。

<sup>3</sup> 終了時評価は2010年10月24日より11月2日まで、現地調査を行った。

表 1.1 プロジェクトゴール及び成果の改訂

項目	PDM Ver.0	PDM Ver.1	PDM Ver.2
上位目標			
要約	特に若年層及び女性の失業が改善される	労働人口における国家職業資格保有者の改善	CBT手法が職業訓練庁（TVTO）の訓練体系の基礎となる <sup>4</sup>
指標	特に若年層及び女性の失業率が改善される	労働への参加率改善	1. ベルシア語版 CBT マニュアルの発行 2. 各 TVTC 代表（中核指導員）が TVTO による CBT 訓練コースを受講する
プロジェクト目標			
指標	1. パイロット訓練コースがフェーズ1終了までに X 回計画・実施される	1. パイロット訓練コースがフェーズ1終了までに 2 回計画・実施される	
成果 1			
指標	1-2. 訓練ニーズ調査手法の改定計画の開発	1-2. 訓練ニーズ調査手法の改訂.	
指標入手手段	1-2. 計画の改訂	1-2. 訓練ニーズ調査マニュアルの開発	
成果 2			
要約	TVTO が労働市場ニーズ分析の結果に基づき、訓練コース基準・カリキュラムを開発・検討・改定をする	TVTO が産業界からの訓練要求に基づき、訓練コース基準・カリキュラムを開発・検討・改定をする	
指標	2-1. X 回分の訓練コース基準・カリキュラムが試行用に改定される 2-2. X 回分のパイロット訓練コース計画が開発される	2-1. 訓練ニーズ分析に基づきパイロット訓練コースの技術分野が選択される 2-2. 訓練コース基準／カリキュラムが試行用に開発される 2-3. パイロット訓練コース計画の開発	
指標入手手段	2-1.改訂された基準・カリキュラム 2-2.パイロット訓練コース計画	2-1. アセスメント報告書 2-2. 改訂された基準・カリキュラム 2-3. パイロット訓練コース計画	
成果 3			
指標	3-1.訓練モニタリング評価ガイドラインの開発	3-1.訓練モニタリング評価マニュアルの開発	
指標入手手段	3-1.モニタリング評価ガイドライン	3-1.モニタリング評価マニュアル	
成果 4			
要約	TVTO がパイロット訓練コースのレビューに基づき管理改善計画を開発	TVTO が産業界の訓練要求に基づいて訓練コース基準を開発・レビュー・改定する	

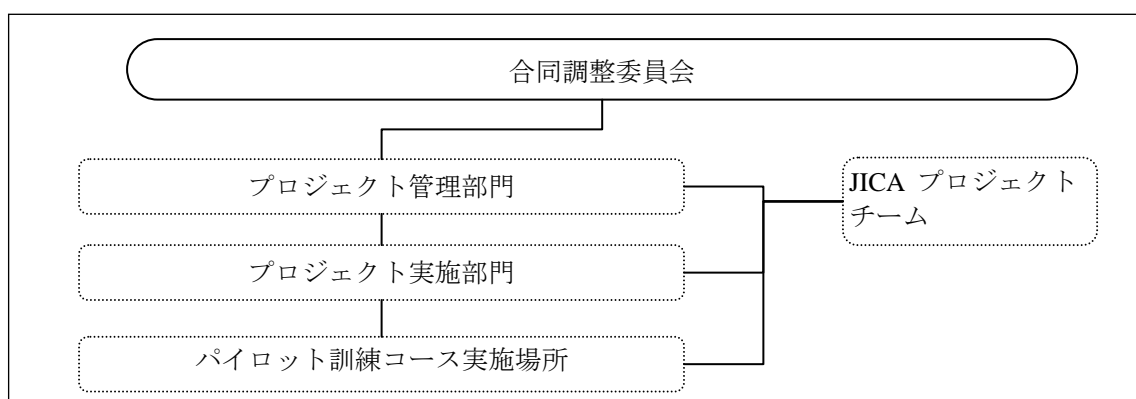
出典：PDM を元に JICA 専門家チームが作成

<sup>4</sup> CBT 手法はあくまでも手段であり、目的は産業界のニーズを反映した訓練を実施する訓練管理サイクル（労働市場のニーズ情報の収集、労働ニーズを踏まえたカリキュラムと教材の開発、訓練の実施、訓練実施後のモニタリング・評価と訓練への反映）の確立にある。

## 1.4 プロジェクト実施体制

プロジェクト実施体制は図 1.1 に示すとおり。合同調整委員会 (JCC) は、プロジェクト実施に関して最高位の意思決定機関である。JCC の議長は、TVTO 内の本プロジェクトの管理部門局長が努めた。その他、関連局の局長クラスが JCC の構成員であった。

担当局の変更や局長その他の人事異動等に伴い、実施体制の構成員は複数回にわたり変更された。表 1.2 は、協力期間中に発生した、担当局等プロジェクトを主管した部局の変遷を示している。



出典：JICA プロジェクトチーム

図 1.1 プロジェクト実施体制

協力期間中の変更のうち主要なものは、2年次（2009年4月）と3年次（2010年6月）にそれぞれ下された TVTO 長官令である。一点目は、プロジェクト主管を訓練局から調査計画局に移管するとの変更であった。二点目は、プロジェクト実施場所をテヘランからカラジ州にある指導員訓練センター (ITC) に移動するという措置であった。特に二点目が通知された時点で、プロジェクトは既に最終年次を開始して1ヶ月経っていたため、JPT はこのような終盤期において移転することで想定されるリスク・遅延等を説明したが、協議を重ねた結果、6月20日付で両者は条件付で覚書を交わした（別添 H 参照）。

表 1.2 プロジェクトを主管した担当局／者／実施機関の変遷

時期	長官	担当局	担当局長 (プロジェクト マネジャー)	実施機関	実施機関監督責任	パイロット コース実施 場所	プロジェクト事務所
2008年11月	Mr. Sharif	訓練局	Mr. Chaharband (訓練局長)	訓練局	Mr. Hatamzadeh (訓練局)	TVTC 第4 センター	TVTO 訓練局
2009年4月		調査計画局	Mr. Saberi (調査計画局長)	定めず	定めず		TVTO 調査計画局
2009年5月				カリキュラム 開発センター (CDC)	Mr. Azad (CDC 総裁)		TVTO 調査計画局 + TVTC 第4センター
2009年12月	Mr. Parviz	Dr. Ghofrani (調査計画局長)	指導員訓練 センター (ITC)		Mr. Farah Abadi (CDC 総裁代行)	ITC	ITC
2010年4月				Dr. Khanifar (CDC 総裁)			
2010年6月				Mr. Teimoori (ITC センター長)			
2010年7月	Mr. Pourabbas						

CDC : カリキュラム開発センター / ITC : 指導員訓練センター (カラジ州)

出典 : JICA プロジェクトチーム

## 1.5 技術成果品一覧

プロジェクトは以下に掲げる技術成果品を協力期間中に開発作成した。

- ✓ CBT カリキュラム策定・実施に関する導入プログラム（概論）
- ✓ 第一回パイロット訓練コースの訓練ニーズアセスメント調査結果報告書
- ✓ 第二回パイロット訓練コースの訓練ニーズアセスメント調査結果報告書
- ✓ CBT マニュアル（これは、訓練基準開発マニュアル、訓練実施マニュアル、訓練コースモニタリング・評価マニュアルで構成される）
- ✓ 両パイロット訓練コースのワークブック

## 1.6 PDMに基づく実施計画

当初計画と活動実績の比較チャートを 図 1.2 に掲げる。

	JFY2008												JFY2009												JFY2010											
	2008												2009												2010											
	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											
General events																																				
JCC meeting				▲												▲										▲										
JICA mission			▲Project Survey											▲Mid term review												▲Terminal Review										
			xcancelled																							▲										
Training Cycle																																				
Training needs assessment		■	■																																	
Planning							IRG①②③						IRG4 IRG5																							
Preparation																																				
Curriculum development (general)																																				
Curriculum development (subject)																																				
Instructors-training																																				
Delivery																																				
Training Course																																				
Internal monitoring																																				
External monitoring																																				
Assessment of students																																				
Evaluation																																				
Course-Completion Evaluation																																				
Followup Survey																																				
Report																																				
Inception Report		▲																																		
Progress Report		▲		▲										▲																						
Monthly Report (E)			▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲	▲										
Annual Report																										▲										
Technical Output																																				
1. Manual of training needs assessment and analysis			Draft																							Final										
2. Manual of Development and Delivery of CBT Curriculum			Model Plan																							1st Draft		2nd Draft								
3. Sample materials of pilot training course				Draft																								2nd Draft								
4. Manual of monitoring and evaluation																											Training Resc	2nd Draft								
5. Plan of strengthening management of TV-TO				Draft																								Final	2nd Draft							
																													Final							
																													2nd Draft							

出典：JICA プロジェクトチーム

図 1.2 活動実施計画と実績（比較）

## 第2章 投入実績

本章ではプロジェクト実施に要した資金・資機材等、イラン・日本両政府からの投入についてまとめる。イラン政府からのコスト負担は主にパイロット訓練コース実施に関する出費である。

### 2.1 要員の投入

#### JICAプロジェクトチームの投入

JICA プロジェクトチーム (JPT) は 8 名で構成されている。各専門家の担当業務と氏名を表 2.1 に示す。同表では、2008、2009、2010 年度における、各専門家の作業日数を示す。各年度の左欄は旅程も含む現地作業日数を、括弧 ( ) で囲われた右欄はイラン国外での作業日数を示す。

表 2.1 JICA プロジェクトチーム構成 (専門家)

番号	担当業務	氏名	作業日数		
			2008 年度	2009 年度	2010 年度
1	総括	本村 雄一郎	36 (3)	38 (10)	29 (6)
2	副総括／職業訓練管理 1	南雲 達也	90 (3)	154	120 (1)
3	職業訓練管理 2	服部 (石丸) 奈加子	65	100	117 (1)
4	訓練ニーズ評価・分析	石橋 徹	97 (5)	78 (3)	86 (4)
5	訓練モニタリング・評価	斉藤 州紀	80 (5)	218 (3)	131 (4)
6	訓練基準・カリキュラム ／自動車整備	ケビン・ジャクソン	0	140 (6)	
7	訓練基準・カリキュラム ／自動車整備	エドワード・デガブリエル			135 (4)
8	訓練基準・カリキュラム ／CBTアドバイザー <sup>5</sup>	ビビアン・ロジャー ・デジルワ	80 (5)	100	110
		小計	448 (21)	828 (22)	728 (20)
		合計	469	850	748

出典：JICA プロジェクトチーム

#### 現地要員の採用

表 2.2 は、プロジェクトが 1 ヶ月以上雇用した現地要員の一覧である。

<sup>5</sup> なお、当該専門家は 2009 年度以降は傭人費にて対応した。



表 2.2 現地要員一覧

プロジェクトでの職位	氏名	形態	開始	終了
業務アシスタント	Ms. Bahar HAMZEHPUR	常勤	2008年12月	2009年3月
業務支援アドバイザー	Mr. Parviz IMANI	常勤	2008年12月	2010年12月
通訳・翻訳	Ms. Maryam AKBARI	常勤	2009年1月	2010年3月
通訳・翻訳	Mr. Mojtaba Ahmad KHAN HOUGH	非常勤	2009年1月	2010年3月
業務支援アドバイザー (IRG コーディネーター)	Mr. A. H. MAZDARANI	非常勤	2009年7月	2010年3月
業務アシスタント	Ms. Sara JAFARI	常勤	2009年11月	2010年12月
通訳・翻訳	Mr. Ramin Bagher	常勤	2010年2月	2010年11月

出典：JICA プロジェクトチーム

### イラン側カウンターパート (TVTO)

プロジェクト担当者として TVTO より配属されたカウンターパートもまた、主管局の変更等など組織決定により数度にわたり変更があった。表 2.3 にプロジェクト終了時点でのカウンターパート一覧を示す。続く表 2.4 で、過去のカウンターパートを一覧する。

表 2.3 プロジェクト終了時のイラン側カウンターパート一覧 (TVTO)

氏名	組織	形態	開始	特記事項
Dr. Ghofrani Mohammad	調査計画局局長	非常勤	2010年5月	プロジェクトマネジャー
Ms. Zahra ZAMANI Zenooz	調査計画局	常勤	同上	プロジェクトマネジャー助手／専門家
Mr. Teymori	ITC センター長	常勤	2010年6月	専門家
Mr. Bajolvand	ITC 訓練課長	常勤	同上	プロジェクトコーディネーター
Mr. Karemi	ITC 訓練課	常勤	同上	
Ms. Bazpaas	ITC 訓練課		同上	
Mr. Moradi	ITC ロジスティック 課長	常勤	同上	
Mr. Mokarami	ITC 調査開発課	常勤	同上	
Mr. Varvmazyar	自動車整備作業場 監督	常勤	同上	
Mr. Seyed Mohsen SALIMIAN	CDC / TVTC No.7	常勤	2009年1月	自動車整備専門家
Mr. Javad RAFATI	CDC / TVTC No.7	常勤	同上	同上
Mr. Ebrahim KHALILZADEH	CDC	常勤	同上	同上

出典：JICA プロジェクトチーム

表 2.4 過去のイラン側カウンターパート一覧 (TVTO)

氏名	組織	形態	開始	終了	特記事項
Mr. Esfandiyar CHAHARBAND	訓練局長	非常勤	2008年12月	2009年4月	プロジェクトマネジャー
Mr. Alireza HATAMZADEH	訓練局	非常勤	同上	同上	
Ms. Zahra ZAMANI Zenooz	同上	常勤	同上	同上	
Mr. Davood FARROKHI	同上	非常勤	同上	同上	
Mr. Alireza TAHERPOUR	同上	非常勤	同上	同上	
Mr. Rezaali TARKHAN	同上	非常勤	同上	同上	
Mr. Soheil SHAHRAKI EBRAHIMI	TVTCNo.18 所長	非常勤	同上	同上	自動車整備専門家
Mr. Mohammad Ali HAMIDI KIA	TVTCNo.18	非常勤	同上	同上	同上
Mr. Roohollah GHASEMI	TVTC No.18 /KOICA	非常勤	同上	同上	同上
Mr. Seyed Bagher AZIMI DOKHT		非常勤	同上	同上	同上
Mr. Mohammad Taghi SABERI	訓練局長	非常勤	2009年4月	2010年3月	プロジェクトマネジャー
Mr. Ebrahim AZAD	CDC 総裁	非常勤	2009年4月	2009年11月	技術監督
	アドバイザー	非常勤	2009年12月	2010年3月	
Mr. Hassan GHOFRAN	同上	常勤	2009年6月	2009年12月	技術監督助手
Ms. Parisa JAYMAND	調査研究局	Part time	2009年6月	2010年3月	プロジェクトコーディネーター
Mr. Ramak FARAH ABADI	CDC 総裁	Part time	2009年12月	2010年3月	技術監督
Mr. Hemmat Ali NAJIB ZADEH	TVTC 第4センター所長	Part time	2009年1月	2010年5月	
Mr. Nader NIKORAVAN	CDC / TVTC No.7	Full time	2009年6月	2010年8月	自動車整備専門家

出典：JICA プロジェクトチーム

### イラン側カウンターパート（産業界）

民間企業との連携は CBT 導入を成功させるために重要な要素である。その為、プロジェクトは産業別訓練諮問準備委員会 (Industry Reference Group: IRG) を立ち上げ、2009年1月より民間セクターからの人材の参加を奨励・促進してきた。第2章(2.2節)において IRG の最新のメンバー一覧を示す。IRG での協議や助言が効果的かつ関連性の高いものとなるよう、メンバー構成は定期的に見直した。

## 2.2 プロジェクト事務所状況

担当局の変更に伴い、プロジェクト事務所の所在地も頻繁な移転を余儀なくされた。事務所設置場所の変遷については表 2.5 のとおり。

表 2.5 プロジェクト事務所所在地の変遷

時期	オフィス	サブオフィス	実習場所
2008年11月	訓練局エリア一室	TVTO2階（会議室）	--
2008年12月		--	--
2009年6月		--	TVTC 第4センター
2009年8月	TVTO アドバイザー部屋の一室	--	
2009年10月	--	調査計画局	
2010年1月	--	CDC ビル内	
2010年7月	ITC	--	ITC

出典：JICA プロジェクトチーム

## 2.3 現地業務費

プロジェクト実施にあたっては両政府がコストを負担した。JICA 側の現地業務費負担の実績は表 2.6 のとおり。但し、日本人、オーストラリア人専門家の人件費等は除く。

表 2.6 現地業務費内訳（日本円）

項目	JFY2008	JFY2009	JFY2010
傭人費（秘書、通訳、コンサルタント等）	1,793,000-	11,050,000-	
オフィス設備管理	0-	0-	
消耗品（コピー用紙、トナー等）	24,000-	2,000-	
通信費（電話等）	38,000-	55,000-	
資料作成費（印刷、翻訳等）	57,000-	270,000-	
借料損料（レンタカー代）	665,000-	1,706,000-	
現地研修費	133,000-	18,000-	
携行機材（コンピューター等）	1,280,000-	0-	
合計	3,989,000-	13,101,000-	

注：金額は千円以下の切下げ値。

出典：JICA プロジェクトチーム

## 2.4 機材及び収集図書・資料

プロジェクト運営上必須であるオフィス設備に関し、JPT は資機材を複数点購入設置した（2008年及び2010年、機材一覧は別添 I 参照）。他方、TVTO 側は第一回パイロット訓練コース実施にあたり、必要な資機材や消耗品を実施場所である TVTC 第4センターに設置手配した。この手順詳細については後述する（第3章）。

また収集図書・資料について、一覧を別添 J に別掲した。

## 2.5 会議議事録及びワークショップ等の活動記録

下表は、JPT 及び TVTO 担当者との間で開催した主要な会議一覧である。議事録を別添 K に所収した。

表 2.7 カウンターパートとの主要な協議

番号	日付	主要議題	形式	参加人数
1	2008年11月29日	プロジェクト開始	会議	合計：17 (TVTO: 7, JICA: 5, JPT: 5)
2	2008年12月8日	プロジェクト枠組み	同上	合計：12 (TVTO: 4, JPT: 8)
3	2008年12月20日	プロジェクトの方向性	同上	合計：19 (TVTO: 8, JICA: 9, JPT: 2)
4	2009年1月20日	カウンターパート選定	同上	合計：6 (TVTO: 2, JPT: 4)
5	2009年2月3日	訓練ニーズ調査分析	同上	合計：8 (TVTO: 2, JPT: 6)
6	2009年2月9日	訓練ニーズ調査分析／ CBT 導入	同上	合計：8 (TVTO: 2, JPT: 6)
7	2009年3月16日	プロジェクトの進捗	JCC	合計：20 (TVTO: 9, JICA: 2, JPT: 9)
8	2009年6月25日	同上	週例会議	合計：9 (TVTO: 3, JPT: 6)
9	2009年6月29日	同上	同上	合計：8 (TVTO: 2, JPT: 6)
10	2009年7月13日	同上	同上	合計：6 (TVTO: 2, JPT: 4)
11	2009年7月27日	同上	同上	合計：4 (TVTO: 2, JPT: 2)
12	2009年8月3日	同上	同上	合計：8 (TVTO: 4, JPT: 4)
13	2009年9月14日	同上	同上	合計：7 (TVTO: 4, JPT: 3)
14	2009年9月28日	同上	同上	合計：4 (TVTO: 1, JPT: 3)
15	2009年10月5日	同上	同上	合計：4 (TVTO: 1, JPT: 3)
16	2009年10月19日	同上	同上	合計：5 (TVTO: 1, JPT: 4)
17	2009年10月27日	同上	同上	合計：7 (TVTO: 3, JPT: 4)
18	2009年11月2日	同上	同上	合計：7 (TVTO: 2, JPT: 5)
19	2009年11月17日	同上	同上	合計：7 (TVTO: 2, JPT: 5)
20	2009年11月30日	同上	同上	合計：9 (TVTO: 3, JPT: 6)
21	2010年1月18日	同上	同上	合計：7 (TVTO: 3, JPT: 4)
22	2010年2月1日	同上	同上	合計：11 (TVTO: 5, JPT: 6)
23	2010年2月3日	プロジェクトの進捗／ 第2パイロットコース 概要／課題	JCC	合計：27 (TVTO: 17, JICA: 2, JPT: 7, オブザーバー:1)
24	2010年2月17日	プロジェクトの進捗／ CPの作業計画	定例会議	合計：8 (TVTO: 3, JPT: 5)
25	2010年5月22日	3年次計画内容の協議	CP協議	合計：8 (TVTO: 2, JPT: 6)
26	2010年5月24日	3年次計画内容の協議	同上	合計：5 (TVTO: 1, JPT: 4)
27	2010年6月22日	プロジェクト進捗／第 二回パイロット訓練コ ースでの指導員の活動 計画	同上	合計：3 (TVTO: 1, JPT: 2)
28	2010年8月25日	CBT 作業委員会の設置	CBT 作業 委員会	合計：6 (ITC: 1, JPT: 5)
29	2010年9月4日	CBT 作業委員会の役割	同上	合計：12 (TVTO: 2, ITC: 3, JPT: 7)
30	2010年9月6日	進捗及びスケジュール	CP協議	合計：4 (TVTO: 1, JPT: 3)
31	2010年9月18日	CBT 作業委員会の役割	CBT 作業 委員会	合計：4 (TVTO: 1, JPT: 3)
32	2010年9月26日	終了時レビュー	CP協議	
33	2010年10月17日	終了時レビュー、ビデ オ制作	CBT 作業 委員会	合計：7 (ITC: 3, JPT: 4)
34	2010年11月6日	終了時レビュー、ビデ オ制作	CBT 作業 委員会	合計：9 (ITC: 3, JPT: 6)

番号	日付	主要議題	形式	参加人数
35	2010年11月7日	進捗報告	CP 協議	合計：7 (TVTO: 1, JPT: 6)
36	2010年11月10日	プロジェクト完了報告 ／提案・普及計画	JCC	合計：22 (TVTO: 11, JICA: 2, JPT: 9, オブザーバー：1)
37	2010年11月13日	TOT 研修	CBT 作業 委員会	合計：9 (ITC: 1, JPT: 6)

出典：JICA プロジェクトチーム

表 2.8 に、JPT が開催した主要なセミナー、ワークショップの記録を示す。

**表 2.8 セミナー、ワークショップ一覧**

番号	期間	ワークショップ名	開催地	参加人数
1	2009年1月19日	ニーズ調査キックオフ	TVTO	
2	2009年1月28日	ニーズ調査ワークショップ	TVTO 本部	
3	2009年2月23日～ 3月9日	CBT カリキュラム策定・実施に 関する導入プログラム	TVTC No.4/ TVTO 本部	TVTO：7名
4	2009年6月28日～ 8月5日	指導員訓練 (TOT)	TVTC No.4/ TVTO 本部	TVTO：4名
5	2009年12月9日	CBT モデル導入に関するワークシ ョップ	TVTO 本部	CDC：1名 指導員：4名 JPT：4
6	2010年6月22日	CBT モデルの導入と JICA プロジ ェクトに関するセミナー	ITC	TVTO/ITC：50名 JPT：7名
7	2010年9月5～7日	CBT モデルの導入に関するワーク ショップ（指導員対象）	ITC	ITC：27名、 JPT：3名
8	2010年10月11日	JICA プロジェクトと CBT 実施マ ニュアル紹介	ITC	ITC：20名、 JPT：6名
9	2010年11月7日	CBT モデルの導入に関するセミナ ー（民間訓練センターマネジャー 対象）	ITC	ITC：30名、 JPT：6名
10	2010年11月8日	CBT モデルの導入に関するセミナ ー	ラジャヒ大	大学関係者 15名 JPT：2名
11	2010年11月8～9日	コース再開のための指導員訓練	ITC	ITC：13名 JPT：3名 指導員3名

出典：JICA プロジェクトチーム

## 第3章 プロジェクトの活動

本章ではプロジェクト期間に実施された各活動について詳述する。

### 3.1 CBTモデルの導入

CBTにこれまで接したことのない TVTO 職員にとっては、参加型のワークショップがその概念を掴むには効果的であることから、カウンターパート部署の変更の度に CBT 導入ワークショップを行った。(ワークショップの目的、スケジュール、資料やハンドブックを別添 Lとして添付する)。

当初の想定では、参加者(カウンターパート)が自動車整備修理部門での CBT パイロット訓練コースを実施できるようにすることを目的とした。このためワークショップは、オーストラリアの CBT アプローチに関する知識を効果的に習得し、イランで応用できるようデザインされた。

2009 年 2～3 月に実施した最初のワークショップでは、産業界によってコンピテンシー基準が設定され、それに基づいてコースの開発・実施が行われる、という CBT の基本モデルを紹介した。パイロット訓練コースではオーストラリアで実施されている手法が応用されることから、オーストラリアのコンピテンシー基準だけでなく、同国の職業訓練改革の経緯、国家資格枠組、運用体制や政策等についても概略した。

ここで参加者は、まずオーストラリア訓練パッケージ(全産業のコンピテンシー基準総覧)の全体構成の説明を受け、それから自動車整備部門のコンピテンシー基準についての説明を受けた。その後参加者自らオーストラリア版コンピテンシー単位を分析し、主要構成要素について自ら他の参加者に説明することを参加型で行った。またコンピテンシー単位について策定されたカリキュラムを分析し、イランの訓練生用に応用する方法を検討した。

ワークショップは参加型(実習型)であった為、参加者はそれぞれ、オーストラリアのコンピテンシー単位を実際にペルシア語訳し、内容を分析し、想定される実際の作業担当者に主要な業務はどれかを確認する作業を実施した。その後実際にカリキュラム開発を(一部)実習し、いくつかの単位について訓練アプローチや手法は何かを発表した。

この初回のワークショップ以外にも TVTO 職員に対するセミナー開催の要請が何度もあり、実施した。これらのセミナーでは、参加者が CBT アプローチになじみ、産業コンピテンシーを適切な枠組に落とし込むなど、カリキュラム開発やいくつかの手法を用いた訓練実施に必要なプロセスを実習した。プロジェクト期間を通して最終的に 170 名の職員がこれらセミナー・ワークショップに出席した。(表 2.8 参照)

## 3.2 コンピテンシー単位決定のためのニーズ調査

### 3.2.1 産業別訓練諮問準備委員会 (IRG)

産業別訓練諮問準備委員会 (Industry Reference Group: IRG) は、TVTO が自動車分野やその他の部門において、CBT システムを導入し広げるために大変重要なメカニズムである。パイロット訓練コース用コンピテンシー基準の策定にあたり、プロジェクトは自動車整備・修理部門に関して様々な規模の関連企業から成る IRG を設置し、メンバー及びその所属先である企業との継続的な協力関係を築いた。参加企業はパイロット訓練コース中の協力を約し、IRG 会議は協力期間中、計7回開催された。

パイロット訓練コース用コンピテンシー基準をできるだけ集約的かつシステムティックに決定できるよう、IRG（2年次は2009年6月に初回開催）はオーストラリア訓練パッケージから予め選んだコンピテンシー単位の優先付けから着手した。

次に JPT とカウンターパート（指導員）は、各企業（IRG メンバー）を個別訪問し、グループないし個別インタビューを行って詳細情報を得た。インタビューでは：1) CBT の概念やオーストラリアで実施されている CBT システムについて説明し、2) パイロット訓練コースで対象とするべきレベルについて助言を求め、3) 自動車整備部門のオーストラリア訓練パッケージを参照しつつ、どのコンピテンシー単位が適切かの選出、を諮った。

TVTO が訓練コースを策定する過程に企業がこのような形で参与するのは前例のないことであったので、個別訪問だけでなく、全体会議である IRG 会合も複数回開催した。会合を重ねるにつれ IRG メンバーはオーストラリア CBT システムに対する理解を増進した。IRG は企業規模や特徴において、イラン自動車産業界をよく代表した構成となった。またメンバー全員が、自動車整備修理部門に関する技術的知識と職歴を備えており、十分助言を仰ぐに足る布陣となった。メンバー一覧は下表のとおりである。

表 3.1 IRG メンバー一覧

番号	職位	企業名	グループ	規模
1	訓練カリキュラム局局长	Saipa Yadak 本部	Saipa	大
2	技術専門家	Saipa Yadak 本部	Saipa	大
3	技術専門家	Saipa Yadak 本部	Saipa	大
4	センター長	Saipa Yadak 中央ワークショップ No 8	Saipa	大
5	技術専門家	Saipa Yadak 中央ワークショップ No 8	Saipa	大
6	マネジャー	Saipa Yadak ワークショップ・代理店	Saipa	中小
7	技術専門家	Saipa Yadak ワークショップ・代理店	Saipa	中小
8	マネジャー	Iran Khodro 中央ワークショップ	Iran Khodro	大
9	センター長	Iran Khodro ワークショップ No 1	Iran Khodro	大
10	センター長	Iran Khodro ワークショップ No 5	Iran Khodro	大
11	技術専門家	Mega Motors	Mega	大
12	特別理事	産業組合	その他	中小
13	技術専門家	個人コンサルタント	その他	中小
14	技術専門家	Saipa Yadak - Pars	Saipa/Pars	大
15	IRG コーディネーター	JICA Project Team	----	----

出典：JICA プロジェクトチーム

### 3.2.2 ニーズ調査

オーストラリア訓練パッケージにある自動車整備修理部門のコンピテンシー単位を用いて、各訓練コース用に訓練ニーズ調査を、以下の手順で行った。

- ✓ オーストラリア訓練パッケージから最適なコンピテンシー単位を選ぶ
- ✓ イラン産業界のニーズを反映するよう、企業との協議や企業への質問紙調査などにより優先順位をつける
- ✓ これを、当該分野を担当する企業の技術専門家の助言を受け、適格化する

パイロット訓練コース用のコンピテンシー基準を定めた手順は以下のとおり。

- ✓ 大中小の様々な規模の企業から熟練の技術専門家を招き、IRGを設置する
- ✓ IRGメンバーに対し、CBTの概念やアプローチについての講義・説明を行い、IRGメンバーの理解を深める
- ✓ IRGメンバーはパイロット訓練コースを実施するのに適切な訓練分野を選ぶ
- ✓ オーストラリア訓練パッケージから、実施する訓練分野に適ったコンピテンシー単位を選ぶ
- ✓ 選抜されたコンピテンシー単位から、さらに協議や質問紙を通して優先順位をつける
- ✓ 質問紙結果を分析し、パイロット訓練コースで実施するコンピテンシー単位を決定する
- ✓ IRGメンバーにインタビューを行い、コンピテンシー単位毎の訓練内容の適格化を行う。

#### 第一回パイロット訓練コース（コンピテンシー単位の設定）

2009年初頭時点で、TVTOとの協議に基づき第一回パイロット訓練コースの対象分野を自動車整備修理分野とした。この決定を受けてJPTとCP指導員は自動車整備関連企業を訪問した。訪問先としては大企業の代表格として、イランの二大自動車メーカーであるSaipaグループ（Saipa Yadak<sup>6</sup>社）やIran Khodro社<sup>7</sup>訓練センター、中小規模の例として代理店や小規模な修理作業場などを訪れた。

管理職クラスや技術専門家、整備士らからのインタビューを通してイランの自動車整備業来全般の概要を把握し、これに基づいて英語での質問紙を作成し、ペルシア語訳を行った。インタビュー対象先は、大企業からの代表者と相談の上で決定した。実施計画はインセプションワークショップ（2009年1月19日）、訓練ニーズ分析ワークショップ（同年1月28日）に提案した内容に基づき検討した。これらの企業訪問の後、再度TVTOと内容を協議検討し、以下の決定を行った。

<sup>6</sup>自動車製造業の大手民間企業グループ SAIPA 社の整備・サービス等の研修部門として設立。SAIPA 社とそのディーラー等の関連企業社員向け研修を行っている。独自の従業員用研修施設を有する。

<sup>7</sup>1962年設立。代表車である Peugeot、Suzuki モデルなどの生産、また、旧ソ連圏やアフリカへ輸出するなど国内最大手のメーカー。グループ企業全体で 240 百万程度の従業員を有し、独自の研修センターがある。（JICA イラン事務所ヒアリングによる）



- ✓ 第一回パイロット訓練コースでは自動車整備の電気部門を実施対象とする
- ✓ 小型乗用車の自動車整備士のオーストラリアの2～4号資格に係る電気部門の全コンピテンシーをオーストラリア訓練パッケージからリストアップし、IRG代表者へのインタビューで優先順位を諮る。なお、19単位がこの分野に該当した。
- ✓ 雇用適正に関する3単位を加え、計22単位とする。各単位の説明や扱い範囲、要素などを含めた質問表を作成する。
- ✓ Saipa Yadak 社や Iran Khodro 社、また代理店に勤める10数名の技術専門家に対するインタビューを、自動車整備訓練の職歴を持つTVTO指導員が行う。
- ✓ 調査の結果5単位を第一回パイロットコース実施対象として選択する。

以上のTVTOとの合意に基づき、コンピテンシー単位を適格化するための詳細な質問票を作成し、2009年2月15日にインタビューを実施、企業側（Saipa Yadak、Iran Khodro 訓練センター、両社代理店）から計17名の技術専門家の協力を得て決定した。

## 第二回パイロット訓練コース

第二回パイロット訓練コースの対象は自動車整備部門のエントリー（新卒者・未熟練工）レベルと定められた。コース実施に先立ち、企業代表者からの助言を受けながらコンピテンシー単位の確定と適格化を実施した。最終決定ではエントリーレベルにとって最適な単位の洗い出しも行った。自動車整備・修理関連（Automotive Retail, Service and Repair）訓練パッケージから、最も基礎的な単位として21のコンピテンシー単位が選定された。

これら選定された21単位の妥当性は、IRGの協力を得て質問紙形式で検証した。13名が現実の職務環境に照らして21単位の選定は妥当であると評価した。また全ての単位がほとんどの自動車整備・修理の作業場現場で必須のコンピテンシー単位であると推奨された。

質問票を分析したのち、CP指導員はIRGメンバーを個別訪問し、各コンピテンシーの適格化に役立てるべく、訓練内容についてより具体的なコメントを求めた。これらコメントを集約した上で適格化を行ったので、第二回コースの全てのコンピテンシーは企業側の訓練ニーズに的確に応えた内容となった。表3.2に主要なコメント内容を掲げる。

表 3.2 IRGメンバーによるコンピテンシー単位へのコメント要約

単位名	コメント概要
Read in the workplace (職務用リテラシー)	<ul style="list-style-type: none"> <li>• 「時間割、フローチャート、図、グラフ等を使った技術報告書の作成」を追加のこと。</li> </ul>
Apply safe working practices (作業安全)	<ul style="list-style-type: none"> <li>• 資材等の安全に関するシート（化学反応や爆発を起こす危険のある資材の取り扱い）を作成し授業で講義のこと。</li> </ul>
Use and maintain basic measuring equipment (基礎的な計測機器の使用と管理)	<ul style="list-style-type: none"> <li>• 「測定限界や無限測定」の追加</li> <li>• 「マイクロメーターなど特殊な計測機器による測定、ボルトの同定」の追加</li> </ul>
Remove, fit and inspect wheel assemblies (車輪の取り外し・取りつけと検査)	<ul style="list-style-type: none"> <li>• 「タイヤ交換の時間表、タイヤのバランス（静的・動的）、特殊工具、スチールやアルミ輪の違い、タイヤの種類」を追加。</li> </ul>

単位名	コメント概要
Test, service and charge batteries (バッテリーの試験・整備・充電)	<ul style="list-style-type: none"> <li>「電気の基礎と法則」を追加</li> <li>「充電システムコンポーネントの特定と車両始動機」を追加。</li> <li>「液体比重計、バッテリー充電器、押しがけ」を追加。</li> </ul>
Inspect and service cooling systems (冷却システムの検査・整備)	<ul style="list-style-type: none"> <li>「質・量のための圧力テスト、冷却テスト」を追加。</li> <li>「フィルタ外し、 マルチシステム及び構成要素」を追加。</li> </ul>
Inspect and service braking systems (ブレーキシステムの検査・整備)	<ul style="list-style-type: none"> <li>「ブレーキ調整、エア抜き、ドラム修理」を追加。</li> <li>「ブレーキ液の特定・交換、エア抜き、ブレーキブースタのテスト、 マニュアルブレーキの調整」を追加。</li> </ul>
Inspect and service transmissions (manual) (マニュアルトランスミッションの検査・整備)	<ul style="list-style-type: none"> <li>「マニュアルトランスミッションの機能、トランスミッション液の特定・交換、液漏れの確認、最終駆動装置」の追加。</li> <li>「トランスミッション液交換の能力」を追加。</li> </ul>
Inspect and service engines (エンジンの検査・整備)	<ul style="list-style-type: none"> <li>「エンジンの主要三機能である、点火（タイミングと点火装置の状態）、混合気、圧縮」を追加。</li> <li>「バルブの清掃・調整、ベルト交換、スパークプラグの取り換えと設置、フィルタ交換」を追加。</li> </ul>
Service petrol fuel systems (ガソリン燃料システムの整備)	<ul style="list-style-type: none"> <li>「燃料フィルタの交換、エアフィルタ、燃料漏れとカーボンキャニスタの確認」</li> <li>「噴射装置と点火装置の確認」を追加。</li> </ul>

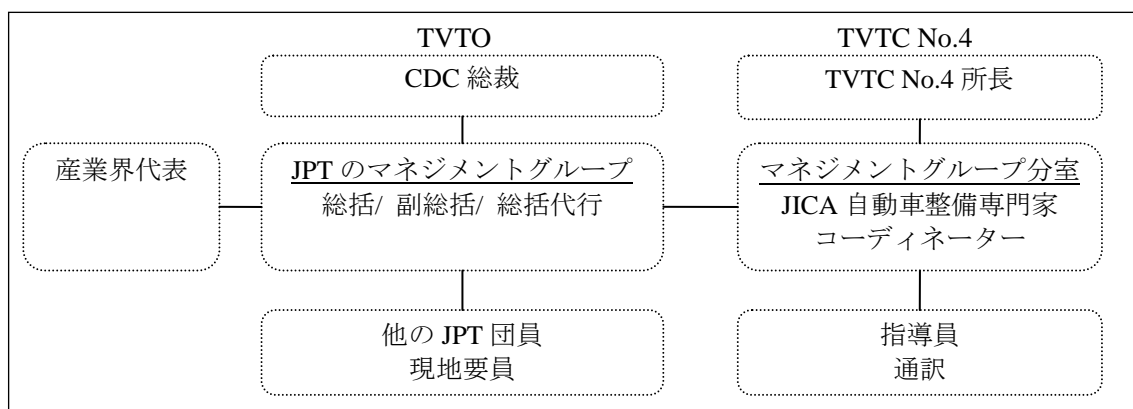
出典：JICA プロジェクトチーム

### 3.3 第一回パイロット訓練コース

第一回パイロット訓練コースは、4週間の指導員訓練（対象指導員：4名）の後に、2009年10月3日から11月25日まで行った。12名の訓練生中、11名が全6単位を完了し、1名は半数（3単位）のみ修了した。以下にコース実施内容とその成果について述べる。

#### 3.3.1 実施体制

第一回パイロット訓練コースの円滑な実施のために、実施機関であるカリキュラム開発センター (Curriculum Development Center: CDC)、パイロットコース実施場所である TVTC 第4センター、指導員、JICA プロジェクトチーム (JICA Project Team: JPT) の四者間でのコミュニケーション・チャンネル（指示命令系統）を明確にした。図 3.1 にその構造を示す。



出典：JICA プロジェクトチーム

図 3.1 第一回パイロット訓練コースの実施体制

### 3.3.2 進捗

第一回パイロット訓練コース実施にあたり、次のように 7 つのコンポーネントに分解し、各コンポーネントは、更に細かく分解された。

#### コンポーネント 1 訓練コース準備

- C1-1 コース・フレームワーク策定
- C1-2 コンピテンシー単位選定
- C1-3 コンピテンシー単位の翻訳
- C1-4 コンピテンシー単位の適合
- C1-5 訓練コースプログラム（カリキュラム）
- C1-6 アセスメント計画

#### コンポーネント 2 機材・消耗品

- C2-1 必要な機材・消耗品のリスト化
- C2-2 予算化とその拠出
- C2-3 調達・搬入・検品

#### コンポーネント 3 教材

- C3-1 学習教材の選定
- C3-2 ワークブックの開発
- C3-3 アセスメント・ツールの開発
- C3-4 教材（学習リソース）ガイド

#### コンポーネント 4 指導員訓練

- C4-1 スケジュールリング
- C4-2 研修実施

#### コンポーネント 5 訓練生募集活動

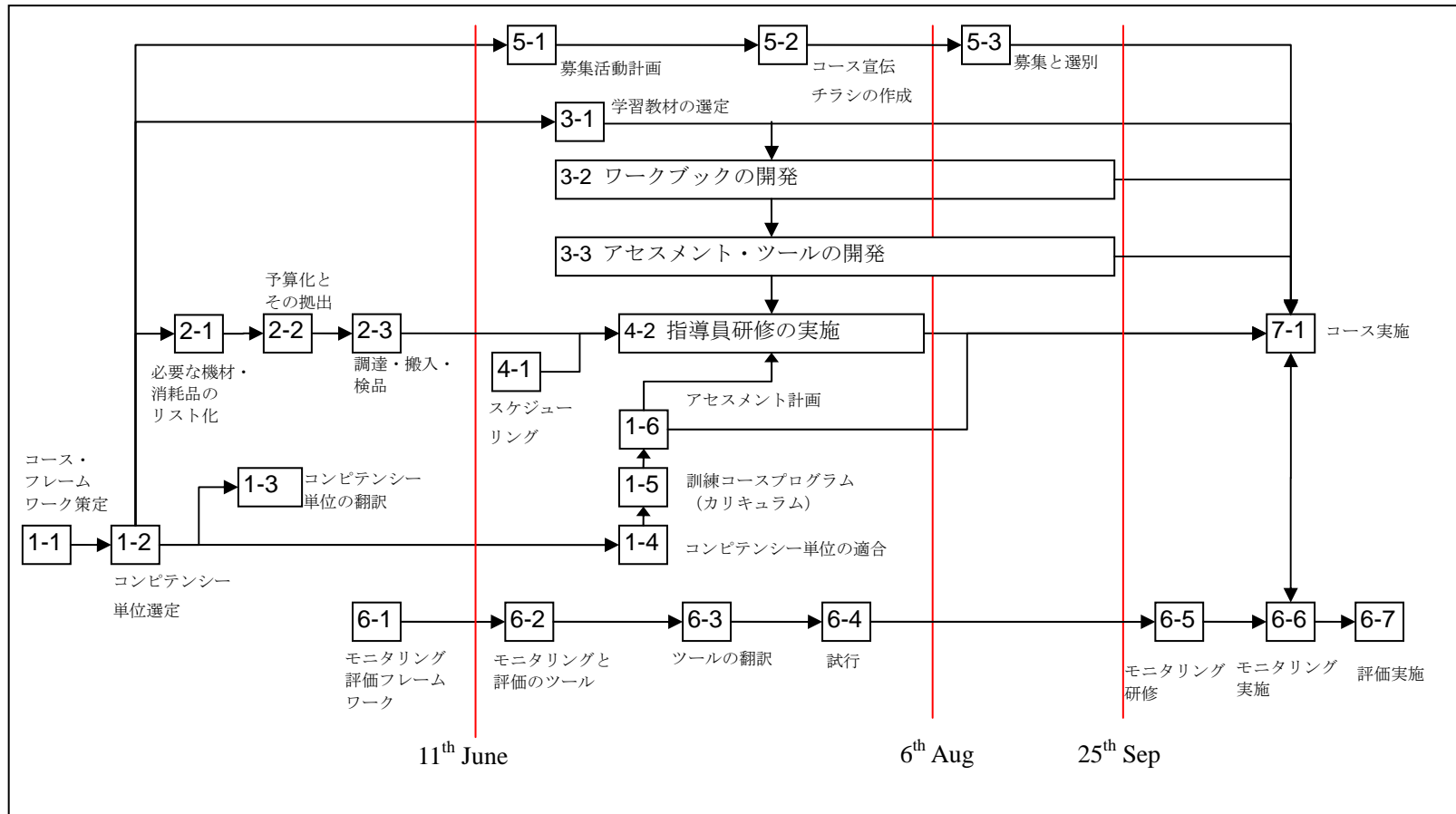
- C5-1 募集活動計画
- C5-2 コース宣伝チラシの作成
- C5-3 募集と選別

**コンポーネント 6 モニタリングと評価 (M&E)**

- C6-1 モニタリング評価フレームワーク
- C6-2 モニタリングと評価のツール
- C6-3 ツールの翻訳
- C6-4 試行
- C6-5 モニタリング・評価研修
- C6-6 モニタリング・評価実施

**コンポーネント 7 コース実施**

図 3.2 に、第一回パイロット訓練コース用のスケジュール・ネットワーク図（プレシデンスダイアグラム法）を示す。



出典：JICA プロジェクトチーム

図 3.2 第一回パイロット訓練コース用のスケジュール・ネットワーク図

第一回パイロット訓練コースの各コンポーネントのプロセスの詳細は以下の通り。

## コンポーネント 1：訓練コース準備

第一回パイロット訓練コースの内容・条件を以下のように決定した。

### C1-1 コースフレームワーク策定

パイロット訓練コースの枠組（案）を JPT が策定し、2008 年 12 月に TVTO に提示した。分野として自動車産業を提案した理由は、イランでの典型的産業分野でありかつ、この分野の業務実施に必要な技術の多くが全世界で共通であることからである。これにより自動車整備・修理分野がパイロット訓練コースの対象として TVTO と合意された。

表 3.3 第一回パイロット訓練コースの枠組

訓練場所：	TVTC 第 4 センター
コース選定：	自動車販売・整備・修理 ✓ 自動車機械技術 ✓ 自動車整備修理 3 号資格 ✓ サンプルとして、電機分野 4 単位 + 雇用適正 1 単位
コース期間：	2 ヶ月（2009 年 10 月 3 日～11 月 25 日）
想定指導員：	自動車整備指導員
想定訓練生：	高校もしくは技術学校卒業、就職したて（訓練生人数は 10～14 人）
指導員訓練：	2009 年 6 月下旬～2009 年 8 月上旬

出典：JICA プロジェクトチーム

### C1-2 コンピテンシー単位選定

表 3.3 の枠組、及び 2009 年 2 月と 3 月に実施したニーズ調査の結果を基にして、第一回パイロット訓練コース用のコンピテンシー単位セットを表 3.4 の通り選定した。

表 3.4 選定したコンピテンシー単位

単位コード	単位名
AURE218708A	Carry out repairs to single electrical circuits
AURE321171A	Service and repair electronic spark ignition engine management systems
AURE320666A	Repair ignition systems
AURE218676A	Test, service and charge batteries
AURC270103A	Apply safe working practices
AURT270278A	Use and maintain workplace tooling and equipment

出典：JICA プロジェクトチーム

### C1-3 コンピテンシー単位の翻訳

2009年3月から同5月までのJPT不在期間中に、第一回パイロット訓練コース用のコンピテンシー単位セットの翻訳を指導員が行った。

### C1-4 コンピテンシー単位の適合

指導員訓練の期間中、6つのコンピテンシー単位の全てを適格化し、イランの自動車整備修理部門の訓練基準を満たすようにした。本過程では、オーストラリア基準を適用し、イランでの訓練に特に適すると考えられる教材の取り込みも行うと共に、イランで生産されている自動車に有用な最新情報入手の為、イランのWebサイトの検索も行った。

### C1-5 訓練コースプログラム（カリキュラム）

全単位の指導順序は、各単位の難易度等を考慮して次の順序とした。

1. Apply safe working practices.
2. Use and maintain workplace tooling and equipment
3. Carry out repairs to single electrical circuits
4. Test service and charge batteries
5. Service and repair ignition systems
6. Service and repair electronic spark ignition engine management systems

訓練コースのタイトルは“Electrical Systems in Automotive Technology Course”と定めた。セッション計画とスケジュールを表3.5と表3.6にそれぞれ示す。

表 3.5 第一回パイロット訓練コースのセッション計画

セッション	開始時刻	終了時刻	期間
セッション 1	08:30	10:30	2 時間
セッション 2	10:45	12:30	1 時間 45 分
セッション 3	13:30	15:30	2 時間

出典：JICA プロジェクトチーム

表 3.6 第一回パイロット訓練コースのスケジュール

週	開始	終了	単位コード	単位名
1	10月3日	10月7日	AURC207103A	Apply safe working practices
2	10月10日	10月14日	AURT270278A	Use and maintain workplace tooling and equipment
3	10月17日	10月21日	AURE218708A	Carry Out Repairs To Single Electrical Circuits
4	10月24日	10月28日	AURE218708A	同上
			AURE218676A	Test service and charge batteries
5	10月31日	11月4日	AURE320666A	Service and Repair Ignition Systems
6	11月7日	11月11日	同上	同上
7	11月14日	11月18日	AURE321171A	Service and Repair Electronic Spark Ignition Engine Management Systems
8	11月21日	11月25日	同上	同上

出典：JICA プロジェクトチーム

## C1-6 アセスメント計画（査定）

CBT では、訓練生が当該コンピテンシー単位を修得したかどうかは、日々のアセスメントで実演により判定する（試験ではない）。つまり、訓練生は規定の業務ができるということを実演してみせる必要があり、これが出来てはじめて次の単位に移ることが出来る。

第一回パイロット訓練コースでは、JICA 自動車整備専門家の支援を受けながら CP 指導員が判定指標 (Performance Criteria) をまとめたアセスメントポートフォリオを作成した。また質問・課題が多数内包されているワークブックをツールとして使用することで、訓練生の知識・技能の習得度を測ることとした。なお、この過程で指導員や TVTO のモニタリング・評価担当者などにヒアリングを行って実情把握に努めた結果、TVTO には訓練生向けの試験や評価システムはあるが、指導員レベルがコース実施中に訓練生のコンピテンシー習得状況を測る段階別のアセスメントはまだ確立されていないことが判明した。

## コンポーネント 2：機材・消耗品

### C2-1 必要な機材・消耗品のリスト化

選定したコンピテンシー単位（表 3.4）を基にして、第一回パイロット訓練コースに必要な機材・消耗品を 2009 年 3 月に JPT が特定し、JPT 不在期間の 2009 年 4 月中に同機材・消耗品の調達をするよう、TVTO に依頼した。

### C2-2 予算化とその拠出

2009 年 5 月中旬に、TVTC 第 4 センターに対し、調査計画局局长が 5,000 US ドル相当、訓練局局长が 25,000 US ドル相当の予算をそれぞれ承認した。

### C2-3 調達・搬入・検品

TVTC 第 4 センターは、調達代行会社を指名して機材・消耗品調達を行った。表 3.7 は機材の必要個数と調達個数を示す。TVTC 第 4 センターに同等もしくは類似品が見つかった幾つかの機材については、調達を中止した。他の機材についても、複数の訓練生が共有して使える種類の機材についてはコスト削減の為に購入数を減らした。機材調達は 2009 年 9 月には完了し、全機材を搬入後検収した。表 3.8 は、消耗品類の必要数と調達状況の一覧を示す。

表 3.7 必要機材と購入機材の一覧

番号	品名	必要個数	実購入数／特記事項
1	Three stage Battery charger	1	1
2	High rate discharge tester carbon pile	1	類似品を一つ購入
3	Battery Carrier	4	2
4	Crimping tools	16	7
5	Wire strippers	16	7
6	Multimeters	16	7



番号	品名	必要個数	実購入数／特記事項
7	Amp meter 30 amp min \$150	1	1
8	Digital tune oscilloscope	1	1
9	Gas analyser four gas	1	1
10	Fuel pressure/flow gauges	1	1
11	LED test lights	3	3
12	Noid lights	1	1
13	Timing light with adjustable advance	1	1
14	Tune up manuals	1	1
15	Injector flow bench and ultrasonic cleaner	1	1
16	Trailer plugs	16	他から提供
17	Coil tester	1	TVTC 第4センター保有のため、調達中止
18	Scan tool	1	同上
19	Inductive amp meter	1	キャンセル
20	Projector screen – portable	1	1

出典：JICA プロジェクトチーム

表 3.8 購入した消耗品

番号	品名
技術的な利用分	
1	Insulated wire various sizes
2	Insulated and solder type terminals various sizes – a wide range readily available
3	Solder – should have ready access to this item
4	Solder wicks
5	Solder paste - this should be on hand already
6	Soldering irons (two students max per iron) 25 and 50 watt
7	Various distributors hall, optical and magnetic - at least three of each type
8	Various batteries for testing - should have
9	Battery spec charts - need to know relevant specifications for the batteries we are using
10	Four/six hydrometers – should have
訓練生用	
11	Overall for all the Trainees – dark blue
12	Safety boots for Trainees
13	Dust coats for the Trainers – light blue
14	Pens and pads for Trainees
15	Mudguard covers
16	Ear plugs
17	Protective gloves
18	Name tags
その他	
19	Attendance roll

出典：JICA プロジェクトチーム

## コンポーネント 3 : 教材

### C3-1 学習教材の選定

第一回パイロット訓練コースの主要教材として、表 3.9 にある 2 冊のペルシア語教材を選定・購入した。

表 3.9 第一回パイロット訓練コース用教材

番号	タイトル	言語	出版社	単価
1	Motor Vehicle batteries and electrical systems	ペルシア語	Andishyaran	IRR 20,000
2	Ignition Systems for gasoline engines	ペルシア語	Andishyaran	IRR 16,000

出典：JICA プロジェクトチーム

### C3-2 ワークブックの開発

指導員・訓練生用のペルシア語のワークブックを開発した。オーストラリアで使われている教材をワークブックの原版とし、これを JICA 自動車整備専門家の指導のもと、CP 指導員がペルシア語に翻訳し、さらに同時並行でイランに適合するよう適格化を加えている。この適格化例としては、

- ✓ 原版のオーストラリアで使われている機材の写真を、第一回パイロット訓練コースに利用予定の機材の写真に差替え
- ✓ “AURC270103A: Apply safe working practices” ではオーストラリアの「労働安全衛生法」の学習を含む。当然、イランの訓練生はオーストラリア版を学ぶ必要はないため、イランの「労働安全衛生法」に差し替え

などである。

### C3-3 アセスメント・ツールの開発

C1.6 での方針のもとに、訓練実施時に訓練生の習熟度を評価するためのアセスメント・ツールとして、オーストラリアで使用されているワークブック（記述式試験や実習リストなどのアセスメント・ツールが入ったもの）を採用することとした。それ故この C3-3 は、C3-2（ワークブックの開発）の一部となった。

## コンポーネント 4 : 指導員訓練

### C4-1 スケジューリング

指導員訓練の日程・内容を以下のように決定した。

日程：6月28日から8月5日（6.5週間）（土曜日から水曜日まで）

開講：8時30分

閉講：16時00分

会場：TVTC第4センターのワークショップ、もしくはTVTO事務所

研修には以下の内容を含んだ。

- ✓ 指導員の自動車整備技術のアップグレード
- ✓ コンピテンシー単位の適格化
- ✓ 訓練コースプログラム開発（カリキュラム）
- ✓ アセスメント計画とアセスメント・ツール
- ✓ 教材と教材開発ガイド
- ✓ 評価用質問紙
- ✓ 実施手法

指導員訓練のコース内容は、指導員の知識・技術のレベルや第一回パイロット訓練コースの訓練生の知識・技術のレベルを想定して決定した。

表 3.10 指導員訓練のスケジュール

日程	項目
第1週 (6月28日～7月1日)	<ul style="list-style-type: none"> <li>● 次のコンピテンシー単位の、CBT手法での実施方法実演:               <ul style="list-style-type: none"> <li>➢ Apply safe working practices</li> <li>➢ Use and maintain workplace tooling and equipment</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Apply safe working practices</li> <li>➢ Use and maintain workplace tooling and equipment</li> </ul> </li> </ul>
第2週 (7月4日～7月8日)	<ul style="list-style-type: none"> <li>● 次のコースの、CBT手法での実施方法実演               <ul style="list-style-type: none"> <li>➢ Test, service and charge batteries</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Test, service and charge batteries</li> </ul> </li> </ul>
第3週 (7月11日～7月15日)	<ul style="list-style-type: none"> <li>● 次のコースの、CBT手法での実施方法実演               <ul style="list-style-type: none"> <li>➢ Repair ignition systems</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Carry out repairs to single electrical circuits</li> </ul> </li> </ul>
第4週 (7月18日～7月22日)	<ul style="list-style-type: none"> <li>● 次のコースの、CBT手法での実施方法実演               <ul style="list-style-type: none"> <li>➢ Repair ignition systems</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Repair ignition systems</li> </ul> </li> </ul>
第5週 (7月25日～7月29日)	<ul style="list-style-type: none"> <li>● 次のコースの、CBT手法での実施方法実演               <ul style="list-style-type: none"> <li>➢ Service and repair electronic spark ignition engine management systems</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Repair ignition systems</li> </ul> </li> </ul>
第6週 (8月1日～8月5日)	<ul style="list-style-type: none"> <li>● 次のコースの、CBT手法での実施方法実演               <ul style="list-style-type: none"> <li>➢ Service and repair electronic spark ignition engine management systems</li> </ul> </li> <li>● 次のコンピテンシー単位用の教材開発               <ul style="list-style-type: none"> <li>➢ Service and repair electronic spark ignition engine management systems</li> </ul> </li> <li>● ワークショップの確認</li> <li>● 指導員訓練と実際のパイロットコースとの違い</li> <li>● CP指導員用の業務リスト作成</li> </ul>

出典：JICAプロジェクトチーム

## C4-2 指導員訓練実施

指導員訓練をスケジュール通りに実施した。実施時に、4名中3名のCP指導員の自動車電機に関する基礎技術が、パイロットコースで指導するコンピテンシー単位群に対して十分とは言えないことが、JICA自動車整備専門家の指摘により明らかになった。当初想定では、自動車整備技術の向上は最小限度に留め、既に身につけている技術をどのようにCBTでの指導に変えるかに力点を置くと想定していたが、JICA自動車整備専門家は指導員の自動車整備技術向上にも時間を割き、実施のための十分な基礎知識を身につけさせ、所期の目的を達成し、訓練を予定通りに完了させた。

## コンポーネント5：訓練生募集活動

### C5-1 募集活動計画

第一回パイロット訓練コースのコース内容と実施時期を考慮して、訓練生募集活動計画を次のように決定した。

#### スケジュール

募集に必要なステップを下記のように決め、実行した。

1. IRG 会合での産業界への通知
2. 募集ルート、応募、プレテスト、スクリーニング等の計画
3. 募集ルートの確定
4. コース宣伝チラシの作成
5. TVTO からテヘラン州事務所へ情報通知
6. テヘラン州事務所から各 TVTC への通知
7. 応募者登録
8. プレテスト実施
9. スクリーニングによる最終決定

#### 想定訓練生

第一回パイロット訓練コースの訓練生の採用人数は、10人から14人とした。内訳は、自動車整備セクターからの現職採用（少なくとも5名）と、高校／技術学校の卒業生／同等の学力・技術を持つ者とした。当初未経験者のみの募集計画であったが、追ってTVTO側から現職の人も対象者に含めるよう指示があったためである。これは、職場での習得技能の発現度を見るためである。当該モジュールを修得することに強い関心があり、全日程出席できることを応募要件とした。更に、募集活動の公平を期すため、数学、国語（ペルシア語）・技術に関する試験（プレテスト）を受けさせることとした。

#### 訓練生募集ルート

JPTは、CP指導員とIRGメンバーとの協力により、以下の5つの募集ルートを特定した。

表 3.11 検討された募集ルート

番号	検討されたルート	特記事項
1	TVTO の通常募集ルート (TVTC ルート)	各 TVTC は募集ルートを持ち、訓練生のほとんどは同ルートで受け付けられる。
2	IRG メンバーの会社	JPT から IRG メンバーに第一回パイロット訓練コースへの訓練生の派遣を依頼可能である。本ルートの欠点は、2 ヶ月間もの間フルタイムで従業員を訓練に送り出すことは、人材不足の民間企業にとっては困難であることである。
3	独立系修理作業所及び自動車販売店	コース宣伝チラシを配布して従業員や、採用予定者の派遣を依頼することが可能。
4	人材紹介会社	テヘランには民間の人材紹介会社があり、仕事が見つかる前の人を訓練生として TVTO に紹介することがある。
5	CDC の独自ルート	CDC が彼ら自身の活動で自動車関連会社に訓練生の派遣を紹介することがある。

出典：JICA プロジェクトチーム

### C5-2 コース宣伝チラシの作成

コースに適した人が応募するよう、以下の内容を含むコース宣伝用チラシを作成した。

- ✓ コースタイトル
- ✓ 目的
- ✓ 期待される成果と、キャリア・パス設計
- ✓ 内容（コンピテンシー単位 6 つ）
- ✓ 訓練手法
- ✓ 期間（日程と時間）
- ✓ 会場
- ✓ 指導員
- ✓ 想定訓練生
- ✓ 応募手順

### C5-3 募集と選別

表 3.11 で示したルートの幾つかをパイロットコースの訓練生募集ルートとして利用した（①TVTO の従来型の募集ルート、②IRG メンバーの会社、③独立系修理工場及び自動車販売代理店）。訓練生募集用に TVTC 第 4 センターに宣伝用チラシを 150 部配布（ルート①）し、IRG コーディネーターに民間セクターからの訓練生募集を依頼した（ルート② & ③）。結果として、応募者総数は 31 名（①一般から 21 名、②企業から 10 名）であった。プレテスト（数学）と面接を以下の要領で実施し、応募者の選考を行った。

表 3.12 プレテストと受講者面接の実施日

募集ルート	プレテスト	インタビュー
第4 訓練センター (TVTC) 経由で応募	2009 年 9 月 27 日	2009 年 9 月 27～28 日
IRG コーディネーター経由で応募	2009 年 9 月 27 日	2009 年 9 月 29 日

出典：JICA プロジェクトチーム

選考は 2009 年 9 月 30 日に実施し、選考結果を CDC に即時報告した。これを受けて、CDC より 3 名の候補者を交代させるべきとの提言があった。理由としては：1) プレテストのスコアが低いこと、2) 就職状況、3) 学歴証明書の不備や到達度の不足、があげられた。この提言を受けて他の応募者を繰り上げ合格とし、9 月 30 日付けで合格通知を合格者に送付した。

## Component 6: モニタリング評価

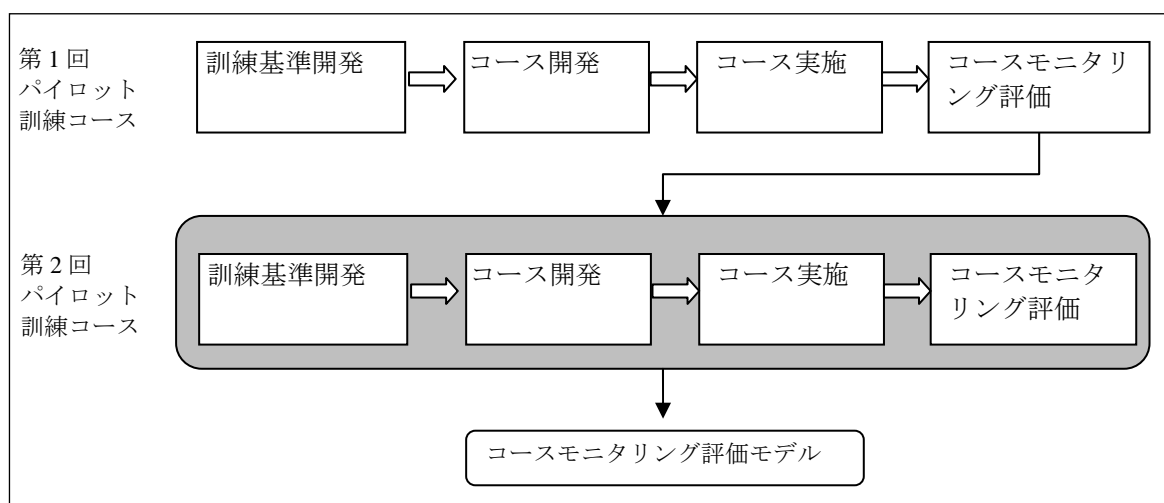
### C6-1 枠組構築

#### モニタリング評価枠組

職業訓練においてモニタリング評価は、訓練運営サイクルの全工程の改善に資する情報を提供する必要がある。その為、本プロジェクトでは下記事項を念頭に置き、モニタリング評価の枠組みを構築した。

- ✓ 第一回パイロット訓練コースのモニタリング評価結果を第二回パイロット訓練コースにフィードバックし、開発・実施プロセスを改善する
- ✓ 第二回パイロット訓練コースのモニタリング評価活動の経験を元に、コース運営の継続的な改善に資するモニタリング評価モデルを開発する

図 3.3 に本概念を図示する。



出典：JICA プロジェクトチーム

図 3.3 パイロットコースのモニタリング評価の枠組

### モニタリング評価活動

第一回パイロット訓練コースの期間が2ヶ月間であること及びその他スケジュールを考慮し、JPTはCPと協議の上、1) 日常的モニタリング、2) コース中間モニタリング、3) コース終了時モニタリング、4) 職場で働く卒業生のフォローアップモニタリングの4つを実施することにし、実施スケジュールを策定の上、実施した。表3.13に活動概要を示す。

表 3.13 第一回パイロット訓練コースのモニタリング評価活動

活動	時期	目的
日常的モニタリング	毎日	<ul style="list-style-type: none"> <li>日々のレベルで課題を確認し、改善案を明確にする。</li> <li>コース評価のためのデータ収集を行う。</li> </ul>
コース中間モニタリング	コース中間	<ul style="list-style-type: none"> <li>コース後半の改善に資するよう、コース実施上の課題及び改善活動案を明確にする。</li> <li>コース評価のためのデータ収集を行う。</li> </ul>
コース終了時モニタリング	コース終了時	<ul style="list-style-type: none"> <li>第二回パイロット訓練コース改善に資するよう、コース実施上の課題・達成度合いと改善活動案を明確にする。</li> <li>コース評価のためのデータ収集を行う。</li> </ul>
フォローアップモニタリング	コース終了2ヶ月後	<ul style="list-style-type: none"> <li>コースの課題や強みを把握して、第二回パイロット訓練コース改善に資するよう、収集データを分析評価する。</li> </ul>

出典：JICAプロジェクトチーム

## C6-2 ツール開発

### 品質指標設定

本プロジェクトでは、他国（ここではオーストラリア）のコンピテンシー基準をイランの現状に合わせるといふファストトラックアプローチを採用しているため、モニタリング評価モデルを開発するにあたって、オーストラリアのモニタリング評価プロセスを参照した。

オーストラリア訓練品質枠組（AQTF: The Australian Quality Training Framework）では、国家が訓練の品質を保証し、訓練の評価をオーストラリアの職業訓練制度利用者に提供する枠組である。このAQTFを参考にし、本プロジェクトのモニタリング評価対象領域を次の6つとした。

- ✓ 訓練実施
- ✓ 指導員
- ✓ 訓練支援環境
- ✓ 訓練生の学習経験
- ✓ 訓練結果
- ✓ 職場におけるパフォーマンス

これら領域を分解し、表3.14に示す品質指標を策定した。

表 3.14 品質指標リスト

領域	品質指標
1. 訓練実施	<ul style="list-style-type: none"> <li>● コース内容</li> <li>● 訓練生アセスメント</li> <li>● 訓練教材・資料</li> <li>● 訓練機材</li> <li>● 明確な期待</li> </ul>
2. 指導員	<ul style="list-style-type: none"> <li>● 説明スキル</li> <li>● 技術知識</li> <li>● コミュニケーションスキル</li> <li>● コース管理スキル</li> </ul>
3. 訓練支援環境	<ul style="list-style-type: none"> <li>● 部屋</li> <li>● センター施設</li> <li>● センターマネジメント、訓練生支援</li> <li>● 安全</li> </ul>
4. 訓練生の学習経験	<ul style="list-style-type: none"> <li>● 達成度</li> <li>● 動機</li> <li>● 全体満足度</li> </ul>
5. 訓練結果	<ul style="list-style-type: none"> <li>● 入学率</li> <li>● 出席率</li> <li>● コンピテンシー単位修了率 (達成率)</li> <li>● 途中退学率</li> <li>● 就職率</li> </ul>
6. 職場におけるパフォーマンス	<ul style="list-style-type: none"> <li>● 卒業生の職場におけるパフォーマンス</li> </ul>

出典：JICA プロジェクトチーム

### モニタリングツール開発

上記品質指標の策定後、モニタリング評価の各活動用に、下表のように自己チェックシート、質問票などのツールを CP と開発し、ペルシア語に翻訳した。

表 3.15 第一回パイロット訓練コースモニタリング評価ツールリスト

モニタリング評価活動	開発したツール
日常的モニタリング	<ul style="list-style-type: none"> <li>● 日常的モニタリング指導員自己チェックシート</li> </ul>
コース中間モニタリング	<ul style="list-style-type: none"> <li>● コース中間フィードバック訓練生質問票</li> </ul>
コース終了時モニタリング	<ul style="list-style-type: none"> <li>● コース終了時フィードバック訓練生質問票</li> </ul>
フォローアップモニタリング	<ul style="list-style-type: none"> <li>● 卒業生インタビューシート</li> <li>● 雇用主インタビューシート</li> </ul>

出典：JICA プロジェクトチーム

作成後、TVTC 第 4 センターにて、訓練生 5 人×2 グループ、合計 10 名に対してツールを試用して不具合を修正し、完成版とした。



### C6-3 モニタリング評価研修

ツール完成後、2009年9月26日にCPを対象として以下の内容で研修を行った。

- ✓ 第一回パイロット訓練コースのモニタリング評価枠組と活動概要
- ✓ CBT アプローチにおけるモニタリング評価の目的（コース運営を評価し改善することが目的であり、指導員の能力評価ではない）
- ✓ 建設的な提案を引き出すために指導員と評価者との間の良好な関係を構築する必要性
- ✓ 訓練生のアセスメント結果の正確な記録の重要性

また、仮想データを用いて、質問票の分析演習も行った。

### C6-4 モニタリング評価実施

第一回パイロット訓練コースに対して次のモニタリング評価活動を計画・実施した。

#### 日常的モニタリング

自己チェックシートを使って、CPが毎日モニタリングを行った。JPTはCPの本活動をモニターし、必要に応じて支援を行った。本モニタリングにて、訓練生間の技術レベルの差異が訓練生間の訓練進捗のばらつきをもたらし、指導を難しくしていることが判明した。習熟の早い訓練生が遅れている訓練生を教える仕組みを導入し、指導の効率を上げることによって本問題を解決した。

日常的モニタリングにより、上記例のようなコース運営上の課題を発見し、改善策を立てて実行した。一方、CBTアプローチでは訓練生のアセスメント記録などの書類作成作業が必要となるのであるが、TVTOでは訓練記録を書面に残す仕組みがあまりないために、本活動はCP指導員にとっては取り組み難いということも明らかになった。

#### コース中間モニタリング

コースの中間時点で、訓練生のコースに対する満足度を質問票にて収集・分析し、コース後半の改善に活用した。

9人が全体的にコースに満足と回答し<sup>8</sup>、3人が不満があると回答した<sup>9</sup>。不満があると回答したのは、職業経験が元々ある技術レベルの高い訓練生であり、入門者用である本コースに満足しなかったと言える。また、コース実施に関わる課題が幾つか明らかになった。一例として、訓練教材・資料に対する満足度の低さが挙げられる<sup>10</sup>。オーストラリアのワークブックを翻訳して教材として利用したのであるが、教材として情報量が十分でなかったため、CPが現地語の教材を追加して配布した。しかしそれがコースの内容と合っていない

<sup>8</sup> 全体満足度に0-20点スケールで15点以上の回答をしている。なおスケールは、（0：全くない、5：ない、10：どちらでもない、15：そうである、20：全くそうである）を利用し、このスケールを本モニタリングを通して使用した。

<sup>9</sup> 全体満足度に15点（＝そうである）未満の回答をした。

<sup>10</sup> 訓練教材・資料の項に12点（「15＝そうである」以下）の回答をした。

かったのが原因ではないかと推察された。教材にはもっと詳しい情報があるべきとの訓練生のコメントもこの推察を裏付けている。この結果を受け、CPはコース後半に必要な追加教材を作成・配布した。一方、指導員の質については全訓練生が概ね満足した<sup>11</sup>。

本活動は、日常的モニタリングで判明したことを再確認する役割を果たし、コース運営改善によりコースの品質向上に資した。

### コース終了時モニタリング

コース終了直後にコース終了時モニタリングを実施した。訓練生の満足度を質問表で調査した。また品質指標の「訓練結果」領域に関するデータを関連書類調査により入手した。これを CP 指導員と評価会を数回開いて協議し、データ分析を行った。表 3.16 に第一回パイロット訓練コースで実施した各コンピテンシー単位の修了者数を示す。

表 3.16 各コンピテンシー単位の修了者人数

コンピテンシー単位	修了者人数
1. Apply safe working practices	12
2. Use and maintain workplace tooling and equipment	12
3. Test, service and charge batteries	12
4. Carry out repairs to single electrical circuits	11
5. Repair ignition systems	11
6. Service and repair electronic gasoline engine management systems	11

出典：JICA プロジェクトチーム

訓練生毎の技術レベルの差異がコース運営に負の影響を与えるなどの、コース運営上の課題が本モニタリングでも確認できた。また、本モニタリングのデータ（定量及び訓練生からの定性コメント）は、日常的モニタリングで得たデータと類似傾向があった、即ち、訓練生の中でも職業経験のある者はコースで扱った内容のレベルに満足していないが<sup>12</sup>、職業経験のない訓練生は全体的に満足している<sup>13</sup>、という開きが生まれた。これにより第二回パイロット訓練コースでは全員が同程度の技術・知識レベル（エントリーレベル）の訓練生となるように設定した。他方でコース内容ではなく、コース運営などに関わる質問では、どの訓練生も知識・技術レベルに関わりなく、指導員の質の高さや自身が学習した経験などについておおむね満足したと回答している<sup>14</sup>。

### フォローアップモニタリング

コースの成果を確認し、第二回パイロット訓練コース改善に関する課題抽出を目的とし、フォローアップモニタリングをコース終了 2 ヶ月後に実施した。JPT の支援のもとで CP

<sup>11</sup> 全訓練生が 15 点（＝そうである）以上の回答をした。

<sup>12</sup> このグループは全体満足度に 0-20 スケールで 14 点を付けた（0：全くない、5：ない、10：どちらでもない、15：そうである、20：全くそうである）なお、本スケールをコース終了時モニタリング全体でも使用している。

<sup>13</sup> このグループは全体満足度に 17 点を付けた（「15＝そうである 以上）

<sup>14</sup> 訓練生は「指導員」品質指標領域に 17 点、「訓練生の学習経験」に 16 点を付けた。（共に 15 点（=Agree）以上）

は全卒業生に就職状況について電話インタビューをし、自動車整備士として働く5人の卒業生に<sup>15</sup>対面インタビュー調査を行った。実際の職場における卒業生のパフォーマンスを確認するため、彼らの雇用主にもインタビューをした。

自動車整備分野で働く卒業生とその雇用主は、訓練を受けた6つのコンピテンシー単位の技術パフォーマンスについては概ね満足していた<sup>15</sup>が、Safety（安全）とRepair Ignition Systems（点火装置修理）の2つの単位については、満足度がやや低かった<sup>16</sup>。Safetyの満足度が低めであったのは、雇用主が安全を重要技術と認識していないため、職場でその技術が発揮される機会がないことが理由と推測される。Repair Ignition Systemsの満足度が低めであったのは、自動車整備の職場によっては必要性が低いのではと考えられた（大規模の整備修理工場では点火装置が故障した場合、修理せず交換してしまうため）。

インタビューを受けた5名の雇用主のうち3名は、実際の職場での勤務経験を訓練生が積めるよう、訓練コースを工夫するのが理想だとコメントした。これは、企業内実習を取り入れたより実践的な訓練を期待していることを示す。この結果を受けて、第二回パイロット訓練コースに企業内実習を導入することを決定した。

以下に卒業生の就職状況をまとめる。

- ✓ 4人の卒業生が就職した。内訳は、1人は自動車整備士、2人は自動車整備士以外の職種ではあるが自動車関連業種に、残る一人は自動車業界外での就職。
- ✓ 産業別訓練諮問準備委員会の紹介で自動車整備業界から訓練に参加した4人の卒業生は、元の職場に戻った。
- ✓ 残る4人の卒業生は未就職であるが、引き続き就学・訓練継続の者もいた。

以下に第一回パイロット訓練コースの成果と課題をまとめる。

- ✓ 卒業生は、訓練を受けた6つのコンピテンシー単位の技術・知識を職場にて問題なく活用していることから、訓練実施は成功であったとする。
- ✓ 訓練機材の不足、不適切なワークブック、訓練生間の技術レベルのばらつきなどの幾つかの課題がコース運営を難しくした。これら課題を解決することにより、コース運営を更に効率化できると期待できる。
- ✓ 訓練生のアセスメント記録作業など、幾つか改善すべき点はあるが、CP指導員はCBTアプローチに基づくコース実施を成功させた。

## 第二回パイロット訓練コースへのフィードバック

第一回パイロット訓練コースの経験に基づき、第二回パイロット訓練コースのモニタリング評価モデルを次のように改訂することを決定した。

- ✓ コース初期段階にて、訓練生のアセスメント記録をCP指導員が適切に記録していなかったにも関わらず、日常的モニタリングでは発見できなかった。これを

<sup>15</sup> 卒業生・雇用主共に1-4スケールで3.1点を付けた。（1=悪い、2=良くない、3=良い、4=とても良い）なお、このスケールをフォローアップモニタリング全てで使用した。

<sup>16</sup> 卒業生・雇用主共にSafetyに2.9点、Repair Ignition Systemsに2.7点を付けた。

改善するため、日常的モニタリングを自己チェック方式から、第三者（JPT）チェック方式に変更した。

- ✓ コース中間モニタリングは日常的モニタリングと役割が重なる部分が多くあったため、コース中間モニタリングの実施をモデルから取り外すこととした。

## コンポーネント 7：コース実施

パイロット訓練コースを計画通り 2009 年 10 月 3 日から 11 月 25 日まで（8 週間）実施した。全 14 名のうち、12 名が全日程を完了し、2 名がコース日程途中で脱落した（落第率 14%）。

### 修了証

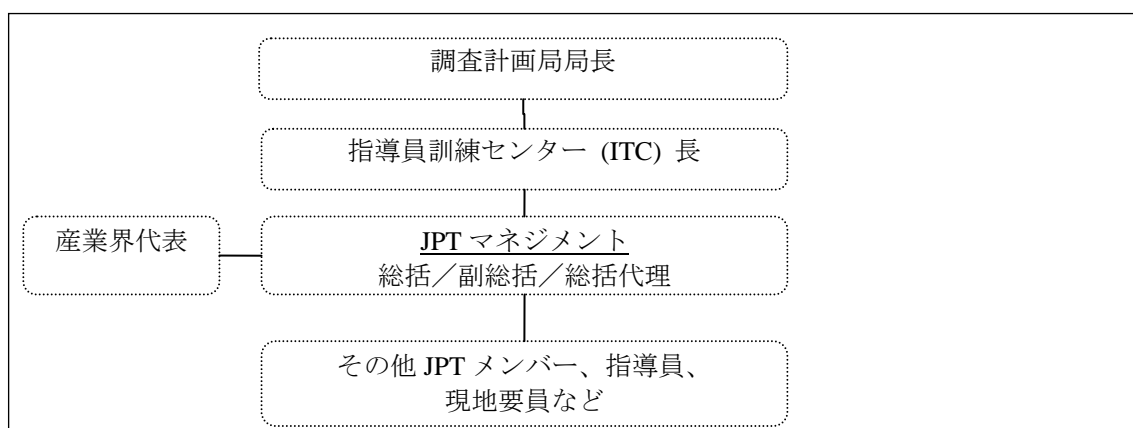
全コース日程終了後、JICA 専門家（自動車整備）の指示に基づき、指導員が 12 名の各訓練生について全 6 単位の習熟度や習熟意欲、態度などについてそれぞれメモを作成した。その後 JICA 専門家（自動車整備、モニタリング・評価）が指導員とのコンピテンシー単位の習熟度の判定会を行った。この判定に基づき各訓練生の修了証を作成した。修了証には、コース名、期間、同審査会によって認可された、当該訓練生の習熟済みのコンピテンシー単位のタイトルを明記した。つまり、コース全体についての修了証ではなく、コース中習熟したと判定された単位についての修了証となっている。コース修了証の発行について、プロジェクトマネージャー（Saberri 氏）と協議を行い、Saberri 氏及び総括（本村）の連署名により発行することとした。修了証授与式を、12 月 13 日に第 4 訓練センターにて開催し、センター長である Najibzadeh 氏により授与した。

## 3.4 第二回パイロット訓練コース

第二回パイロット訓練コースは、4 名の CP 指導員に対する 4 週間の指導員訓練の完了後、2010 年 7 月 17 日より 9 月 20 日まで実施された。実施環境をめぐる想定外の変更に伴い、コース実施期間は当初予定の 8 週間から 6 週間に短縮された。全体期間を短縮せざるを得ないという課題に直面したものの、企業内実習を組み込んだ点で本コースは極めて有益なものとなった。企業内実習により、訓練生はコースを通して実際の職務作業環境に触れ、知識を得ることができた。訓練生の満足度は概して高く、今後 TVTO が CBT を実施展開するために必要な教訓を得ることもできた。以下、主要な点について概説する。

### 3.4.1 実施体制

第一回パイロットコース実施時には、CDC、第 4 訓練センター、TVTO、とプロジェクト事務所とコース実施場所が離れていたが、第二回パイロット訓練コースでは事務所とコース実施場所が共に ITC 内となり、実施体制は下図のように簡素化された。



出典：JICA プロジェクトチーム

図 3.4 第二回パイロット訓練コースの実施体制

### 3.4.2 進捗

第二回パイロット訓練コース準備と実施について、以下のとおり必要な業務を 9 コンポーネント（タスク）に分割した。

- コンポーネント 1 コースフレームワーク
- コンポーネント 2 訓練基準(コンピテンシー単位)
  - 2-1 選定
  - 2-2 翻訳
  - 2-3 適格化
  - 2-4 適格化したコンピテンシー単位の見直し
- コンポーネント 3 プログラムと計画
  - 3-1 訓練コース計画
  - 3-2 セッション計画
- コンポーネント 4 教材
  - 4-1 教科書
  - 4-2 ワークブック
  - 4-3 その他の学習リソース
- コンポーネント 5 習熟度アセスメント（査定）
  - 5-1 アセスメント計画
  - 5-2 アセスメントポートフォリオ
  - 5-3 アセスメントツール
  - 5-4 アセスメントツールの見直し
- コンポーネント 6 技術アップグレード（必要に応じて）
  - 6-1 カウンターパートの技術レベル査定
  - 6-2 カウンターパートの技術アップグレード

**コンポーネント7 機材・消耗品**

- 7-1 必要な機材・消耗品のリスト化
- 7-2 予算化と拠出
- 7-3 調達・搬入・検品

**コンポーネント8 訓練生募集**

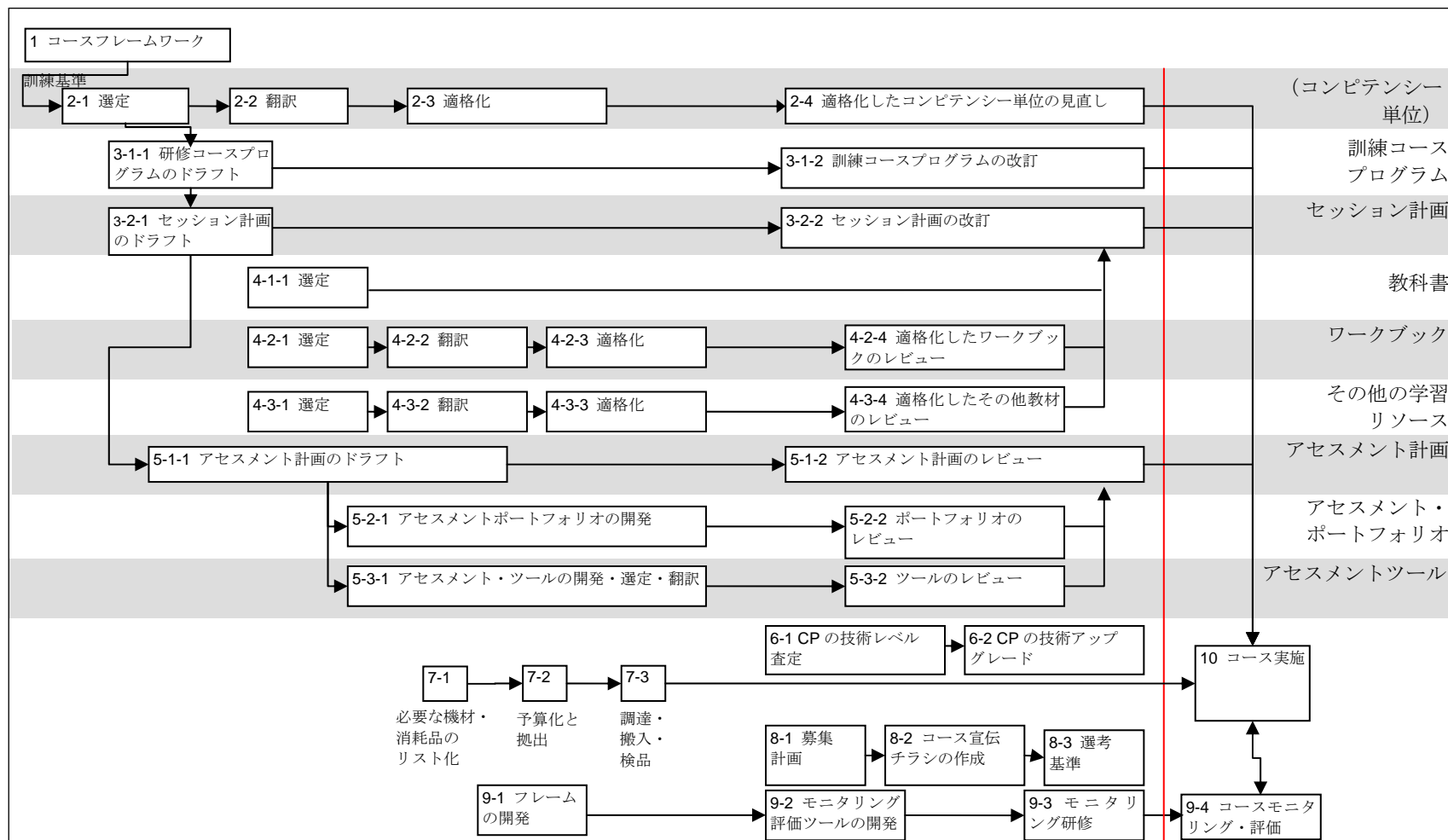
- 8-1 募集計画
- 8-2 コース宣伝チラシの作成
- 8-3 募集と選別

**コンポーネント9 モニタリングと評価(M&E)**

- 9-1 モニタリング評価フレームの開発
- 9-2 モニタリング評価ツールの開発
- 9-3 試行
- 9-4 モニタリング研修
- 9-5 コースモニタリング・評価

**コンポーネント10 コース実施**

また、同パイロットコースの準備フェーズとスケジュールをプレシデンスダイアグラム法 (Precedence Diagramming Method) に従い図 3.5 のとおり示す。



出典：JICA プロジェクトチーム

図 3.5 第二回パイロット訓練コース用のスケジュール・ネットワーク図

続いて各コンポーネントの詳細を記す。

## コンポーネント 1：訓練コース準備

JPT は 2009 年 12 月時点で、第二回パイロットコースの概要（案）を下掲表のとおり、対象分野として自動車部門を推奨した。CP 指導員の専門分野が自動車部門であること、また彼らが引き続きパイロットコースに協力することにより、第一回パイロット訓練コースの経験を踏まえたコース改善が可能であること、これがひいてはプロジェクトの成否を決すると判断したためである。JPT による推薦対象分野（自動車整備・サービス部門）は TVTO により合意、承認を得た。

表 3.17 第二回パイロット訓練コースの枠組

訓練場所	TVTC 第 4 訓練センター、後にカラジ指導員訓練センター
コース選定	自動車：販売、整備、修理 自動車整備：パート 1
コース期間	2 ヶ月（企業内実習含む）
想定指導員	自動車整備指導員（デガブリエル監督）
想定訓練生	高校もしくは技術学校卒業、新卒採用者（訓練生人数は 10～14 人）
指導員訓練	2010 年 5 月（4 週間）

出典：JICA プロジェクトチーム

その他主な提案、変更内容は以下のとおり。

### カウンターパート（指導員レベル）の追加投入

2009 年 12 月、CBT の実践経験のある人材を CDC/TVTO 内に増やすため、プロジェクトの CP 指導員の増員を TVTO に提案した。本提案を受けて、当時のプロジェクトマネージャー（Mr.Saberi）は KOICA プロジェクトに従事する TVTO スタッフ（4 名）を本プロジェクトにできる限り協力するよう決定した（2009 年 12 月 21 日付）。しかし KOICA プロジェクト業務が多忙であるため、実現しなかった。

これとは別に、プロジェクトの ITC 移転に伴い、2010 年 6 月、TVTO が ITC からの指導員の追加投入を提案したが、これも実現しなかった。

### 訓練実施場所

2009 年 12 月に、当時のプロジェクトマネージャー（Mr. Saberi）は、第 18 訓練センター（KOICA プロジェクト実施場所であり、自動車整備修理専用の訓練作業所を建設中）の建設が第二回パイロット訓練コース開始までに完了しないため、第 4 訓練センターを訓練実施場所とする旨決定した。しかし、この決定は 2010 年 6 月に ITC へのプロジェクト実施場所移転の決定に伴い覆された。



## コンポーネント 2: 訓練基準（コンピテンシー単位）

### C2-1 コンピテンシー単位の選定

表 3.17 の枠組みに基づき、自動車整備修理分野の訓練パッケージから基礎にあたる 21 単位（コンピテンシー）を選んだ。この選定には産業別訓練諮問準備委員会（IRG）との個別面接及び質問紙による回答を適用した。質問紙には、同 21 単位のタイトル一覧と各単位の概要説明を添付した。13 名のメンバーは、意見交換を行ったのち、質問紙に各 21 単位についての評価（優先順位やコメント）を記入した。対象とした全単位が優先順位が高いとの採点を得、様々なタイプの作業所に共通に必要なコンピテンシーであることが確認された。

このうち、準備期間において、指導員の稼働可能な時間数などからワークブック翻訳・開発の進度に合わせて優先度を検討し、2009 年度末期には 14 単位を優先して準備に着手することとした。しかしながら、2010 年 5 月、ITC 移転に関する決定と両者合意、計画変更とそれに伴う移転の諸手続き等に想定外の時間を要し、パイロット訓練コースの開始自体が 2 週間遅延（当初 7 月 3 日開始であったところ 17 日）し、コース期間そのものも 6 週間（企業内実習は除く）に短縮することとなった。この短縮に伴い、取り扱うコンピテンシー単位数を 10 に減じ、「自動車メンテナンスコース」の一部を構成するものとして、「パート 1」として実施することに決定した。当該「パート 1」で扱うコンピテンシー 10 単位を表 3.18 に掲げる。

表 3.18 第二回パイロット訓練コースとして選定されたコンピテンシー単位

単位コード	単位名	所要時間（標準）
AURC251356A	Read in the workplace	20
AURC270103A	Apply safe working practices	20
AURT201170A	Inspect and service engines	20
AURT203170A	Inspect and Service petrol fuel systems	15
AURT210170A	Inspect and service braking systems	20
AURT215170A	Inspect and service steering systems	10
AURT207170A	Inspect and Service Transmissions (Automatic)	10
AURT270278A	Use and maintain workplace tooling and equipment	20
AURE218676A	Test, service and charge batteries	15
AURE218708A	Carry out repairs to single electrical circuits	40

出典：JICA プロジェクトチーム

### C2-2 コンピテンシー単位の翻訳

第二回パイロット訓練コース用のコンピテンシー単位の翻訳（英語からペルシア語）を 2010 年 1 月から 4 月にかけて CP 指導員と JPT が実施した。

### C2-3 コンピテンシー単位の適格化（カスタマイズ）

指導員訓練中にコンピテンシー単位の適格化を行い、各指導員は自動車整備専門家やその他 JPT 専門家の指導・助言を受けながら、ワークブックの開発を行った。

### C2-4 適格化したコンピテンシー単位の見直し

コンピテンシー単位は 2010 年 7 月に企業に承認される水準になるよう適格化された。また、第二回パイロット訓練コースが 2010 年 9 月に完了した時点で、適格化したコンピテンシー単位について以下の観点で最終的なレビューを実施した。

- ✓ 実施した業務が適切なものであったか、
- ✓ 実施した業務の範囲とレベル、
- ✓ 関連する知識の量、範囲、レベル、
- ✓ 学習支援教材が適切であったか、
- ✓ 効果と持続性を検証するためのアセスメント・ツールや手法

## コンポーネント 3：プログラムと計画

### C3-1 訓練コースプログラム（カリキュラム）

当初計画では 21 単位を扱う予定であったところ、ワークブック開発等の準備及び実施時間を考慮し 14 単位に減じた。さらに増加予定の CP の増員がなかったこと、及び 2010 年度当初の実施場所移転に伴うコース開始の遅れにより、さらに 4 単位減じて表 3.18 に示したように、10 単位で実施した。10 単位の選定は、ワークブック開発の進捗や想定される訓練生の関心度などに基づいて決定した。この 10 単位は「自動車メンテナンスコース」中、「パート 1」としてコースの一部を成すものである。このうち 3 単位が、第一回パイロットコースでも扱ったのと同じ単位であるが、訓練生は全く新規に募集・採用される予定であること、募集対象が業務経験のない層（2 号資格）を想定していることから必須であると判断した。

コースタイトルは「自動車整備コースパート 1」と決定した。表 3.19、表 3.20 はコース全体の時間割であり二期に分割し、両期間の間に 3 週間の企業内実習を入れた。第二期はラマダン（イスラム断食期間）にあたるため、コース時間が短くなった。

表 3.19 第二回パイロット訓練コースの時間表（第一期）

第一期 2010年7月17日～7月28日			
週	日	午前	午後
第1週	7月17	Introduction + Safety (ED)	Safety (R)
	18	Safety (ED)	Tools and Equipment (S)
	19	Safety (R)	Tools and Equipment (S)
	20	Engines (S)	Tools and Equipment (S)
	21	Engines (S)	Tools and Equipment (S)
第2週	24	Engines (S)	Tools and Equipment (S)
	25	Engines (S)	Engines (S)
	26	Engines (S)	Engines (S)
	28	Read in Workplace (R)	Read in Workplace(R)

開始：8:30～終了：15:00（昼食休憩1時間）

(K): Mr. Khalilzade; (R): Mr. Rafati; (S): Mr. Salimian; (N): Mr. Nikooravan; (ED): Mr. DeGabriele

出典：JICA プロジェクトチーム

表 3.20 第二回パイロット訓練コースの時間表（第二期）

第二期 2010年8月21日～9月15日			
週	日	午前	午後
第1週	8月21	Petrol (K)	Petrol (K)
	22	Petrol (K)	Petrol (K)
	23	Petrol (K)	Petrol (K)
	24	Petrol (K)	Petrol (K)
	25	Petrol (K)	Petrol (K)
第2週	28	Petrol - EFI (K)	Petrol EFI (K)
	29	Petrol - EFI (K)	Petrol - EFI (K)
	30	Brakes (K)	Brakes (K)
	31	Brakes (K)	Brakes (K)
第3週	9月4	Brakes (K)	Brakes (K)
	5	Brakes (K)	Brakes (K)
	6	Auto Trans (R)	Auto Trans (R)
	7	Auto Trans (R)	Auto Trans (R)
第4週	8	Auto Trans (R)	Auto Trans (R)
	11	Steering (S)	Steering (S)
	12	Steering (S)	Steering (S)
	13	Electrical (N)	Electrical (N)
第4週	14	Electrical (N)	Electrical (N)
	15	Read in Workplace (R)	Read in Workplace (R)

開始：8.30～終了：14:00（※ラマダン中のため昼食休憩なし）

(K): Mr. Khalilzade; (R): Mr. Rafati; (S): Mr. Salimian; (N): Mr. Nikooravan; (ED): Mr. DeGabriele

出典：JICA プロジェクトチーム

2010年7月、4名のCP指導員のうち、Nikooravan氏がTVTOを退き海外へ留学した。これに伴い、彼が担当する予定であったバッテリー・電気部門はITCの当該部門担当の指導員が代行することで合意した。この指導員は過去「CBT導入」ワークショップ（3日間）に出席して基礎的なCBTアプローチについて理解・習得済みであった。

### C3-2 企業内実習

企業内実習の目的は、自動車整備という職について現実的な見方を訓練生が持てるようにすること、より詳しくいえば、実際の職務環境でどのような業務を遂行することが求められるかを体得する機会を与えることである。

CBT は、現実の職・仕事を遂行するのに必要な様々な業務を実施できるように訓練するものであり、訓練制度が定める理論の教授のことではない。

企業内実習中、訓練生はコースで学んだことの実際を、体験・観察した。つまり、理論と職務環境での実践を、直接体験を通してつなぐことが狙いであった。

#### 企業内実習の実施

企業が実習受け入れに提供する各作業所にどの訓練生を割り当てるかについては IRG 会社（2010年7月5日実施）にて協議された。続いて委員会メンバーと CP 指導員との会合が Saipa Yadak 社でもたれた。この会合の目的は企業内実習においてどの企業がどのタスクを担当するか、また実習先現場をどこにするかを決定することであった。Megamotor 社から Mohamadi 氏が、Saipa Yadak 社からは Ghodarzi 氏と Nabaei 氏の2名が出席した。

本会合の成果として、実習先企業ごとに担当するコンピテンシー単位もしくはタスクのスケジュールが決定された。

本会合は、コンピテンシー単位からブレイクダウンされた業務が妥当なものかを企業が確認する場としても機能した。結果、若干の調整がなされ実習先企業が訓練生に価値のある体験を提供できることを担保した。

また CP 指導員が実習先企業の監督者と緊密に連携して訓練生をモニターすることとした。Mega Motor 社からの依頼により、2名の CP 指導員が常に訓練生に付き添うこととした。実習現場で訓練生が体験する業務の管理と記録のためのチェックリストを作成し、CP 指導員が記入することとなった。（別添 M-1 Workplace Task Distribution for Industry Attachment）

この企業内実習では、CP 指導員は訓練生に対して以下の責任を担った。

- ✓ 実習先の監督者に対し、訓練生が体験する業務を確認し、プロジェクトにおける企業内実習の目的を説明する
- ✓ 常に実習現場の訓練生を訪ねて進捗を確認し、実習先の監督者と打合せを行う
- ✓ すべての訓練生の企業内実習報告書を作成する
- ✓ 必要に応じて、企業、JPT、TVTO へ問題を報告する

一方、訓練生は以下の責任を担った。

- ✓ 決められた実習現場にて午前8時から午後3時30分まで15日間実習を行う
- ✓ 第二回パイロット訓練コースのコンピテンシー単位の業務を実際に経験・観察する
- ✓ 実習中の遅刻、欠席については実習先の監督者と担当 CP 指導員に連絡する
- ✓ 一般的な勤務形態に関しては実習先の社員の指示に従う

実習期間中を通して、訓練生は訓練コースで学ぶコンピテンシー単位の業務を経験することができた。

## コンポーネント 4：教材

第二回パイロット訓練コース用カリキュラムは、その開発プロセスをステップに分けて体系立てて、それをマニュアル（別添 N）に所収した。続く以下のセクション（C4-1 から C4-6）では、JPT が実際にとった手順について述べる。

### C4-1 学習・アセスメントガイドの作成

初めに、学習・アセスメントガイドを作成した。同ガイドには以下の項目が含まれる。

- ✓ 指導員は誰（となる予定）か、学習支援・指導を仰ぐための連絡方法は何か
- ✓ 修了すべきコンピテンシー単位数
- ✓ コースの名目期間と想定されるコース／単位スケジュール
- ✓ 勤怠及びアセスメントの要件
- ✓ 推薦テキスト・教材
- ✓ 企業内実習やコースに関連する視察等の予定

第二回パイロット訓練コースでは、コース期間を通してこれらを試験的に用いたが、指導員訓練期間にて開発したテンプレートも別添 N の CBT マニュアルに収録してある。

### C4-2 コンピテンシー単位の分析と全訓練情報の翻訳

指導員訓練期間中、CP 指導員は JPT 専門家の指導の下、各コンピテンシー単位を十分時間を取って分析・翻訳を行った。まず、「冷却システムの検査・整備 (Inspect and Service Cooling Systems) 2号資格」をサンプルとし、内容についての詳細な議論、分析、翻訳を行った。JPT より具体的な例示を行ったことで、CP 指導員は各単位が有する語用や文体に慣れ、理解を深めることができた。CP 指導員たちは、この1週間の演習によって、プロジェクト開始から聞きなじんできた理論的な情報だと考えていた CBT 理念を、より具体的な側面から理解するのに極めて役立ったと報告している。

### C4-3 コンピテンシー単位の要素（エレメント）毎の訓練業務の設定

JPT は訓練業務分析のステップでも、IRG を通して主要な企業代表と協議を行った。この協議で判明したことは、企業の多くが現場で必要とされる職務と業務の分析を顧みる余裕がない、ということであった。そこで JPT は第二回パイロット訓練コースの業務分析は、企業からのインプットではなく代替的な方法で実施した。

#### C4-4 業務内容の妥当性・適切性に関する企業への確認

業務内容を決定するため、CP 指導員はまず Azadi Kosh 地区でも評判の良い自動車整備作業所を 3ヶ所訪れた (MEHR、KOSH、CHARMAHALI BENZ の 3ヶ所)。訪問先で CP 指導員は持参した業務一覧表をもとに、作業所監督と協議し、業務の選び方、実際に必要となる頻度、2 号資格相当のコースにとっての重要性や、どの程度実用に耐えるか、などの点を確認した。作業所主任や監督者からのコメントにより、業務の加除修正を行った。

さらなる業務内容の改訂は、IRG メンバーの協力を得て実施した。全体会議が 2010 年 7 月 5 日に開催された後、Saipa Yadak 社訓練機関内で企業内実習について個別の追加打合せを行った (同 7 日) 際、この業務表を配布して、パイロット訓練コースでの実施について再度微調整を行った。

#### C4-5 訓練リソースの開発

第二回パイロット訓練コースのための訓練リソースは以下に述べる 4 つのステップに従い開発した。

- 1) 技術情報の収集
- 2) 利用可能な訓練教材の調査
- 3) 訓練ワークブック作成

CP 指導員はオーストラリアのワークブックをそれぞれ複数冊分析し、それぞれの内容で最も適した体裁・記述のものを選んで 1 冊に統合した。ブック共通の構成は以下のとおり。

目次
導入：単位の説明／アセスメント基準（訓練生は何を修了させなければならないか）／主な参照資料／キーワード
安全配慮
本文：ワークブックで扱うコンポーネントの説明、システムや運用方法、整備ステップ、「セーフティボックス」、実習／要約／レビュー設問・業務／次に進む前に指導員に報告すべき項目

- 4) その他訓練リソースの作成

その他作成されたものは：

- ✓ 訓練生への配付資料
- ✓ 追加の作業指示や業務進捗を記録するための実習シートとチェックリスト
- ✓ 職務環境における業務反復実施を記録・担保するための第三者確認証
- ✓ 公正かつ適正な業務実演とアセスメントのために必要な資機材・ツールリスト

## C4-6 訓練計画の策定

CP 指導員は以下の項目を含む訓練計画を策定した。

計画	実践での留意点
セッションの構成（セッション計画含む）	学習意欲を高めるような戦略をたてる
アセスメント・ツールの選択	問いかけ型のテクニックを用いる
訓練教材の選択	訓練生の個性に対応する
（勤怠・学習態度等）モニタリング	意見出しと発表形式の活用

## コンポーネント 5：習熟度アセスメント（査定）

### C5-1 アセスメント計画

アセスメント計画は様々なアセスメント手法の中でもから、その当該要素（エレメント）のパフォーマンス基準ないしは、各コンピテンシー単位にどの手法を用いるか、に照らして選んだ上、策定した。各単位に必要なアセスメントはアセスメント表（別添 M-2 Assessment Matrix for Unit of Competence、別添 M-3 Assessment Guide）に掲げた。最も一般的なアセスメント手法は、筆記試験の解答（通常多項目選択式）、実演形式や作業場での（パフォーマンス）確認などである。

### C5-2 アセスメントポートフォリオ

パイロットコースの進行に即したアセスメントポートフォリオを各訓練生用に作成した。単位によって証明の形式は様々であり、記録は CP 指導員が行った。代表的なポートフォリオの内容として：筆記テスト結果（原本）、業務の実演のアセスメントチェックリスト、作業所での業務審査、指導員や作業所監督者からのコメントがある。ポートフォリオで使用する主要な書式・チェックリストなどサンプルは各ワークブックにも所収した（別添 M-4 Assessment Summary）

### C5-3 アセスメント・ツール

主なアセスメント・ツールは、ワークブックに統合して記載されるか、コンポーネント毎に独立するか、いずれかの形で開発される。ワークブック版でのツールとは：コンピテンシー習熟に至るまでのステップを示したアセスメントの概要説明、レビュー問題、実演業務のチェックリスト、課題の 4 つから構成される。ワークブックに含まれないものには、アセスメント表、筆記式多重選択テスト、作業所でのタスク審査フォームのツールがある。

## コンポーネント 6 : 訓練生募集

### C6-1 募集計画

ITC と JPT の協議の結果、訓練生募集は ITC が担当した。ITC 訓練課課長である Bojalvand 氏は第二回パイロット訓練コース実施のコーディネーターとして、カラジ周辺からの訓練生募集を行った。当初計画では募集広報はチラシの配布や ITC ウェブサイトで行う予定であった。しかし、ITC 訓練局が既に過去の類似のコースへの応募者リストを有していたため、プロジェクト事務所のカラジ移転に伴う数週間のロスを巻き返して募集プロセスを最速化するために、訓練生はまず ITC の有するリストから選抜した。

### C6-2 選考基準

候補者の選考基準は以下のとおり。

- ✓ ITC 事務所への登録が完了していること
- ✓ ディプロマレベル (SIKL) の学位取得済み (前期中等教育に相当)
- ✓ 年齢 : 17~30 歳 (証明書必須)
- ✓ 国語・数学のプレテスト合格者であること
- ✓ 面接を受けること
- ✓ 健康状態良好であること

### C6-3 選考過程

応募者はプレテスト (2010 年 7 月 14 日実施) を受検し、面接 (同 17 日) を受けた。プレテストは ITC で行い、既に定評あるものとして、既存の標準的な「数理」試験用紙を用いた。本試験は 20 問の多項目選択式で 28 名の受検者のうち、合格ライン (50%) を満たしたものは 17 名だけであった。しかし、CP 指導員はプレテストでふるい分けを行わず、全 28 名に面接を実施した。プレテストのみでは適性が十全には測れないであろうとの理由である。筆記と面接結果を統合し、最終的に 12 名の訓練生候補、2 名の補欠を選抜した。

## コンポーネント 7 : コース実施

### C7-1 時間割

当初、第二回パイロット訓練コースは全 11 週間 (訓練 8 週間と企業内実習 3 週間) を計画していたが、プロジェクトオフィスの移転などの想定外の事情が発生したことで、本訓練 6 週間に短縮し、企業内実習は 3 週間のままとした。これにより対象コンピテンシー単位の数は 10 単位に減じた。企業内実習の期間を減らさなかったのは、本パイロット訓練コースのコンポーネントとして最重要視したためである。



## C7-2 教授方法

CP 指導員が教室や作業場運営を積極的にリードし、訓練生が前向きに学習するような働きかけが必要であり、そのために訓練生の業務・手順・概念の理解度を査定するための問いかけ技法を用いる余地があったとの指摘があった。

また振り返りのセッションでは、CP 指導員ら自ら、理論の伝達に熱心になるあまり、実際の業務査定は独立した実演として行うだけでなく、実際の作業の流れの中でも行うことも可能であった、との気づきがあった。

## C7-3 資機材とリソース

CP 指導員と訓練生は ITC が有する最新式の自動車関連の資機材を利用することができた。訓練生は多様な新型乗用車や、豊富な工具や特殊機器を実際に使用することができた。このような資機材の充実は、ほとんどの典型的な TVTC では不可能である。

資機材だけでなく、多くの学習教材も提供された。第二回訓練コースに先立ち CP 指導員が自ら開発したワークブックは訓練生にとって有用なリソースとなった。またコース実施管理は、通常の出席簿の記録と以下に述べるコース関連情報の修了記録の二本立てで行った。

- ✓ 全項目についての知識テスト
- ✓ 業務実習記録シート
- ✓ 作業場での業務実習
- ✓ アセスメント要約
- ✓ 訓練生合意文書
- ✓ プレテスト
- ✓ Mega Motor 社作成の企業内実習プログラム

## コンポーネント 8：モニタリングと評価

### C8-1 枠組構築

第一回パイロット訓練コースで使用したモニタリング評価モデルを改善し、第二回パイロット訓練コースに適用した。表 3.21 に第二回パイロット訓練コースで実施した 4 つのモニタリング評価活動の概要を示す。

**表 3.21 第二回パイロット訓練コースの4つのモニタリング評価活動**

活動	タイミング	目的
日常的モニタリング	日々	<ul style="list-style-type: none"> <li>日々の課題及びその改善のための活動の同定。</li> <li>コース評価のためのデータ収集。</li> </ul>
企業内実習モニタリング	企業内実習期間中	<ul style="list-style-type: none"> <li>企業内実習における日々の課題と、企業内実習及びコース全体の後半部分の改善に資する活動の同定</li> <li>コース評価のためのデータ収集。</li> </ul>
コース終了時モニタリング	コースの終了時	<ul style="list-style-type: none"> <li>コース実施における課題・強みと、将来の訓練コースの改善に資する活動の同定</li> <li>コース評価のためのデータ収集。</li> </ul>
フォローアップモニタリング	コース終了 2 ヶ月後	<ul style="list-style-type: none"> <li>訓練コースの最終的な成果を確認してコースを評価し、将来の訓練コースの改善資する活動の同定。</li> </ul>

出典：JICA プロジェクトチーム

第一回パイロット訓練コースからの主な変更点は下記の通りである。

- ✓ 日常的モニタリングを指導員による自己チェック形式から第三者 (JPT) によるモニタリングに変更
- ✓ コース中間モニタリングを中止
- ✓ 第二回パイロット訓練コースでは企業内実習が実施されるため、企業内実習モニタリングの追加
- ✓ コース終了時モニタリングの質問票では 0-20 ではなく 1-5 スケールを使用

### C8-2 ツール開発とツールの使い方訓練

JPT は 6 月 19～20 日に CP を対象にワークショップを開催し、第二回パイロット訓練コースで使用するツール開発とモニタリング評価プロセスについて、以下の要点を説明した。

- ✓ 第一回パイロット訓練コースのモニタリング評価の結果とレビュー
- ✓ 第二回パイロット訓練コースにおけるモニタリング評価の確認
- ✓ 既存のモニタリング評価ツールの見直し
- ✓ モニタリング評価ツールの新規開発
- ✓ モニタリング評価の主目的の再確認 (コースの改善であり指導員の能力評価ではない)

品質指標についても以下の通り、若干の変更を行った。

- ✓ 「訓練結果」と「職場におけるパフォーマンス」の 2 つの領域を 1 つの領域「訓練成果」に統合
- ✓ 安全品質指標を「訓練支援環境」から「訓練実施」の領域に移動 (これは安全が訓練環境だけの問題ではなく、訓練の様々な点に関連するためである)

表 3.22 に第二回パイロット訓練コースの品質指標の一覧を示す。

**表 3.22 品質指標リスト**

領域	品質指標
1. 訓練実施	<ul style="list-style-type: none"> <li>• コース内容</li> <li>• 訓練生アセスメント</li> <li>• 訓練教材・資料</li> <li>• 訓練機材</li> <li>• 安全</li> <li>• 明確な期待</li> </ul>
2. 指導員	<ul style="list-style-type: none"> <li>• 説明スキル</li> <li>• 技術知識</li> <li>• コミュニケーションスキル</li> <li>• コース管理スキル</li> </ul>
3. 訓練支援環境	<ul style="list-style-type: none"> <li>• 部屋</li> <li>• センター施設</li> <li>• センターマネジメント、訓練生支援</li> <li>• 安全</li> </ul>
4. 訓練生の学習経験	<ul style="list-style-type: none"> <li>• 達成度</li> <li>• 動機</li> <li>• 全体満足度</li> </ul>
5. 訓練成果	<ul style="list-style-type: none"> <li>• 入学率</li> <li>• 出席率</li> <li>• 単位修了率（達成率）</li> <li>• 途中退学率</li> <li>• 就職率</li> <li>• 職場におけるパフォーマンス</li> </ul>

出典：JICA プロジェクトチーム

日常的モニタリングシート、日常的フィードバック訓練生質問票、企業内実習モニタリングのためのツールを新規開発し、他のツールは改訂した。第二回パイロット訓練コースのモニタリング評価ツールを表 3.23 に示す。

**表 3.23 第二回パイロット訓練コースモニタリング評価ツールリスト**

モニタリング評価活動	開発・改訂したツール
日常的モニタリング	<ul style="list-style-type: none"> <li>• 日常的モニタリングシート（新規開発）（新規開発）</li> <li>• 日常的フィードバック訓練生質問票（毎日）</li> <li>• 日常的フィードバック訓練生質問票（単位ごと）（新規開発）</li> </ul>
企業内実習モニタリング	<ul style="list-style-type: none"> <li>• 企業内実習タスク終了チェックシート（新規開発）</li> <li>• 企業内実習日常的モニタリングシート（新規開発）</li> <li>• 企業内実習監督者質問票（新規開発）</li> <li>• 企業内実習訓練生質問票（新規開発）</li> </ul>
コース終了時モニタリング	<ul style="list-style-type: none"> <li>• コース終了時フィードバック訓練生質問票（改訂）</li> <li>• コース終了時訓練生フォーカスグループインタビューシート（新規開発）</li> </ul>
フォローアップモニタリング	<ul style="list-style-type: none"> <li>• フォローアップ卒業生インタビューシート（改訂）</li> <li>• フォローアップ雇用主インタビューシート（改訂）</li> </ul>

出典：JICA プロジェクトチーム

### C8-3 モニタリング評価実施

計画通りに4種のモニタリング評価活動を以下の通り実施した。

#### 日常的モニタリング

JPT がコース文書の確認や質問票・インタビューによる訓練生・指導員から意見聴取を行い、コース改善に役立てた。例えば、モニタリングにおいて訓練時間割の遅延が判明した際、コンピテンシー単位の業務の優先順位付けを確認し、訓練を規定時間内に終了できるよう調整が可能となった。また別の例では、指導員の1人が訓練生のアセスメント記録を付けるにあたり、独自フォームを使用し、記録が規定記録用紙に転記されていなかった。標準のフォームに記録するように指導することにより、不適切な記録作業を修正した。

#### 企業内実習モニタリング

企業内実習中は訓練生ができるだけ多くの種類の業務<sup>17</sup>を経験することが期待されるため、企業内実習モニタリングでは、期間中に訓練生がどれだけの業務を経験しているかを集中的にチェックした。また質問票により、訓練生から達成度や満足度に関する意見も収集した。

CP 指導員は受け入れ企業の職場で訓練生を毎日監督し、JPT も適宜職場を訪問して CP を支援した。モニタリングを通して、訓練生がある一種の業務しか経験できていないことを CP が一週目に気づき、受入企業の監督者に報告した。訓練生を異動させ、別の業務経験ができるよう、迅速な対応を取ってくれた。また訓練生はコースで学んだ業務だけでなく、学んでいないものも経験していたことが明らかになった。

訓練生が経験できた業務の平均値<sup>18</sup>を表 3.24 にまとめる。全ての訓練生が経験すべき業務を全て経験することは無理であったが、大部分の訓練生が一定程度の業務を経験することができたことがこれから分かる。

<sup>17</sup> 業務とはコンピテンシー単位を分解したものであり、パイロットコースにおける訓練生のアセスメントはこの業務レベルで行う。例えば、Service Petrol Fuel Systems 単位は8つの業務に分解される。受入企業の監督者は、企業内実習業務終了チェックシートを使い、各訓練生がどれだけの業務を経験したかを毎日チェックした。

<sup>18</sup> 訓練生が経験したタスクの平均値＝すべての訓練生が経験したタスク数のべ総数 ÷ (タスク数の総計×訓練生数)

表 3.24 各コンピテンシー単位のタスク終了率

コンピテンシー単位（含まれるタスクの数）	訓練生が経験したタスクの 平均値
ブロック 1（企業内実習実施前）	
1. Apply Safe Work Practices（5 タスク）	72%
2. Workplace Tools and Equipment（4 タスク）	69%
3. Inspect and Service Engines（11 タスク）	78%
4. Service Petrol Fuel Systems（8 タスク）	45%
5. Read in the Workplace（5 タスク） *50%は企業内実習実施前に終了	55%
ブロック 2（企業内実習実施後）	
6. Inspect and Service Braking Systems（11 タスク）	45%
7. Inspect and Service Transmissions (Automatic)（3 タスク）	58%
8. Inspect and Service Steering Systems（5 タスク）	38%
9. Test, Service and Charge Batteries（4 タスク）	25%
10. Repairs to Single Electrical Circuits（6 タスク）	10%

出典：JICA プロジェクトチーム

上記の結果に基づき、CP指導員は、訓練生の経験した内容に見合うようコース後半のスケジュールを変更した。企業内実習終了直後にフィードバック質問票を配布し、訓練生の満足度に関する意見を収集したところ、企業内実習に対して全般的に満足していた<sup>19</sup>。

### コース終了時モニタリング

コース終了直後に本モニタリングを実施した。質問票とインタビューにて JPT が訓練生から意見収集の上、コース関連書類からもデータを収集した。その後に、CP と評価会を行い、収集データを分析した。コース結果は次の通りである。

- ✓ 7名の訓練生が全 10 個のコンピテンシー単位を修了。2 名が 5 個の単位を修了。残り 3 名は 6～9 の単位を修了した。
- ✓ 出席率<sup>20</sup>は 93%であった
- ✓ 途中退学率は 0%であった
- ✓ 訓練生はコースに十分満足した

表 3.25 に第二回パイロット訓練コースにおけるコンピテンシー単位修了率をまとめた。

<sup>19</sup> 全体満足度に 1～4 スケールで 3.5 点を付けた。（1：全くない、2：ない、3：そうである、4：全くそうである）このスケールは企業内実習モニタリングを通して使用された。

<sup>20</sup> 出席率 = 全受講者ののべ出席日数 ÷ (訓練生数 × 訓練コースの日数)

表 3.25 各コンピテンシー単位の修了者数

コンピテンシー単位	修了者数
1. Apply Safe Work Practices	12
2. Use and maintain workplace tooling and equipment	12
3. Inspect and Service Engines	9
4. Service Petrol Fuel Systems	7
5. Inspect and Service Braking Systems	10
6. Inspect and Service Transmissions (Automatic)	9
7. Inspect and Service Steering Systems	11
8. Test, service and charge batteries	11
9. Carry out repairs to single electrical circuits	11
10. Read in the Workplace	11

出典：JICA プロジェクトチーム

12 名中、5 名の訓練生が幾つかのコンピテンシー単位を修了できなかった。この原因について評価会で CP 指導員と分析を行ったところ、習得速度の遅い訓練生にとっては訓練時間が十分ではなかったことが主な理由としてあげられた。訓練教室、パソコン、図書館、セッション終了後の学習時間などの学習環境を整備することで訓練環境を改善すること、更に訓練生の自主的な学習を奨励するべく改善努力をすることが、これの解決には必要であるとの結論に行き着いた。これは、3 人の訓練生が、もし ITC が授業後も開いていたら、自習したかったとコメントしていることから確かなものと言える。

コース終了時モニタリングではこのように量的・質的データを効果的に提供できた。様々な視点から収集したデータを分析することにより、訓練の全過程における課題を明確にし、将来のコースの改善のための道しるべを示した。

### フォローアップモニタリング

フォローアップモニタリングはコース終了後一定期間後に、CP により実施され、「コースの成果」品質指標領域に関するデータを収集し、評価の結論がまとめられる予定である。

## 3.5 CBT 作業委員会

第二回合同調整委員会会議（2010 年 2 月実施）での協議に基づき、JPT は CBT 作業委員会をテヘランに設置することを提案したが、プロジェクトのカラジへの移転に伴い、ITC 内に設置された。またその機能は本来提案した内容よりも規模を縮小した。同作業委員会の設置は、JICA プロジェクトにより得られた教訓をイランの職業訓練セクターに継続的に応用することを目的とする。CBT 委員会の実施状況については、表 2.7 に記載した。

## 3.6 CBTモデルとマニュアルの開発

JPT が CP 指導員と協働しながら、パイロット訓練コースを二回にわたって運営した目的は、CBT アプローチや方法論を実地経験を通して導入するためであった。彼ら CP 指導

員のほか、導入ワークショップに参加した TVTO 職員らを対象として JPT は CBT を実施する際の手引となるよう、マニュアルを開発した。

マニュアルはプロジェクトが期間中に実際に CBT をパイロット訓練コースを実施しながら改訂・編集を試みた経験・教訓に基づいて開発されている。2010年3月に第一回パイロット訓練コースに基づいて初版が TVTO に提出され、コメント・修正を求めた。この初版に第二回パイロット訓練コースで得られた教訓など、改訂をくわえたのが第二版（2010年9月提出）である。関係者にコメントを仰ぎ、また翌10月に実施したマニュアル内容に関する披露セミナーの参加者からもコメント・修正等を受け付け、最終稿とした。完成版のマニュアルは以下の三部構成である。

第一部：職務に関連したコンピテンシー基準の決定

第二部：コンピテンシー・ベースト・トレーニングの実施を支援するカリキュラム開発

第三部：適切なモニタリング評価枠組（フレームワーク）を開発する手順

読者の使いやすさに配慮して、各部には「概説」「手順」そして「添付資料（各フォーマット等）」を備えている。

### 3.7 教訓

本プロジェクト開始時から、その活動を通して得た様々な教訓について以下に述べる。

- ✓ CBT 導入ワークショップ参加者は、それまで CBT の概念や方法論に触れたことがないため、幾つかの基本概念を受け入れるのに時間がかかっていた。CP がパイロットコース実施に参加することによって CBT アプローチへの理解を劇的に改善したことから、参加型ワークショップへの参加は CBT 理解促進の助けになるといえる。以下、導入当初に周知させるのに困難を感じた用語や考え方等をあげる。
  - CBT ではコンピテンシー基準は訓練機関が規定するのではなく、産業界が定めるという考え方
  - 訓練実施機関の責務は、適切なカリキュラムを開発し、訓練実施のためのカリキュラムと教材の開発と適切な実施手法の選択にあるという認識
  - 訓練生の習熟度についての段階的なアセスメントは指導員が行うべきであり、試験部署というような外部組織がやることではないということ
  - 訓練コースが産業界の定める基準を満たし、かつ、コース中も継続的にコース改善を可能にするために、コース実施中にモニタリング評価を行う必要性
- ✓ 企業の規模により事業体制やアプローチが異なるため、必要なコンピテンシー基準にも違いがある。このような多様な訓練コースに応えるため、IRG メンバーのほかニーズ調査の情報ソースとしては、十分な知識・技術を備えるだけで

なく、多様な企業規模を代表するような人材を選抜することが理想である。ただ現実には小企業からのソース提供は極めて困難であったため、以下 2 点で対策とした：1) 当該産業界の企業連合から中小企業代表者を探した；2) 大企業に提携会社・関連子会社などからの人選を依頼した。

- ✓ IRG メンバーは確定してしまうのではなく、適宜、審査し直して定期的に入替えをする必要があった。これは全国規模かつ多種多様な訓練構造開発に対応できるような人材発掘が容易ではないためである。
- ✓ プロジェクトでは IRG メンバーや所属企業からの協力をかけ得るまでに、ニーズ調査やフォローアップモニタリングなどの機会を活用して小まめに連絡を取り、丁寧な関係構築に努めたことが重要であった。基本的な信頼関係を築いたことで、IRG の設立運営や企業内実習などの実現につながった。
- ✓ 各コンピテンシー単位が定めるオーストラリアでの標準訓練時間は、イランの訓練生の学習習慣や特性においては十分な時間ではなかった。訓練パッケージ開発時には、標準訓練時間を適切に見積もるために、より多くの試行が必要である。
- ✓ 前日になって臨時公休日が通知されたり、指導員の人事、管理責任者層の異動・変更など、訓練環境では想定できない要件が発生しパイロット訓練コースのスケジュール変更が頻発した。イランではコース時間割は柔軟に対応するしかない。
- ✓ ファストトラックアプローチの一環として、オーストラリアのワークブックを翻訳してイラン用にカスタマイズをして利用したが、幾つかは新規に書き下ろし作成した。この新規開発にはより多くの時間（約 10 日）がかかった。
- ✓ 企業内実習をパイロット訓練コースで実現させたことは、少なくとも以下 3 点の成果があった。1) 訓練生が講義で学んだタスクについての理解を進めた、2) 熟練整備士の働く姿勢や自動車整備産業の職場文化を訓練生が直接知ることができた、3) 技術レベルの強化によってコース自体の成功に繋がった。
- ✓ しかし、企業によっては機密保持の観点から訓練生のモニタリングを行う指導員を遠ざけておいたこともあった。本来事業を妨げないように最大限の配慮をしたモニタリングが必要である。
- ✓ 指導員は訓練生のスキルをアセスメントすることよりも、教えることに集中する傾向があった。
- ✓ 日常的モニタリングや訓練生のアセスメントの記録作成やアップデート、フォーム保管などの文書化 (documentation) は CBT 実施において重要なスキルであるが、不慣れなためなのか CP 指導員はうまくできず、よく記録漏れや遅れも発生した。



- ✓ （フォローアップ調査での）限られた時間のインタビューでは、現在のパフォーマンスと訓練との関係を確認したり、卒業生のパフォーマンスをコンピテンシーユニットごとに確認したりすることは限界があった。それ故、多くのデータを蓄積し、インタビュースキルを向上させ、正確性を向上する必要がある。
- ✓ コース終了後に開いた評価会は指導員にとって相互に学び合い、知識とスキルの向上に貢献する良い機会となった。また、コースを担当した指導員は多くの追加フィードバック、多様な視点によるデータの解釈を提供し、分析に大きく貢献した。これゆえ、評価分析時に指導員が参画することは双方にとってメリットがある。

## 第4章 プロジェクトの成果

プロジェクトの円滑な運営及びプロジェクト終了後の持続性の双方の観点から、カウンターパートへの技術移転は技術協力プロジェクトにとって重要である。本章では、プロジェクトの達成した技術移転成果の概要を説明し、次に終了時評価団による評価結果を紹介する。

### 4.1 カウンターパートへの技術移転

JPT と協業してプロジェクトを実施することを通して、CP は以下のことを経験し、習得した。

#### コンピテンシー単位を定義するニーズ調査

- ✓ オーストラリア訓練パッケージの全体構造、及びコンピテンシー単位の内容の理解の進め方
- ✓ 産業構造の分析の仕方
- ✓ 産業界との協力関係の構築方法
- ✓ 対象領域とレベルの決定方法
- ✓ オーストラリア訓練パッケージ内の類似資格の特定方法
- ✓ オーストラリア訓練パッケージ内の一覧表から候補となるコンピテンシー単位の特定方法
- ✓ インタビューにあたり、質問紙の準備、インタビュアーの訓練、適切な面接対象者の特定、インタビュー実施、インタビュー結果の分析、コンピテンシー単位の優先順位付けの各方法
- ✓ 特定したコンピテンシー単位を、会議・質問紙・インタビューなどを用いて技術者に優先順位付けしてもらう方法
- ✓ インタビュー・会議で得た意見を元にコンピテンシー単位を修正する方法
- ✓ 訓練コースの設計を完成させる方法

#### 産業別訓練諮問準備委員会 (IRG) の運営

- ✓ IRG 委員のメンバー構成の設計の仕方
- ✓ 技術専門家として十分な経験を有する適切な IRG メンバー候補の探し方
- ✓ 産業界側の便益を十分説明することにより、技術専門家が IRG メンバーとなることを企業が承認してくれるよう取り計らう方法
- ✓ IRG 会合の召集・開催・運営方法と、配付資料・議題の準備方法、議事録の取り方
- ✓ 進捗と達成度合いを視覚化させることによって、IRG を活性化させて継続性を持たせる方法

- ✓ IRG メンバーの所属先企業に、会議・インタビュー・企業内実習の実施依頼をする方法

なお、企業から選抜された15名のIRGメンバーも次のようなことを学んだ。

- ✓ 技術分野の人的資源開発の責任を分担するというCBTシステムで、民間企業はどのようなメリットを得られるのか
- ✓ CBTシステム導入にあたってのTVTOとの協力の仕方
- ✓ オーストラリア訓練パッケージの全体構造、及びコンピテンシー単位の内容の理解の進め方
- ✓ 対象となる訓練分野とレベルの決定方法
- ✓ オーストラリア訓練パッケージ内の類似資格の特定方法
- ✓ オーストラリア訓練パッケージ内の一覧表から候補となるコンピテンシー単位の特定方法
- ✓ 特定したコンピテンシー単位を、会議・質問紙・インタビューなどを用いて優先順位付けする方法
- ✓ 訓練コースの設計を完成させる方法

### コース実施

- ✓ カリキュラム教材を開発するのに有用な情報を、コンピテンシー単位から抜き出し（要素 (element) や判定指標 (performance criteria) をサブタスクに分解）分析する方法。
- ✓ インフォーマルなローカル IRG を形成し、訓練内容について産業界の意見を聞く方法
- ✓ 訓練コースに企業内実習を含め、コンピテンシーの習得を早める方法
- ✓ オーストラリアの教材を使ってカリキュラム教材を開発する方法
- ✓ アセスメントマトリックス、演習記録シート、職場におけるタスクチェックリスト、複数回答式試験などを含むアセスメント・ツールの開発方法
- ✓ インターネットを活用した研修教材・資料の検索リサーチ方法
- ✓ 訓練生の既修得済知識と技術を計るための事前テストの準備方法

### モニタリング評価

- ✓ CBT 実施環境における効果的なモニタリング評価のための技術・知識の習得
- ✓ モニタリング評価の計画方法と、ツール開発方法
- ✓ 日常的モニタリングでのデータ記録及び分類方法
- ✓ 質問紙及びインタビューによるデータ収集方法
- ✓ 卒業生の職場訪問による、フォローアップモニタリング用のデータ収集方法
- ✓ 日常的モニタリングやコース終了時モニタリングの収集データの分析方法。これにはデータの整理や集計の仕方や、その後の改善活動計画までも含む
- ✓ 企業内実習のモニタリング方法

## 4.2 終了時評価団による評価結果

調査団が実施した、評価 5 項目によるプロジェクト評価結果は下記の通りである。

表 4.1 終了時評価結果 (2010)

評価結果	内容説明
妥当性： 高い	日本側は、イランでの雇用機会増加に貢献するプロジェクトの支援を続けることを確認した。TVTO は、プロジェクトは目標を達成したが、TVTO の責任範囲である TVT セクター全体の改善には他の要素もあることを説明した。
有効性： ある程度高い	TVTO の管理層の度重なる交代やプロジェクト実施場所変更など、多くの困難に直面したにも関わらず、JPT は柔軟に対応して大部分を当初計画通りのスケジュールで実施した。プロジェクト結果が指し示すには、プロジェクト目標はプロジェクト終了までに達成されると見込まれる。
効率性： 平均的	プロジェクト開始当初と終了時評価時点で比較すると、プロジェクトへの投入量と成果には違いがあるが、期待される成果はプロジェクト終了時までには達成される見込みがある。なお、以下の 3 点が主にプロジェクトの効率性改善の妨げになっていた。 <ul style="list-style-type: none"> <li>● カウンターパートの減員</li> <li>● プロジェクト管理構造の数回に渡る変更</li> <li>● 初期のプロジェクト実施場所が不適切であったこと</li> </ul>
インパクト： 正のインパクトはあると期待されるが、負のインパクトはない	プロジェクト終了後 3～5 年後には、プロジェクトの上位目標である、労働人口における国家職業資格保持者が増加すると見込まれる。現在プロジェクトで開発中の訓練マネジメントサイクル、CBT マニュアル及び導入計画は、イラン国職業訓練分野に関係する全ての機関・産業・個人が利用可能になり、上位目標達成の要件を満たすことになる。 TVTO は下記四項を実施して、上位目標達成可能性をあげることを期待される。上位目標は、日本側の直接支援なしに達成されることとする。 <ul style="list-style-type: none"> <li>● 進行中の職業訓練セクター改革が適切な時期に完了すること</li> <li>● CBT 方式が訓練アプローチとして承諾された暁には、現在の国家職業訓練資格・基準を修正すること</li> <li>● 職業訓練セクターの指導員がより多く、CBT 方式の訓練を受けること</li> <li>● プロジェクトで設立された IRG モデルを必要に応じて他分野にも拡張すること</li> </ul>
持続性：	イラン側の組織・政策・技術の各面からの適切な方策が、持続性をあげるには必要である。プロジェクト終了までに、プロジェクトが訓練した 3 名の指導員を通して、CBT アプローチの普及に向けて日伊双方が投入をすることが肝要である。

出典：『技術協力プロジェクト（職業訓練管理強化プロジェクト）に係る、終了時評価団と職業訓練庁調査プログラム局局長間の議事録（別添 G）』を JICA 専門家チームが翻訳

終了時評価の結果は全般的に良好であり、またプロジェクトで開発したモデルの普及に必要な措置を取ることが期待できることから、その上位目標（CBT手法が職業訓練庁（TVTO）の訓練体系の基礎となる<sup>21</sup>こと）の達成が見込まれることにも留意している。

#### 4.3 終了時評価後の進捗

JPT 策定の、本報告書第5章の TVTO 改善計画を元にして、TVTO (ITC) は2011年に実施推奨されているタスクである、自動車整備資格2号の完全導入を目指して残りの11のコンピテンシー資格のカリキュラム開発を開始している。TVTO (ITC) は、全工程を以下の4つのプロセスに分解している。

表 4.2 自動車整備資格2号完成までの4つのフェーズ

フェーズ	期間	タスク
1	2日間	各県 TVTC から選抜された 20 名の指導員に CBT の集中講座を開催する。開発予定のコンピテンシー単位一つにつき 2 名の指導員を割り当て、自動車整備コース第二部の実施用のペルシア語訓練教材の開発ができるよう、CP がこの 20 名を訓練する。
2	約 6 週間	各県 TVTC 指導員はそれぞれの地方に戻り、ワークブックやアセスメント・ツールなどの訓練教材の開発を継続する。各人はローカル IRG を招集形成し、内容のカスタマイズを図る。なお、CP は E-mail や電話による遠隔指導を行い、週に一度 ITC での直接指導を行う。
3	2週間	各県 TVTC 指導員は ITC に再度招集され、訓練資料の最終化を図る。この際、既に形成された中央の IRG と協議し、内容の現実的妥当性を確保する。 また、自動車整備コース第二部の実施計画を策定する。
4	12～14 週間	自動車整備コース第二部は、主として本案件で実施した第二回パイロット訓練コースに参加した訓練生に対して実施し、オーストラリア自動車整備資格 2 号に相当する資格を彼らが得るようにする。同時に新規の訓練生の受け入れ、CBT 展開の経験の最大化を図る。

出典：ITC からの聞き取りを元に JICA 専門家チームが作成

ITC からの要請を受け、JPT は上記フェーズ 1 の実施を支援し、11月15日と16日の両日、13名の指導員を対象にしてワークショップ（TOT 研修に相当する内容）開催を CP と共同で行った。

<sup>21</sup> CBT 手法はあくまでも手段であり、目的は産業界のニーズを反映した訓練を実施する訓練管理サイクル（労働市場のニーズ情報の収集、労働ニーズを踏まえたカリキュラムと教材の開発、訓練の実施、訓練実施後のモニタリング・評価と訓練への反映）の確立にある。

## 第5章 今後の対応に対する提言

### 5.1 はじめに

プロジェクトの主任務は、CP と協働して、イラン国の職業訓練環境にて CBT アプローチの開発・実施・評価を試行実施し、これを通してモデルを開発・提案することにある。本プロジェクトでは、第3章で詳述したように、二回のパイロットコースにて、オーストラリアの職業教育訓練 (VET) 制度の自動車整備修理業界のコンピテンシー基準とカリキュラムをイランに合うように適格化して利用した。これにより、イランへの CBT 適用は可能かつ有用であると、指導員・訓練生・産業界に評価された。これを全国・全職業訓練分野に拡大・普及するには、プロジェクトで得た知見・教訓に基づいた戦略の活用が重要となる。

本章は、職業訓練改革手段として CBT を TVTO が利用するにあたり、プロジェクトの成果を最大限活用する道標を提示するものである。

### 5.2 イラン国における職業訓練改革と実施の要件

訓練提供機関にとって最大のクライアントは産業界（製品・サービスを提供し、人を雇用する全職業分野の一般的呼称としての）であることは言を俟たない。産業界の現在（及び将来）の訓練ニーズに合う訓練コースを提供することが職業訓練実施機関には必要である。産業界は誰が訓練コースを実施するかにはあまり関心はないが、訓練がニーズに合致しているかどうかには大きな関心を持つ。それ故、全国どこでも通じるという基準を需要主導型で提供し、職業訓練の合理化をすることが必要である。これには CBT アプローチの適用が最も有効である。本章 5.3 以降では、この導入に向けての計画案を提示するが、その実施の要件を以下にその理由とともに提言する。

#### 5.2.1 他国の訓練基準を導入するファストトラックアプローチ

コンピテンシー基準の開発は、一般的に次の5つのプロセスからなる。

- 第一プロセス：研究
- 第二プロセス：分析
- 第三プロセス：開発
- 第四プロセス：検証
- 第五プロセス：評価

この5つのプロセスを実施してコンピテンシー基準を定義するには、膨大な時間と予算が必要である。しかし、他国のコンピテンシー基準を使ってイランに合うように適格化するファストトラックアプローチを採用することにより、CBT システム導入の初期費用・初期期間を減じることができる。本戦略採用の利点は、要約すると次のようになる。

- ✓ 訓練基準を開発する予算と時間の大幅減。訓練ニーズ調査に必要なプロセスを初めから実施すれば1つの産業分野の訓練ニーズ分析だけで数年はかかるだろう。また、イランでは訓練ニーズ専門家もいないために海外から招致することになり費用も莫大となる。
- ✓ オーストラリアの訓練機関からカリキュラム、教材、アセスメントフォームなどの様々な資料を流用でき、TVTOは時間・費用を大幅に抑えることが出来る。
- ✓ 既に多くの国がCBTを採用しており、TVTOはこれら国から様々な資料を入手可能となり、イランの産業界の状況に合わせて適格化するだけでよい。また情報はインターネットによって入手も可能である。

本プロジェクトのパイロット訓練コースでは、この戦略をとってオーストラリアの自動車整備修理分野のコンピテンシー基準を利用した。これは中核となる訓練ニーズ（求められる職能）は世界中で共通であろう、また、適格化もイラン国の産業界の訓練ニーズに合うことを目指す限りは有用であろう、という仮説の上に成り立っている。

プロジェクトでは、第二回パイロット訓練コース用に、基本単位である21のコンピテンシー単位を予め選定してイランのIRGメンバーに優先順位付けを依頼したところ、この単位はイランの自動車整備現場で整備士が業務を行うためにも必須であり、非常に有用であると認めた。つまり、両国間で訓練ニーズは非常に似通っていることと言える。よってプロジェクトが採った「ファストトラック」戦略は有効であると言え、TVTOが今後CBTを迅速に導入するためにこの戦略をとることを提案する。

### 5.2.2 段階的開発実施

CBTアプローチを全国のTVTCに一斉導入することはTVTCの数が非常に多く、また産業数も多いために、非常に困難である。限られた人的リソースを有効に活用するため、段階的導入を提案する。

具体的には、各分野各資格の実施までのプロセスを、開発段階、パイロット段階、本格実施段階の3段階に分ける。開発段階ではITCでの導入とし、パイロット段階でそれを各州のモデルTVTCにて導入し、本格実施で残る全TVTCへの導入を図ることを提案する。

また指導員がCBTに慣れるよう、基本的な2号資格から開発を開始して、その後3～5号と移ることを提案する。

また分野としては、既に開発が開始されている自動車整備分野から取り組み、その後優先度の高い分野を2～3取り組み、然る後に他分野に着手することを提案する。分野が違えば人的リソースも代わるため、同時並行的に導入することにより時間の短縮を図る。

この関係を下図に示す。開発段階とパイロット段階は2年間ずつと仮定してある。

産業	資格	年													
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
自動車整備	2号	開発		パイロット		本格実施									
	3号			開発		パイロット		本格実施							
	4号&5号					開発		パイロット		本格実施					
最優先部門 (2-3部門)	2号					開発		パイロット		本格実施					
	3号							開発		パイロット		本格実施			
	4号&5号									開発		パイロット		本格実施	
その他部門	2号							開発		パイロット		本格実施			
	3号									開発		パイロット		本格実施	
	4号&5号											開発		パイロット	

出典：JICA プロジェクトチーム

図 5.1 全部門への CBT の展開ロードマップ

### 5.2.3 現行の資格制度とCBT資格との統合について

イラン国の既存訓練アプローチと CBT は大きく異なるため、両制度による資格を互換させることは不可能である。それ故、移行期間である開発段階とパイロット段階では、両制度から異なる修了証書を発行する必要がある。つまりモデル研修センター（選抜された TVTC）ではオーストラリアの品質枠組での 2 号相当資格を発行し、従来型のコースを引き続き実施するその他 TVTC では現在の 1 号資格を発行する。

### 5.2.4 指導員の企業内実習を強化

CBT はすぐに就業可能なレベルの訓練生を輩出するのが目的であるから、指導員も産業界での十分な勤務経験が必要である。この観点からすると、新規指導員の採用基準は、適切な職業資格（大学の学位は不要）と、産業界での一定期間以上の勤務経験を有することとなる。

また指導員全員が、関連企業にて企業内実習を定期的にとが出来るようにすべきでもある。全訓練技術を習得するには企業内実習を相当期間受ける必要があることから、企業内実習は、指導員が技術を段階を追って習得できるよう設計した方が良い。例えば自動車整備分野においては、指導員は実習毎に、異なるコンピテンシーを段階的に取り組むことが出来る。（例：第一回 トランスミッション、第二回 ブレーキ、第三回 電気、第四回 エンジン、など）

### 5.2.5 訓練センターの施設・機材

職能上必要な知識・技術を訓練生が確実に習得するには、OJT が最も適しており、真に有効な OJT を提供できるのは産業界だけである。しかし、模擬職場とでも呼ぶような訓練環境を作って訓練生が職場感覚を体験させることは公・私立の訓練機関にも不可能ではない。訓練生が要求される業務を実行・実演できるよう、訓練機関は施設・機材をできるだけ多く提供する必要がある。



### 5.2.6 カリキュラムと訓練教材

訓練教材と訓練カリキュラムの開発・提供は、訓練機関が訓練機関であるための必要事項である。オーストラリアをはじめ、幾つかの国では、カリキュラム開発の責任は各訓練機関にある。訓練基準にあうカリキュラムを開発する能力を備えていなければ、公・私立に関わらず、訓練機関として登録することが出来ない。別の例では、カリキュラム開発を中央国家が設立した機関で開発責任を負うこともある。

イランの TVTO では、個々の TVTC にはカリキュラムを開発する能力はありそうもない。幾つかの TVTC を統合し、カリキュラムを共同開発できるようにするか、CDC や ITC などの既存の部署に一任する、あるいは、これを実施するために関係機関を調整する部局を新設する必要がある。

ファストトラックアプローチを採用して、オーストラリアのような国からコンピテンシー基準を輸入し、既存のカリキュラムを購入し、イランの訓練状況に合うように改訂することももちろん可能である。本プロジェクトのパイロット訓練コースで試行したように、この手法によるカリキュラム開発は有効であり、一から作るよりも安価で開発が出来る。

### 5.2.7 コース実施の品質保証

イランで伝統的であった職業訓練制度では、資格合否判定は外部の試験実施組織などにより一元管理されており、均質な結果が担保されていた。しかしながら CBT では、現場の指導員が訓練生の技能実演を見て判定する。これゆえ、全ての訓練提供機関が訓練基準の質（即ち 5.2.4～5.2.6 で記載されたこと）を維持すること、そして継続的改善をするような品質保証枠組の制定が必要である。CBT コースの品質を保証する仕組みは、以下の3つを提案する。

#### TVTO州事務所 (P-TVTO) からの承認（コース実施前）

TVTO 州事務所 (P-TVTO) は TVTC を調査して、当該 TVTC の指導員の技術能力・施設・教材・機材などを考慮した上で、CBT コースの実施が当該 TVTC で可能かどうかを評価する必要がある。また当該訓練分野の全指導員は、ITC の実施する指導員訓練コースに参加し、CBT の基本概念・目的・アプローチと、訓練手法、訓練教材、コースモニタリング評価の実施方法を習得する必要もある。

#### TVTCの内部モニタリングと内部監査（コース実施中）

TVTC は個々の訓練プログラムの記録、アセスメント結果、コース評価、訓練生の募集結果、就職できた訓練生の訓練後評価などを記録して後の改善・参照用とすべきである。

#### TVTO州事務所による、TVTCの外部モニタリングと外部監査

TVTO 州事務所は TVTC に対して外部モニタリングと外部監査機能を持ち、1) 訓練生募集、2) 訓練実施、3) 内部モニタリング評価、4) 指導員、5) 訓練教材、を継続監査して訓練の質を担保する必要がある。

### 5.3 中央レベルの主要組織の設立・強化

本プロジェクトは中央の整備なしのパイロット活動であったが、CBT 制度をイラン全土で本格導入するには、中央レベルの主要組織の設立強化が欠かせない。以下に、これに必要なことを紹介する。

#### イラン職業訓練改革においてCBTアプローチを採用するとの方針決定

TVTO 長官と上位関連局長が、イラン国の職業訓練改革の必要性を認識することが第一歩として必要である。政策、全体計画、組織、人材の配置と役割・責任の考慮、予算割当、産業界のトップとの合意、CBT アプローチの適用で十分な経験を有する海外の訓練実施機関との合意形成の考慮も含む。想定する本組織の役割・構成は以下の通り。

#### **TVTO長官と上位経営陣**

**使命**：高い次元でのトップ経営判断により、全訓練実施機関の訓練アプローチを、伝統的職業訓練から CBT へ変革することの主導。

**責任範囲**：

- ✓ 中央 CBT 実施ユニット(C-CIU) の編成
- ✓ 当該産業の訓練諮問準備委員会 (IRG) の設置
- ✓ CBT 中核拠点として ITC を任命
- ✓ C-CIU、IRG、ITC や他の関係機関の関連活動への十分な予算割当。主な予算対象は、訓練、教材、機材である。

**構成**：TVTO 本部の全局の代表者と長官

#### 中央CBT実施ユニット (C-CIU) の設立

TVTO 長官と上位関連局長はトップ判断を下すだけであり実施レベルからは遠い故に、各機関を調整する機能を有する中央 CBT 実施ユニット (C-CIU) をつくり、実施促進をする必要がある。想定する本組織の役割・構成は以下の通り。

**中央CBT実施ユニット (C-CIU)**

**使命：** CBT 制度拡大を目標に、計画立案・実施・モニター・評価・関連各機関調整

**責任範囲：**

- ✓ 必要な意思決定と、TVTO、TVTO州事務所<sup>22</sup>、ITC、IRG、州IRG<sup>23</sup>、TVTC<sup>24</sup> と産業界を含む、関係各機関の調整。
- ✓ IRG が、訓練ニーズ分析と国家産業コンピテンシー基準認証をすることを支援
- ✓ ITC が指導員訓練を実施する上での調整
- ✓ ITC と共同で訓練パッケージを開発し、関連する訓練実施機関に送付
- ✓ コース実施の品質保証のために、ITC の外部監査を実施

**構成：**

- ✓ 調査計画局局長（議長）
- ✓ 以下の各機関の代表（調査計画局、ITC、CDC、TVTO 州事務所、TVTO、IRG）

**産業界との関係強化のための、TVTOと産業界トップとの合意形成**

IRG は中央 IRG (C-IRG) と州 IRG (P-IRG) の二種類づくり、C-IRG ではイラン全土で普遍的な共通訓練基準の策定を行う (P-IRG については後述)。

この C-IRG を公式に設立するために TVTO が産業界へ正式な協力依頼を申し入れ、TVTO と産業界トップがその関係強化に合意をすることが CBT 制度導入には必須である。TVTO の産業界訓練管理局がこの調整役として適任であり推薦する。なお、本プロジェクトでは、自動車整備修理分野での IRG を設立済みであり、これを順次全分野で IRG を設置をすることが必要である。

想定する C-IRG の役割・構成は以下の通り。

**中央IRG**

**使命：** 現在の産業界の訓練ニーズを反映して、1) コンピテンシー単位、2) アセスメントガイドライン、3) 資格 の3つを定義すること。

**責任範囲：**

- ✓ 他国（とりわけオーストラリア）の訓練パッケージの調査検討
- ✓ イラン産業界のニーズに合う訓練パッケージの選択
- ✓ IRG メンバーとの会議・インタビューを通じて他国のコンピテンシー単位の適格化。必要に応じて他産業界代表とも会議・インタビューをする。
- ✓ ITC で実施されるパイロット訓練コースのモニタリング及び評価実施

**構成：** 当該産業界の、大中小の様々な規模の企業から、十分な技術レベルを有する専門家で構成。また C-CIU の代表もメンバーに含む。

※ 初期段階では、CDC の CP が IRG 調整役となることを提言する。

<sup>22</sup> 開発及び本格実施段階でのみ

<sup>23</sup> 本格実施段階でのみ

<sup>24</sup> 開発及び本格実施段階でのみ

### 国外の職業訓練機関との提携

ファストトラックアプローチには、コンピテンシー基準とカリキュラムに対しては、CBT の実績を十分備えた、国外の訓練実施機関と合意して継続的な支援を得ることが必要である。合意には、1) TVTO の管理職の国外での経営訓練、2) TVTO 指導員への国外での技術訓練、3) イランでの OJT 実施のために海外から指導員を派遣すること、4) コンピテンシー単位毎の教材の提供 を含む。

### ITCを任命

国家中核拠点として各資格の初期開発を担う機関として既存の ITC を再任命することが必要である。想定する ITC の役割・構成は以下の通り。

#### ITC

使命：CBT の調査・開発・指導員訓練の実施及び、CBT の国家中核拠点となること

責任範囲：

- ✓ 訓練教材、訓練機材、モニタリング評価用紙の開発（ITC の管理監督下において、外部機関にこれらを外注することも出来る）
- ✓ 指導員訓練の実施
- ✓ コンピテンシー単位に関し中央 CIU への技術アドバイス
- ✓ パイロットコースの開発段階にてその訓練品質を確保するために、内部モニタリングと監査を実施する

構成：当該分野を担当する、ITC の部署所属の全指導員が参加。

### ITCとCDCへのCP指導員の配置と、同僚職員の配置と強化

3 名の CP 指導員の有効な活用が、イラン国で CBT アプローチの開発・実施の円滑化の鍵となる。そこで、本 CP3 名を、中央レベルの核となる組織の、ITC と CDC に配置する。

ここに同僚を配置し、CP が CBT 導入研修を実施して裾野を広げ、新規職員も本プロジェクトで開発した CBT アプローチ導入マニュアルが利用できるようになる。またこの新指導員に企業内実習を受けさせ、CBT の理論を実践にまで昇華できるレベルにまでする。

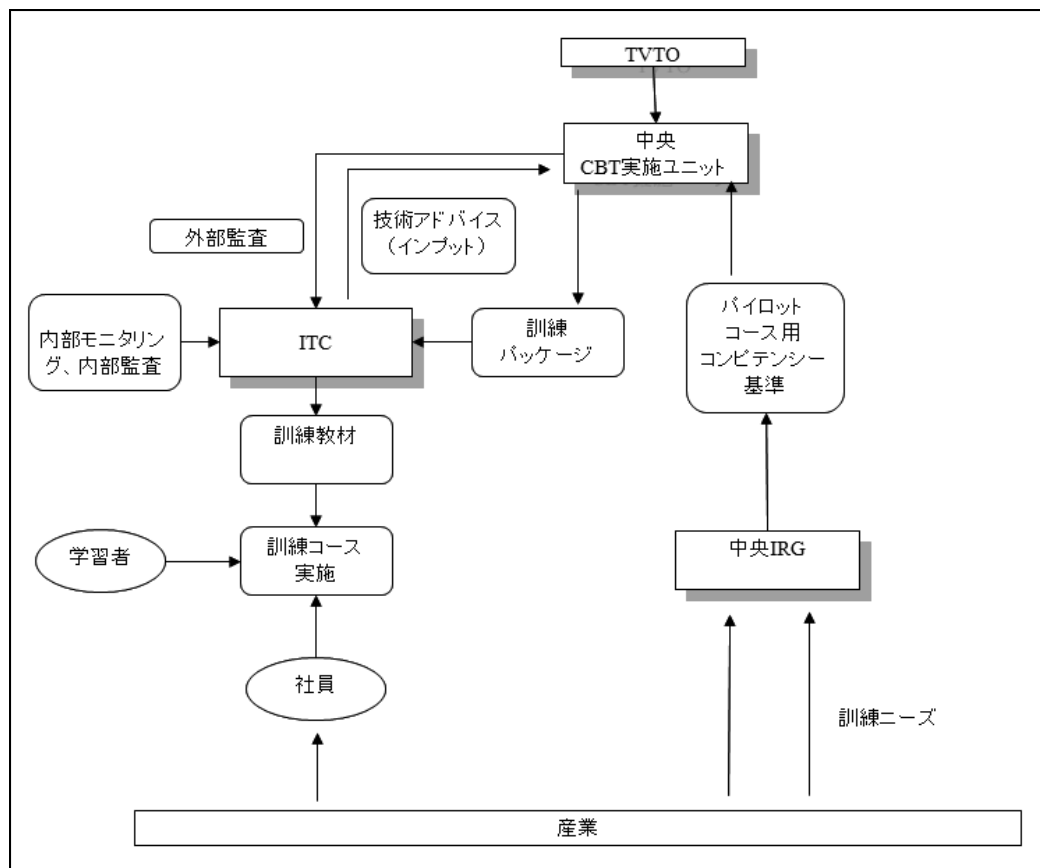
なお、これら中核の CBT 普及員には、報奨を充実させ、CBT 制度拡大の一助とすべきことも検討するよう提言する。

## **5.4 段階的实施案**

中央の組織作りとは別に、CBT モデル普及を行うことになる。ここでは、5.2.2 節で述べた段階的導入の実施計画案とその際の組織設計案を示す。段階には、開発、パイロット、本格実施の三段階あり、これを各個詳述する。

### 5.4.1 開発段階

開発段階では、先に述べた、4つの中央組織（TVTO 長官と上位経営陣、中央 CBT 実施ユニット (C-CIU)、中央 IRG、ITC）のみが参画する。この関係図を図 5.2 に示す。



出典：JICA プロジェクトチーム

図 5.2 開発段階における実施体制案

また、実施計画案の例として、既に1年間の実施を終えた自動車整備2号資格を完成させるための2011年の活動案を例示する。図5.1から分かるとおり、この年は自動車整備2号資格の開発だけの実施を提言している。

		2011												
		年	1	2	3	4	5	6	7	8	9	10	11	12
自動車整備2号資格：開発段階		月												
1	中央CIUの再構成		■											
2	中央IRGの再構成			■										
3	2号資格用の訓練パッケージの再設計			■	■									
4	新規指導員の任命			■										
5	ワークブックの準備				■	■	■	■						
6	訓練生募集						■							
7	2号資格Part1実施						■	■	■	■				
8	企業内実習実施									■	■	■		
9	2号資格Part2実施										■	■	■	
10	内部モニタリング						■	■	■	■	■	■	■	
11	外部モニタリング												■	
12	評価											■	■	
13	ワークブック改訂												■	■
14	2号資格の訓練パッケージの最終化													■
15	フェーズ2用の選抜TVTCの指導員訓練の実施													■

出典：JICA プロジェクトチーム

図 5.3 2011 年実施計画案

#### 5.4.2 パイロット段階

前述の4機関・部署（TVTO 長官と上位経営陣、中央 CBT 実施ユニット（C-CIU）、中央 IRG、ITC）に加えて、パイロット段階では更に3つの機関・部署が、下記の役割を担うことが望まれる。

##### **TVTO州事務所 (P-TVTO)**

**使命：**各州の職業訓練システムを CBT システムへ変革するよう、全 TVTC を促進・支援する。

**責任範囲：**

- ✓ 州 CBT 実施ユニット(P-CIU) の形成
- ✓ 州IRG (P-IRG)<sup>25</sup>の設立
- ✓ CBT アプローチを適用するモデル訓練センター (TVTC) を幾つか選抜
- ✓ CBT を開始するにあたり、P-CIU、P-IRG、選抜した TVTC の活動に十分な予算割当を行う。主な予算は、訓練、教材、機材である。

**構成：**P-TVTO の全部署の代表が参画。

<sup>25</sup> 本格実施段階のみ対象

**州CBT推進ユニット (P-CIU)**

**使命**：当該州の全産業に CBT システムを広める関連各機関が、計画を立案・実施・モニター・評価するのを調整すること。

**責任範囲**：

- ✓ 必要な意思決定及び、TVTO、TVTO州事務所、ITC、IRGs、州IRG<sup>26</sup>、TVTCや産業界を含む関係機関との調整
- ✓ P-IRGが、国家産業コンピテンシー基準<sup>27</sup>を当該州に合うよう修正するために、当該州にて訓練ニーズ分析をすることの支援
- ✓ ITC による指導員訓練の調整
- ✓ TVTC への訓練パッケージと機材の提供
- ✓ TVTC の外部監査

**構成**

- ✓ P-TVTO の調査計画部部长（議長）
- ✓ 次の組織の代表（P-TVTOの調査計画部、C-TVTO、P-IRG<sup>28</sup>、TVTC）

**指定 (モデル) 訓練センター (TVTCs)**

**使命**：ITC で開発された CBT コースを試行し、当該州でモデル訓練センターとなること。

**責任範囲**：

- ✓ ITC が実施する CBT 指導員訓練に参加して CBT コースの実施について理解を得る（CBT 指導員訓練は教材・機材・モニタリング評価用紙の利用方法を含む）
- ✓ CBT コース実施の準備
- ✓ CBT コースの実施
- ✓ 内部モニタリング・監査の実施
- ✓ CBT コース実施で得られた教訓を P-CIU に報告

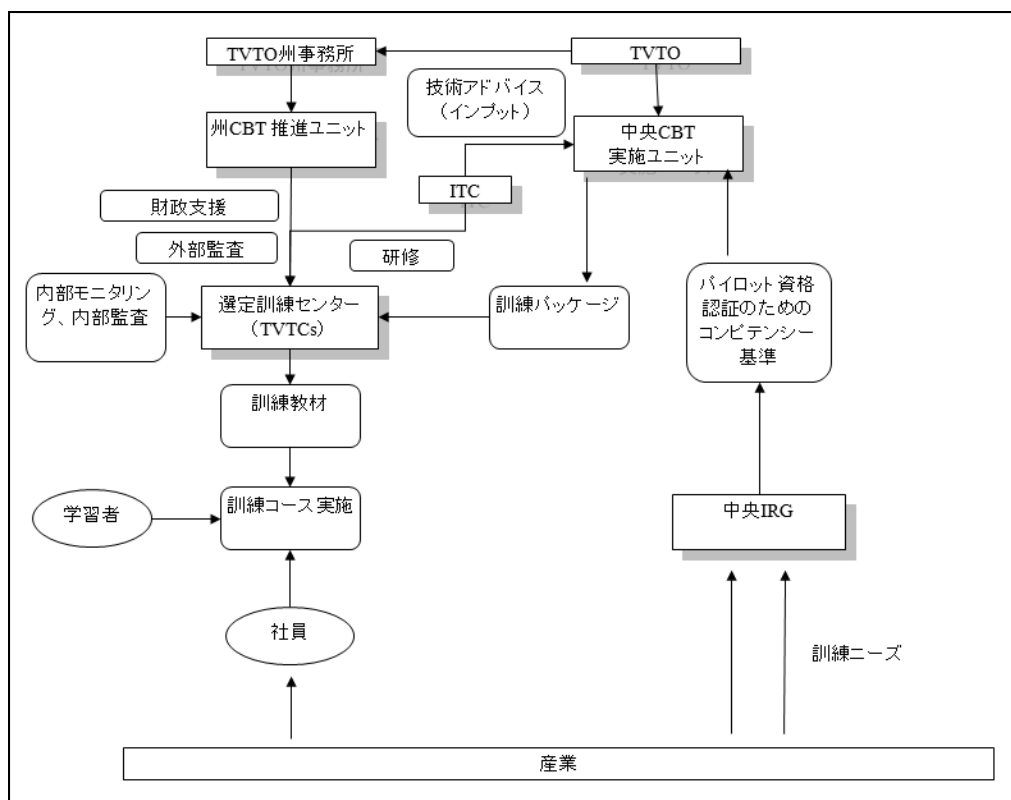
**構成**：当該部署の TVTC 指導員全員が参画すべきである。

この関係図を図 5.4 に示す。

<sup>26</sup> 本格実施段階のみ対象

<sup>27</sup> 本格実施段階のみ対象

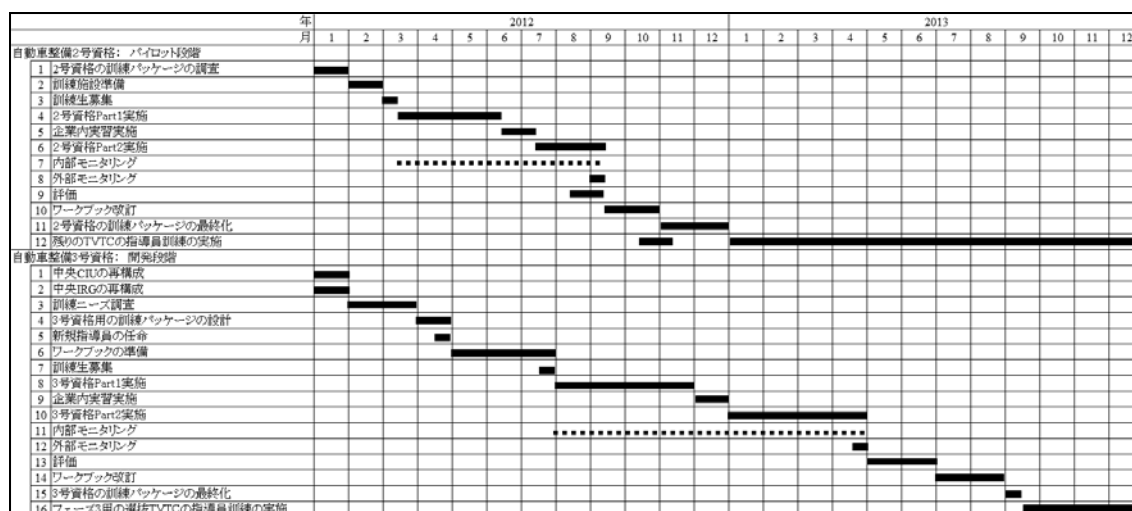
<sup>28</sup> 本格実施段階のみ対象



出典：JICA プロジェクトチーム

図 5.4 パイロット段階における実施体制案

2012 年には自動車整備分野 2 号資格のパイロット活動がモデル訓練センターで開始される。図 5.1 から分かるとおり、2012 年と 2013 年には、自動車整備 2 号資格のパイロット活動と同時並行で、自動車整備 3 号資格の開発が ITC で行われる。この両方の実施計画案を図 5.5 に示す。



出典：JICA プロジェクトチーム

図 5.5 2012 年と 2013 年の実施計画案



### 5.4.3 本格実施段階

本格実施段階では、これまでの開発、パイロットの二段階で記載した7つの関係機関／部署に加え、州 IRG が加わって以下の役割を果たすことが望まれる。

#### 州IRG (P-IRG)

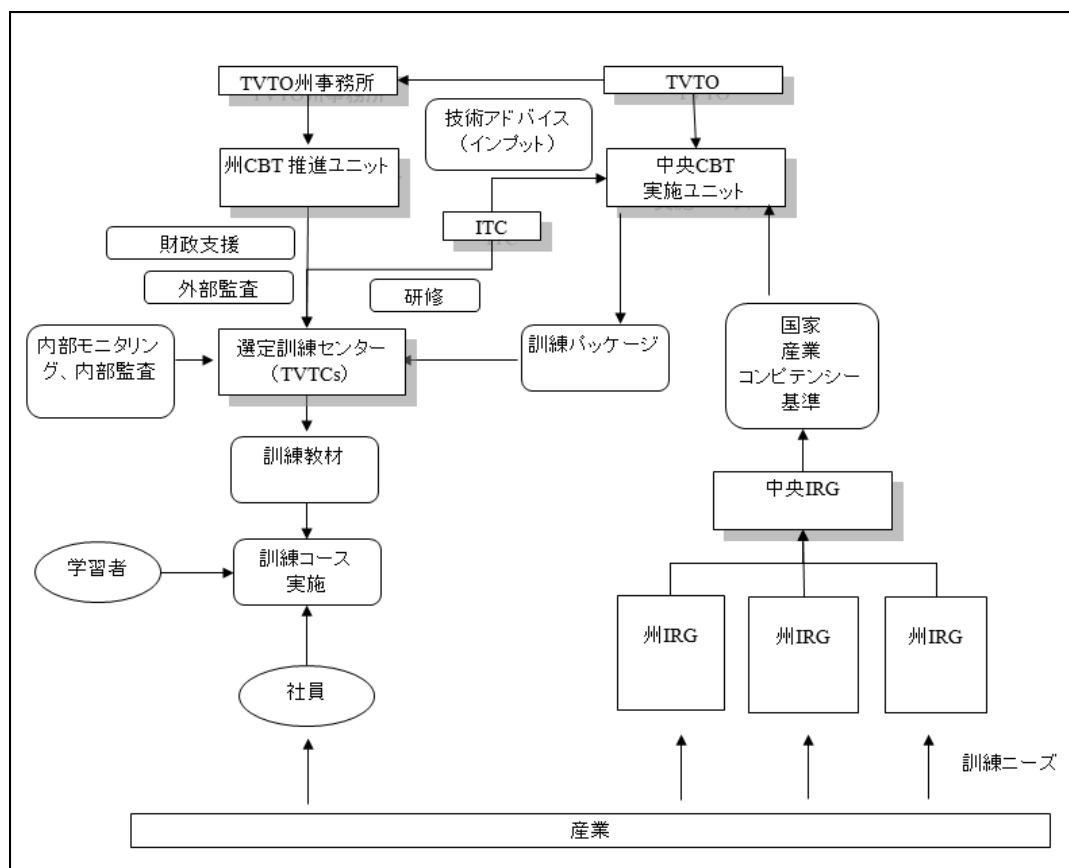
**使命：** 1) 当該州の産業界の現在の訓練ニーズを特定し、2) 同地のニーズを反映するように訓練パッケージを修正し、3) IRG に同地のニーズをフィードバックする。

**責任範囲：**

- ✓ 当該州の現在の訓練ニーズの策定
- ✓ C-CIU から提供される訓練パッケージの検討
- ✓ 当該州の訓練ニーズに合うよう、訓練パッケージの改訂

**構成：** 当該州の当該産業界の、大中小の様々な規模の企業から、十分な知識・技術を備えた専門家で構成される必要がある。P-CIU の代表もメンバーに含む。

この関係図を図 5.6 に示す。



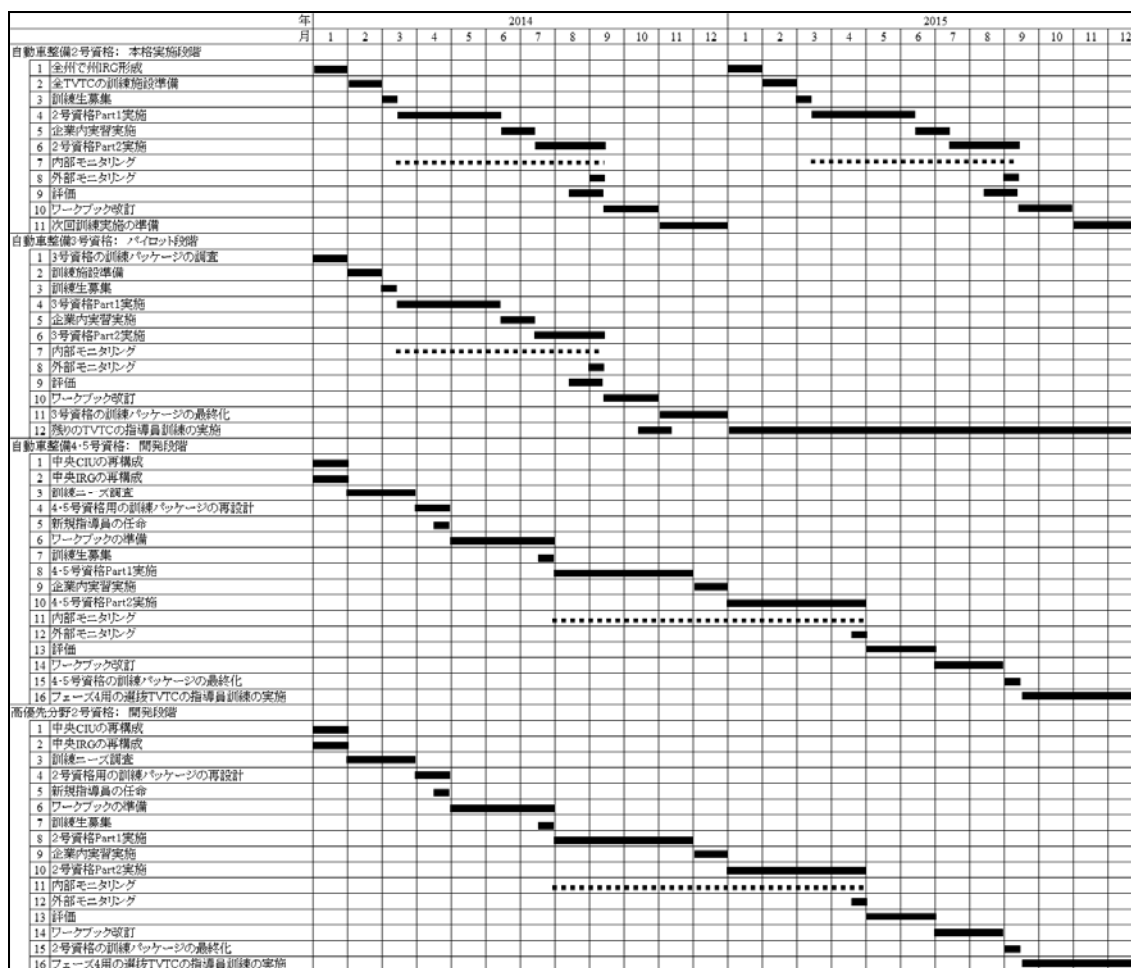
出典：JICA プロジェクトチーム

図 5.6 本格実施段階における実施体制案

2014 年には次の活動が同時並行で行われる。

- ✓ 自動車整備分野 2 号資格の本格実施 (全 TVTC)
- ✓ 自動車整備分野 3 号資格のパイロット (モデル訓練センター)
- ✓ 自動車整備資格 4・5 号の開発 (ITC)
- ✓ 高優先分野 2 号資格の開発 (ITC)

この実施計画案を図 5.7 に示す。



出典：JICA プロジェクトチーム

図 5.7 2014 年と 2015 年の実施計画案

以上の計画を実際に実施する上では、別添 N のマニュアルが大いに活用できる。本章とマニュアルを有効に活用して円滑な導入が実現することを期待する。

**添付A：**

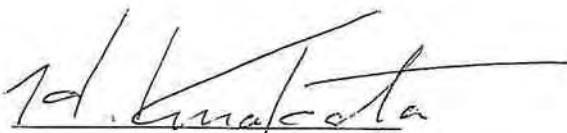
**技術協力プロジェクト（職業訓練管理強化プロジェクト）に係る、国際協力機構とイラン・イスラム共和国関係官庁間の  
討議議事録**

RECORD OF DISCUSSIONS  
BETWEEN  
JAPAN INTERNATIONAL COOPERATION AGENCY  
AND  
THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF  
THE ISLAMIC REPUBLIC OF IRAN  
ON JAPANESE TECHNICAL COOPERATION  
FOR THE PROJECT FOR STRENGTHENING TECHNICAL AND VOCATIONAL  
TRAINING MANAGEMENT SKILLS  
IN TECHNICAL AND VOCATIONAL TRAINING ORGANIZATION

The Japan International Cooperation Agency (hereinafter referred to as "JICA") had a series of discussions through the Resident Representative of JICA Iran Office in the Islamic Republic of Iran (hereinafter referred to as "I.R.Iran") with the Iranian authorities concerned with respect to desirable measures to be taken by JICA and the Government of I.R.Iran for the successful implementation for the above-mentioned project.

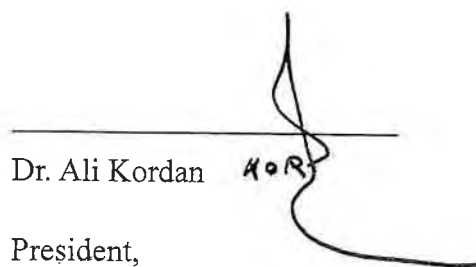
As a result of the discussions, JICA and the Iranian authorities concerned agreed on the matters referred to in the document attached hereto.

Tehran, April 21 2007



Mr. Hiroshi Kurakata

Resident Representative  
Japan International Cooperation Agency  
Iran Office



Dr. Ali Kordan

President,  
Technical and Vocational Training Organization,  
Vice Minister,  
Ministry of Labor and Social Affairs,  
The Islamic Republic of Iran

## THE ATTACHED DOCUMENT

### I. COOPERATION BETWEEN JICA and the Government of I.R.Iran

1. The Government of I.R.Iran will implement the Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization (hereinafter referred to as "the Project") in cooperation with JICA.
2. The Project will be implemented in accordance with the Master Plan which is given in Annex I.

### II. MEASURES TO BE TAKEN BY JICA

In accordance with the laws and regulations in force in Japan, JICA will take, at its own expense, the following measures according to the normal procedures under the Colombo Plan Technical Cooperation Scheme.

#### 1. DISPATCH OF JAPANESE EXPERTS

JICA will provide the services of the Japanese experts as listed in Annex II.

#### 2. PROVISION OF MACHINERY AND EQUIPMENT

JICA will provide such machinery, equipment and other materials (hereinafter referred to as "the Equipment") necessary for the implementation of the Project as listed in Annex III. The Equipment will become the property of the Government of I.R.Iran upon being delivered C.I.F. (cost, insurance and freight) to the Iranian authorities concerned at the ports and/or airports of disembarkation.


#### 3. TRAINING OF IRANIAN PERSONNEL IN JAPAN



JICA will receive the Iranian personnel connected with the Project for technical training in Japan.

### III. MEASURES TO BE TAKEN BY THE GOVERNMENT OF I.R.IRAN


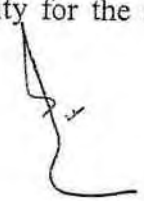
1. The Government of I.R.Iran will take necessary measures to ensure that the self-reliant operation of the Project will be sustained during and after the period of Japanese technical cooperation, through full and active involvement in the Project by all related authorities, beneficiary groups and institutions.
2. The Government of I.R.Iran will ensure that the technologies and knowledge acquired by the Iranian nationals as a result of the Japanese technical cooperation will contribute to the Iranian economic and social development of I.R.Iran.
3. The Government of I.R.Iran will grant in Iranian privileges, exemptions and benefits to the Japanese experts referred to in II-1 above and their families, which are no less favorable than those accorded to experts of third countries working in I.R.Iran under the Colombo Plan Technical Cooperation Scheme.
4. The Government of I.R.Iran will ensure that the Equipment referred to in II-2 above will be utilized effectively for the implementation of the Project in consultation with the Japanese experts referred to in Annex II.
5. The Government of I.R.Iran will take necessary measures to ensure that the knowledge and experience acquired by the Iranian personnel from technical training in Japan will be utilized effectively in the implementation of the Project.
6. In accordance with the laws and regulations in force in I.R.Iran, the Government of I.R.Iran will take necessary measures to provide at its own expense:



- (1) Services of the Iranian counterpart personnel and administrative personnel as listed in Annex IV;
  - (2) Land, buildings and facilities as listed in Annex V;
  - (3) Supply or replacement of machinery, equipment, instruments, vehicles, tools, spare parts and any other materials necessary for the implementation of the Project, other than the Equipment provided by JICA under II-2 above ;
  - (4) Means of transport and travel allowances for the Japanese experts for official travel within I.R.Iran; and
  - (5) Suitably furnished accommodation for the Japanese experts and their families.
7. In accordance with the laws and regulations in force in I.R.Iran, the Government of I.R.Iran will take necessary measures to meet
- (1) Expenses necessary for transportation within I.R.Iran for the Equipment referred to in II-2 above as well as for the installation, operation and maintenance thereof;
  - (2) Customs duties, internal taxes and any other charges, imposed in I.R.Iran on the Equipment referred to in II-2 above; and
  - (3) Running expenses necessary for the implementation of the Project.

#### IV. ADMINISTRATION OF THE PROJECT

1. President of Technical and Vocational Training Organization (hereinafter referred to as "TVTO") will bear overall responsibility for the administration



and implementation of the Project.

2. Principal Advisor to Head of TVTO/Japan Desk will be responsible for the managerial matters of the Project.
3. Deputy of Research and Development, and Deputy of Technical and Training will be responsible for the technical matters of the Project.
4. The Japanese Chief Advisor will provide necessary recommendations and advice to the president of TVTO on any matters pertaining to the implementation of the Project.
5. The Japanese experts will give necessary technical guidance and advice to the Iranian counterpart personnel on technical matters pertaining to the implementation of the Project.
6. For the effective and successful implementation of technical cooperation for the Project, a Joint Coordinating Committee (hereinafter referred to as "JCC") will be established whose functions and composition are described in Annex VI.

## V. JOINT EVALUATION

Evaluation of the Project will be conducted jointly by JICA and the Iranian authorities concerned, at the middle and during the last six months of the cooperation term in order to examine the level of achievement.

## VI. CLAIMS AGAINST JAPANESE EXPERTS

The Government of I.R.Iran undertakes to bear claims, if any arises, against the Japanese experts engaged in technical cooperation for the Project resulting from,





occurring in the course of, or otherwise connected with the discharge of their official functions in I.R.Iran except for those arising from the willful misconduct or gross negligence of the Japanese experts.

#### VII. MUTUAL CONSULTATION

There will be mutual consultation between JICA and I.R.Iran on any major issues arising from, or in connection with this Attached Document.

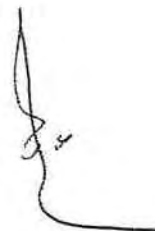
#### VIII. MEASURES TO PROMOTE UNDERSTANDING OF AND SUPPORT FOR THE PROJECT

For the purpose of promoting support for the Project among the people of I.R.Iran, the Government of I.R.Iran will take appropriate measures to make the Project widely known to the people of I.R.Iran.

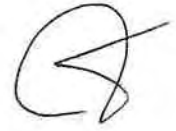
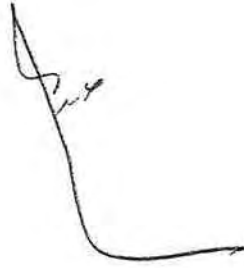
#### IX. TERM OF COOPERATION

The duration of the technical cooperation for the Project under this Attached Document consists of the two stages. The Stage one (1) is planned as two (2) years and the Stage two (2) is planned as one and half (1.5) years. Consequently, the duration is three (3) and a half years in total, from 1<sup>st</sup> July 2007.

- ANNEX I      MASTER PLAN
- ANNEX II     LIST OF JAPANESE EXPERTS
- ANNEX III    LIST OF MACHINERY AND EQUIPMENT
- ANNEX IV    LIST OF IRANIAN COUNTERPART AND ADMINISTRATIVE PERSONNEL



ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES  
ANNEX VI JOINT COORDINATING COMMITTEE



## **ANNEX I      MASTER PLAN OF THE PROJECT**

### **1. Objective of the Project**

(1) Overall Goal

Unemployment, especially of youth and women is improved

(2) Project Purpose

TVTO's training management cycle is improved.

### **2. Period and Stages of the Project**

The project period is three and a half years, which consists of two stages:

(1) Stage 1 (two years): Strengthening the training management of TVTO through the introduction of a tentative system

(2) Stage 2 (one and a half years): Monitoring, evaluation and consolidation of the tentative system

### **3. Outputs of the Project**

(1) TVTO is able to assess the training needs in labor market more efficiently.

(2) TVTO develops, reviews and updates the training course standard and curriculum based on the result of the labor market needs analysis.

(3) TVTO improves its monitoring and evaluation system.

(4) TVTO develops a management improvement plan based on the review of the pilot training course(s).

The Output (1), (2) and (3) are mainly for stage 1, and Output (4) is for stage 2.

### **4. Activities of the Project**

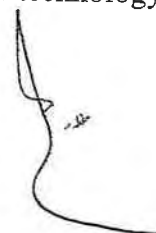
(1)-1. To develop needs assessment study plan for pilot training course(s).

In the process of planning, the following activities are to be considered.

a) To clarify the process of the needs assessment study,

b) To establish a comprehensive system to access the job information and training needs, and

c) To establish the function to access the information on new technology



- (1)-2. To conduct the training needs assessment study
- (1)-3. To select the training course(s) to be revised for the pilot training implementation
- (1)-4. To apply the pilot training needs assessment study to other training course(s)

- (2)-1. To review the present system of standard and curriculum development and revision

In the process of revision, the module system is to be considered to respond to the labor market needs

- (2)-2. To revise a standard(s) and a curriculum(s) for a pilot training course(s)
- (2)-3. To design a pilot course(s)
- (2)-4. To develop guidelines for training materials
- (2)-5. To prepare the necessary equipment for the pilot course(s)
- (2)-6. To deploy the appropriate instructors
- (2)-7. To implement a pilot course(s)
- (2)-8. To identify the problems of a pilot course(s) and reflect it in the revised standard and curriculum

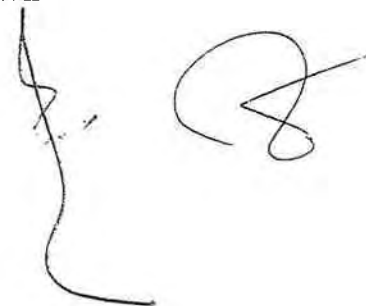
- (3)-1. To plan the training monitoring and evaluation

In the process of planning, the method of aptitude test is to be reviewed

- (3)-2. To conduct the training course evaluation
- (3)-3. To conduct the training course monitoring

- (4)-1. To review the pilot training course(s)

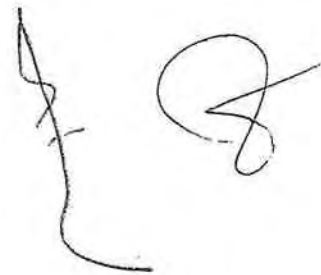
- (4)-2. To summarize the experience and lessons of the pilot training course(s)
- (4)-3. To develop a plan of training management improvement plan

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## ANNEX II LIST OF JAPANESE EXPERTS

1. Chief Advisor
2. Expert(s) on Vocational Training Management
3. Expert(s) on Training Needs Assessment and Analysis
4. Expert(s) on Training Standard and Curriculum
5. Expert(s) on Training Monitoring and Evaluation
6. Other Expert(s) will be assigned when necessary for smooth and effective implementation of the Project.

Note: Each expert could concurrently act as expert in another field, if necessary.

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### ANNEX III LIST OF MACHINERY AND EQUIPMENT

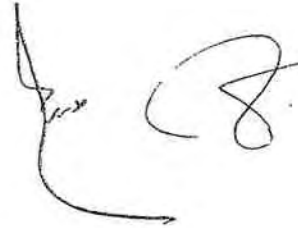
1. Necessary equipment for implementation of the Project will be provided.

Equipment planned to supply is as follows:

Office equipment

Note:

The detailed specifications and quantity of the above-mentioned equipment to be provided each year will be discussed in principle every year between the JICA experts and the Iranian counterpart personnel based on the annual plan of the Project, within the allocated budget of the Japanese fiscal year (from April to March).

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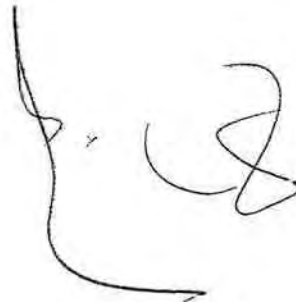
**ANNEX IV LIST OF IRANIAN COUNTERPART AND ADMINISTRATIVE PERSONNEL**

1. Counterpart personnel

- (1) Principal Advisor to Head of TVTO/Japan Desk
- (2) Deputy of Research and Development, TVTO
- (3) Deputy of Technical Training, TVTO
- (4) Deputy of Administration and Financial, TVTO
- (5) Deputy of Research and Development from Instructor Training Center (ITC)
- (6) Executive Director of Training and Implementation, TVTO
- (7) Senior Staff (s) of Pilot Regional Office, TVTO
- (8) Senior Staff (s) of concerning departments of TVTO Headquarters

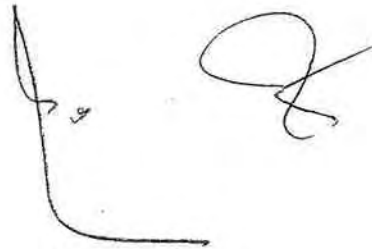
2. Administrative Personnel

- (1) Secretaries
- (2) Translator
- (3) Drivers
- (4) Accountant

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**ANNEX V LIST OF LAND, BUILDINGS AND FACILITIES**

1. Land, buildings and facilities which is necessary for the Project
2. Room space and necessary infrastructure facilities for installation and storage of the equipment
3. Offices and basic logistics facilities for the Japanese experts
4. Other facilities mutually agreed upon as necessary

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## **ANNEX VI JOINT COORDINATING COMMITTEE**

### **1. Functions**

The Joint Coordinating Committee (hereinafter referred to as "JCC"), will meet at least once a year or whenever the necessity arises, in order to fulfill the following functions:

- (1) To formulate the work plan of the project and to coordinate and monitor the overall progress of the Project based on the Plan of Operation within the framework of the Record of Discussions
- (2) To review the result of the annual work plan and the progress of the technical cooperation
- (3) To exchange views on major issues that may arise during the implementation of the Project

### **2. Membership**

The members of the JCC shall comprise a chairperson, members and observers. The chair may declare closed session against the observers. The rules and guidelines for the management of the JCC will be determined as the initial stage of the project.

#### (1) Chairperson

- a. President of Technical and Vocational Training Organization (TVTO)

#### (2) Iranian side

- a. Principal Adviser to the head of TVTO/Japan Desk
- b. Deputy of Research and Development, TVTO
- c. Deputy of Technical and Training, TVTO
- d. Deputy of Administration and Financial, TVTO
- e. President of Instructor Training Center
- f. Director General of International Relations, Ministry of Labor and Social Affairs

#### (3) Japanese side

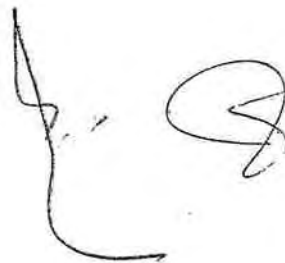
- a. Chief Advisor
- b. Expert(s) on Vocational Training Management
- c. Expert(s) on Training Needs Assessment and Analysis
- d. Expert(s) on Training Standard and Curriculum



- e. Expert(s) on Training Monitoring and Evaluation
- f. Resident Representative of JICA Iran Office
- g. Other personnel concerned, to be dispatched by JICA, if necessary

(4) Observers

- a. Official(s) of the Embassy of Japan in the I.R.Iran may attend the JCC as an observer(s). The chairperson is able to name new members or request the attendance of other participants, as necessary, upon agreement of the JCC.

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**添付B：**

**技術協力プロジェクト（職業訓練管理強化プロジェクト）  
に係る、国際協力機構と職業訓練庁間の議事録**

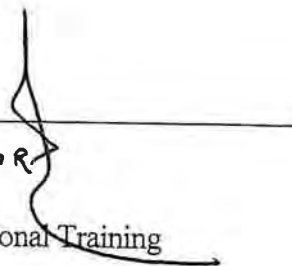
**MINUTES OF MEETINGS  
BETWEEN  
JAPAN INTERNATIONAL COOPERATION AGENCY  
AND  
TECHNICAL AND VOCATIONAL TRAINING ORGANIZATION OF  
THE ISLAMIC REPUBLIC OF IRAN  
FOR  
THE PROJECT FOR STRENGTHENING TECHNICAL AND VOCATIONAL  
TRAINING MANAGEMENT SKILLS  
IN  
TECHNICAL AND VOCATIONAL TRAINING ORGANIZATION**

The Japan International Cooperation Agency (hereinafter referred to as "JICA") had a series of discussions and exchange of views, through the Resident Representative of JICA Iran Office, with Technical Vocational Training Organization (hereinafter referred to as "TVTO") for the purpose of working out the details of the Project for Strengthening Technical and Vocational Training Management Skills in TVTO (hereinafter referred to as "the Project"). As a result of the discussions, JICA and TVTO agreed to summarize the matters referred to in the document attached hereto as a supplement to the Record of Discussions signed on April 21, 2007.

Tehran, April 21, 2007



Mr. Hiroshi Kurakata  
Resident Representative  
Iran Office  
Japan International Cooperation Agency



Dr. Ali Kordon  
President,  
Technical and Vocational Training  
Organization  
Vice Minister,  
Ministry of Labor and Social Affairs  
The Islamic Republic of Iran

## ATTACHED DOCUMENT

### 1. PDM

JICA explained that the Project Design Matrix (hereafter referred to as the "PDM") is commonly used in Japanese technical cooperation in order to manage and implement projects efficiently and effectively. It will also be used as a reference for monitoring and evaluating the Project.

As a result of discussions, both sides agreed to apply the PDM as shown in Annex 1 to the Project with the following understanding:

- (1) The PDM is a logically designed matrix which defines the initial understanding of the framework of technical cooperation for the Project and indicates the logical steps toward the achievement of the Project purpose.
- (2) The PDM is to be flexibly revised according to the progress and achievements of the Project, upon approval by the Joint Coordinating Committee.
- (3) XX in the PDM indicators need to be identified the appropriate quantities according to the training needs survey conducted in the Project.

### 2. Tentative Schedule of Implementation

Tentative schedule of the Project is shown in Annex 2.

### 3. Plan of Operation

Plan of Operation will be formulated at the initial stage of the project in accordance with the PDM.

### 4. Clarification of the descriptions in the Record of Discussions

- (1) As for Articles I.1, III.1 to III.7

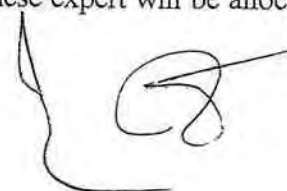
JICA and TVTO confirmed that the TVTO, on behalf of the Government of the Islamic Republic of Iran, would implement the project and take the necessary measures to ensure the items indicated at Articles III.1 to III.7.

- (2) As for Article II.2 and Annex III

The office equipment referred in ANNEX III of R/D means daily equipments for the daily operation of the Project, such as personal computer(s), printer, photocopy machine, overhead projector, etc. The procurement of necessary equipments for the pilot training courses will be covered by TVTO.

- (3) As for Article III.6.(2) and ANNEX V

JICA and TVTO confirmed that the office space for the Japanese expert will be allocated



in the TVTO main building. TVTO may temporarily allocate it outside of its building under the following conditions;

- (a) To be convenient for the daily access to TVTO main building
- (b) To make all necessary effort to find the office space inside the building in the earliest timing

In order for TVTO to prepare the adequate office space, JICA will inform the essential information i.e. number of Japanese expert(s), expected furniture, to TVTO upon the commencement of the Project .

- (4) As for Article III.6 (4)

JICA and TVTO confirmed that travel allowance for the Japanese experts would be covered by JICA for all of their official travels within I.R. Iran.

- (5) As for Article III.6 (5)

JICA and TVTO confirmed that furnished accommodation for the Japanese experts and their families would be covered by JICA.

#### **5. Administration of the Project**

With reference to Article IV of the Record of Discussions, JICA and TVTO sides agreed that under the overall responsibility of the President of TVTO, coordination of administration and implementation of the Project will be carried out through mutual consultation by both the Iranian and the Japanese side.

#### **List of Annex**

- Annex 1: Project Design Matrix (PDM)
- Annex 2: Tentative Schedule of Implementation
- Annex 3: Organization Chart

A handwritten signature or set of initials in black ink, consisting of a stylized 'A' followed by a large, loopy 'G'.

## Annex 1. Project Design Matrix (PDM)

Project Title : **Project for Strengthening the TVT Management Skills in TVTO**

Period : **Three and a half Years**

(First stage: **Two years** Second stage: **One and a half years**)

Target Group : (Direct) **TVTO staff and instructors**

(Indirect) **TVTO trainees**

Project Site : **to be identified**

Ver.0

Period : **July 2007- December 2010**

Date : **April 21, 2007**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
Unemployment, especially of youth and women is improved	1. Unemployment rate of youth and women is improved.	1. Statistics of labor employment	1. Improvement plan is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	<ol style="list-style-type: none"> <li>1. XXX<sup>1</sup> pilot training course is planned and implemented until the end of the 1 phase.</li> <li>2. Experiments and lessons from the implementation of pilot training course are analyzed and reported until the end of the 1 phase.</li> <li>3. The trainee's satisfaction rate of pilot training is better than that of other courses</li> <li>4. Based on the experience and lessons from pilot training course(s), a plan for training management improvement is completed at the end of the Project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training course plan and the Project progress reports</li> <li>2. Pilot training reports</li> <li>3. Pilot training reports</li> <li>4. Plan for training management improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. The government of the Islamic Republic of Iran does not change TVET policies.</li> <li>2. The government of Japan doesn't change its policy of ODA to Iran drastically.</li> </ol>
<b><u>Outputs</u></b>			
<p><u>Output 1:</u> TVTO is able to assess the training needs in labor market more efficiently.</p> <p><u>Output 2:</u> TVTO develops, reviews and updates the training course standard and curriculum based on the result of the labor market needs analysis.</p>	<ol style="list-style-type: none"> <li>1-1. TVTO staffs understand the training management process of Japanese training institutions.</li> <li>1-2. Revising plan of training needs assessment method is developed.</li> <li>1-3. Training needs is assessed and analyzed.</li> <li>2-1. XXX training course standard(s) and/or curriculum(s) are revised as a trial.</li> <li>2-2. XXX pilot training course plans are developed.</li> </ol>	<ol style="list-style-type: none"> <li>1-1. Evaluation documents of the training in Japan</li> <li>1-2. Revising plan</li> <li>1-3. Assessment report</li> <li>2-1. Revised standard(s) and curriculum(s)</li> <li>2-2. Pilot training course plan</li> </ol>	<ol style="list-style-type: none"> <li>1. The Project's C/Ps form TVTO remain at TVTO HQ and related office.</li> </ol>

<sup>1</sup> The figures will be decided according to the result of the training needs survey conducted in the Project.

<p><u>Output 3:</u> TVTO improves its monitoring and evaluation system.</p>	<p>3-1.Training monitoring and evaluation guideline is developed. 3-2.Training monitoring and evaluation is conducted and analyzed.</p>	<p>3-1.Monitoring and evaluation guideline 3-2.Monitoring and evaluation reports</p>	
<p><u>Output 4:</u> TVTO develops a management improvement plan based on the review of the pilot training course(s)</p>	<p>4-1. The experience and lessons are summarized as a report 4-2. A plan for training management improvement is developed</p>	<p>4-1.Pilot training course report 4-2. Plan for training management improvement</p>	

<u>Activities of the Project</u>	<u>Inputs</u>	
<p><b>Output 1</b></p> <p>Activity 1-1: To develop needs assessment study plan for pilot training course(s).</p> <ul style="list-style-type: none"> <li>· In the plan, following activities are to be considered</li> <li>--To clarify the process of the needs assessment study</li> <li>--To establish a comprehensive system to access the job information and training needs</li> <li>--To establish the function to access the information on new technology</li> </ul> <p>Activity 1-2: To conduct the training needs assessment study.</p> <p>Activity 1-3: To select the training course(s) to be revised for pilot training implementation.</p> <p>Activity 1-4: To apply the pilot training needs assessment study to other training course(s)</p>	<p><u>Japanese Side:</u></p> <ol style="list-style-type: none"> <li>1. Dispatch of Japanese experts</li> <li>2. Provision of equipment</li> <li>3. Training of counterpart personnel in Japan</li> <li>4. Supplementary budget for local expenditure</li> </ol> <p><u>Iranian Side :</u></p> <ol style="list-style-type: none"> <li>1. Counterpart personnel</li> <li>- <u>Principal Advisor /Head of the Japan Desk</u></li> <li>- Deputy of Technical and Training Affairs</li> <li>- Deputy of Research and Development</li> <li>- Deputy of Administration and Financial</li> <li>- Deputy of Research and Development from Instructor Training Center (ITC)</li> <li>- Executive Director of Training and Implementation</li> <li>- Senior staff(s) from ITC</li> <li>- Senior staff(s) from Pilot Regional Office</li> </ol>	
<p><b>Output 2</b></p> <p>Activity 2-1: To review the present system of standard and curriculum development and revision.</p> <ul style="list-style-type: none"> <li>· In the revising plan, following activities are to be considered</li> <li>--To develop module systems to respond to the labor market needs</li> </ul> <p>Activity 2-2: To revise a standard(s) and a curriculum(s) for a pilot training course(s)</p> <p>Activity 2-3: To design a pilot course(s)</p> <p>Activity 2-4: To develop guidelines for training materials</p> <p>Activity 2-5: To prepare the necessary equipment for the pilot</p>	<ol style="list-style-type: none"> <li>2. Administrative staff</li> <li>- Secretaries</li> <li>- Translator</li> <li>- Drivers</li> <li>- Accountant</li> </ol> <ol style="list-style-type: none"> <li>3. Land, buildings and facilities</li> <li>Offices / work space for Japanese experts in TVTO Headquarters</li> </ol> <ol style="list-style-type: none"> <li>4. Allocation of budget</li> </ol>	



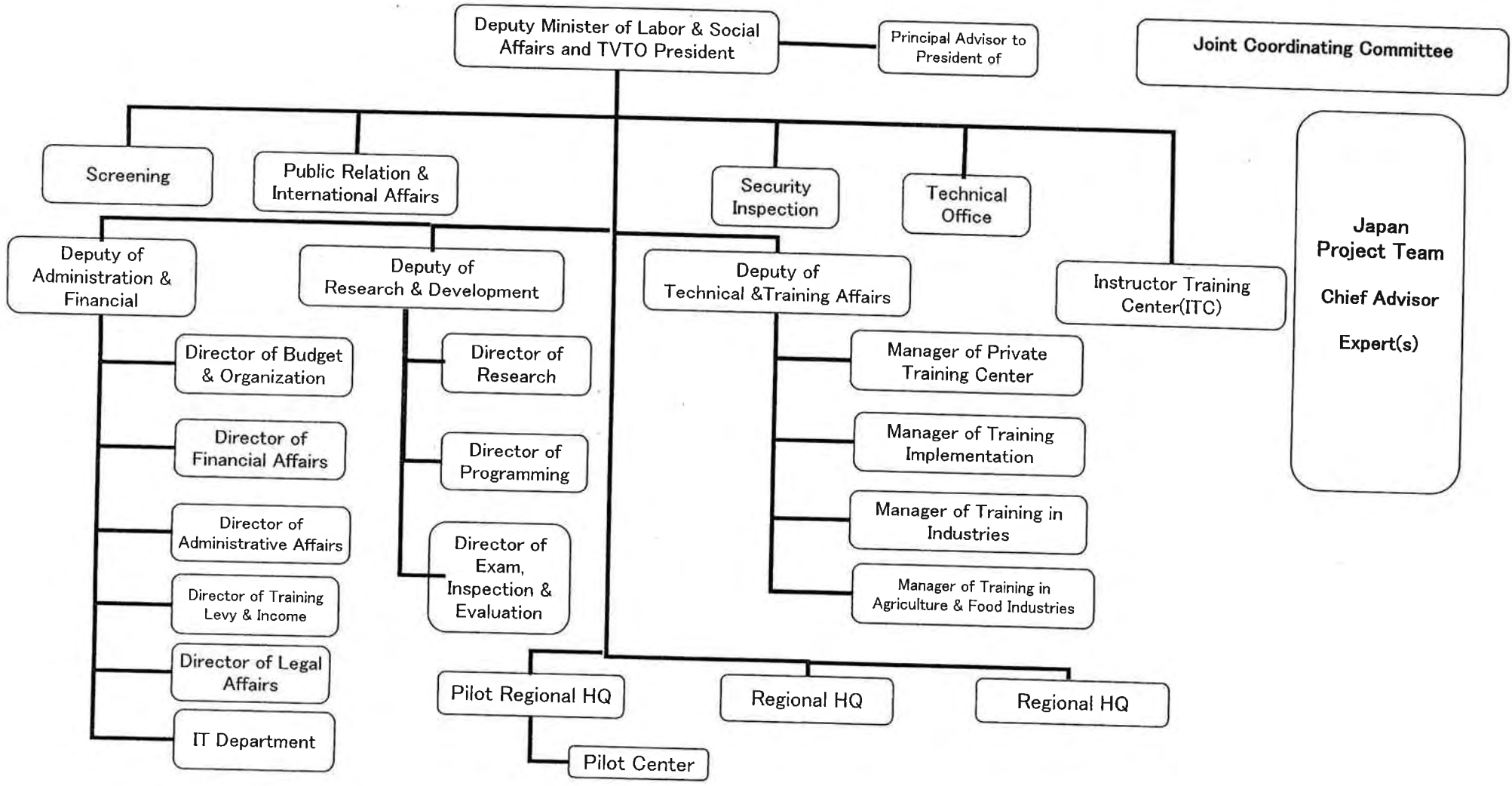
<p>course(s)</p> <p>Activity 2-6: To deploy appropriate instructors</p> <p>Activity 2-7: To implement a pilot course(s)</p> <p>Activity 2-8: To identify the problems of a pilot course(s) and reflect it in the revised standard and curriculum.</p> <p><b>Output 3</b></p> <p>Activity 3-1: To plan training monitoring and evaluation</p> <ul style="list-style-type: none"> <li>• In the revising plan, following activities are to be considered</li> <li>• --To review the method of aptitude test</li> </ul> <p>Activity 3-2: To conduct the training course evaluation</p> <p>Activity 3-3: To conduct the training course monitoring</p> <p><b>Output 4</b></p> <p>Activity 4-1: To review the pilot training course(s)</p> <p>Activity 4-2: To summarize the experience and lessons of the pilot training course(s)</p> <p>Activity 4-3: To develop a plan of training management improvement plan</p>	<p>Expenses for the implementation of the pilot training course(s), Salaries and other allowances for the Iranian staff</p>	<p><b><u>Preconditions</u></b></p> <p>-To confirm that TVTO will not be privatized.</p>
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### Annex 2 Tentative Schedule of the Project

	2007			2008												2009												2010														
	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	5	6	7	8	9	10	11	12
	Stage 1												Stage 2																													
Planning detailed activities	█																																									
Needs assessment study	█																																									
Training standard/curriculum revision				█																																						
Preparation for and implementation of a pilot course(s)				█																																						
Training course monitoring and evaluation				█																																						
Training standard/curriculum revision (2nd term)																█																										
Preparation for and implementation of a pilot course(s) (2nd term)																█																										
Training course monitoring and evaluation																█																										
Development of TVTO's management improvement plan																█																										

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**添付C :**

**プロジェクト・デザイン・マトリクス (バージョン0)**

## Appendix C Project Design Matrix (PDM) Version 0

Project Title : **Project on Strengthening the TVT Management Skills in TVTO**

**Ver.0**

Period : **Three and a half Years**

Project Site : **To be identified**

Period : **July 2007-December 2010**

Target Group : (Direct) **TVTO staff and instructors**

Date : **April 21, 2007**

(Indirect) **TVTO trainees**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
Unemployment, especially of youth and women is improved.	1. Unemployment rate of youth and women is improved.	1. Statistics of labor employment	Improvement plan is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	1. XXX Pilot training course is planned and implemented until the end of the 1 phase 2. Experiences and lessons from the implementation of pilot training course are analyzed and reported. 3. The trainees' satisfaction rate of pilot training is better than that of other courses. 4. Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the Project.	1. Training course plan and the Project progress reports 2. Pilot training reports 3. Pilot training reports 4. Plan for training management improvement	1. The government of the Islamic Republic of Iran does not change TVET policies. 2. The government of Japan doesn't change its policy of ODA to Iran drastically.
<b><u>Outputs</u></b>			
<u>Output 1:</u> TVTO is able to assess the training needs in labor market more efficiently.  <u>Output 2:</u> TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.  <u>Output 3:</u> TVTO improves its monitoring and evaluation system.	1-1. TVTO staffs understand the training management process of Japanese training institutions. 1-2. Training needs assessment method is revised. 1-3. Training needs is assessed and analyzed.  2-1. XXX training course standard(s) and/or curriculum(s) are revised as a trial. 2-2. XXX pilot training course plans are developed.  3-1. Training monitoring and evaluation guideline is developed. 3-2. Training monitoring and evaluation is conducted and analyzed.	1-1. Evaluation documents of the training in Japan 1-2. Revising plan 1-3. Assessment reports  2-1. Revised standard(s) and curriculum(s) 2-2. Pilot training course plan  3-1. Monitoring and evaluation guideline 3-2. Monitoring and evaluation reports	The Project's C/Ps from TVTO remain at TVTO HQ and related office.

<p><u>Output 4:</u> TVTO develops a management improvement plan based on the review of the pilot training course(s).</p>	<p>4-1.The experience and lessons are summarized as a report. 4-2.A plan for training management improvement is developed.</p>	<p>4-1.Pilot training course report 4-2.Plan for training management improvement</p>	
<b><u>Activities of the Project</u></b>	<b><u>Inputs</u></b>	<b><u>Preconditions</u></b>	
<p><b>Output 1</b> Activity 1-1: To develop needs assessment study plan for pilot training course In the plan, following activities are to be considered --To clarify the process of the needs assessment study --To establish a comprehensive system to access the job information and training needs --To establish the function to access the information on new technology Activity 1-2: To conduct the training needs assessment study Activity 1-3: To select the training course(s) to be revised for pilot training implementation Activity 1-4: To apply the pilot training needs assessment study to other training course(s)</p> <p><b>Output 2</b> Activity 2-1: To review the present system of standard and curriculum development and revision In the revising plan, following activities are to be considered --To develop module systems to respond to the labor market needs Activity 2-2: To revise a standard(s) and a curriculum(s) for a pilot training course(s) Activity 2-3: To design a pilot course(s) Activity 2-4: To develop guidelines for training materials Activity 2-5: To prepare the necessary equipment for the pilot course(s) Activity 2-6: To deploy appropriate instructors Activity 2-7: To implement a pilot course(s) Activity 2-8: To identify the problems of a pilot course(s) and reflect it in the revised standard and curriculum</p>	<p><u>Japanese Side:</u> 1. Dispatch of Japanese experts 2. Provision of equipment 3. Training of counterpart personnel in Japan 4. Supplementary budget for local expenditure</p> <p><u>Iranian Side :</u> 1. Counterpart personnel - Principal Advisor / Head of the Japan Desk - Deputy of Technical and Training Affairs - Deputy of Research and Development - Deputy of Administration and Financial - Deputy of Research and Development from Instructor Training Centre (ITC) - Executive Director of Training and Implementation - Senior staff(s) from ITC - Senior staff (s) from Pilot Regional Office 2. Administrative staff - Secretaries - Translator - Drivers - Accountant 3. Land, buildings and facilities Offices / work space for Japanese experts in TVTO Headquarters 4. Allocation of budget Expenses for the implementation of the pilot training course(s), salaries and other allowances for the Iranian staff</p>	<p>To confirm that TVTO will not be privatized.</p>	

**Output 3**

Activity 3-1: To plan training monitoring and evaluation

In the revising plan, following activities are to be considered

--To review the method of aptitude test

Activity 3-2: To conduct the training course evaluation

Activity 3-3: To conduct the training course monitoring

**Output 4**

Activity 4-1: To review the pilot training course(s)

Activity 4-2: To summarize the experience and lessons of the  
pilot training course(s)

Activity 4-3: To develop a plan of training management  
improvement plan

**添付D：**

**プロジェクト・デザイン・マトリクス（バージョン1）**



## Appendix D Project Design Matrix (PDM) Version 1

Project Title : **Project on Strengthening the TVT Management Skills in TVTO**

**Ver.1**

Period : **Three and a half Years**

Project Site : **Tehran**

Period : **July 2007-December 2010**

Target Group : (Direct) **TVTO staff and instructors**

Date : **December 15, 2009**

(Indirect) **TVTO trainees**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
The National Vocational Qualification in labor force is improved.	1. Participation rate in labor force is increased.	1. Statistics of labor employment	Improvement plan is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	1. Pilot training course is planned and implemented twice until the end of the project. 2. Experiences and lessons from the implementation of pilot training course are analyzed and reported. 3. The trainees' satisfaction rate of pilot training is better than that of other courses. 4. Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the Project.	1. Training course plan and the Project progress reports 2. Pilot training reports 3. Pilot training reports 4. Plan for training management improvement	1. The government of the Islamic Republic of Iran does not change TVET policies. 2. The government of Japan doesn't change its policy of ODA to Iran drastically.
<b><u>Outputs</u></b>			
<u>Output 1:</u> TVTO is able to assess the training needs in labor market more efficiently.  <u>Output 2:</u> TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.  <u>Output 3:</u> TVTO improves its monitoring and evaluation system.	1-1. TVTO staffs understand the training management process of Japanese training institutions. 1-2. Training needs assessment method is revised. 1-3. Training needs is assessed and analyzed.  2-1. Technical area for pilot training course is selected based on training needs analysis 2-2. Training course standard and/or curriculum are developed as a trial. 2-3. Pilot training course plans are developed.  3-1. Training monitoring and evaluation manual is developed. 3-2. Training monitoring and evaluation is conducted and analyzed.	1-1. Evaluation documents of the training in Japan 1-2. Manual of Training Needs Assessment 1-3. Assessment reports  2-1. Assessment reports 2-2. Revised standard and curriculum 2-3. Pilot training course plan  3-1. Manual of Monitoring and evaluation 3-2. Monitoring and evaluation	The Project's C/Ps from TVTO remain at TVTO HQ and related office.

<p><u>Output 4:</u> TVTO develops a training management improvement plan based on the review of the pilot training course.</p>	<p>4-1.The experience and lessons are summarized as a report. 4-2.A plan for training management improvement is developed.</p>	<p>reports 4-1.Pilot training course report 4-2.Plan for training management improvement</p>	
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<u>Activities of the Project</u>	<u>Inputs</u>	<u>Preconditions</u>
<p><b>Output 1</b> Activity 1-1: To develop needs assessment study plan for pilot training course Activity 1-2: To establish working group with industry Activity 1-3: To conduct the training needs assessment study Activity 1-4: To select the training course to be revised for pilot training implementation Activity 1-5: To apply the pilot training needs assessment study to other training course</p> <p><b>Output 2</b> Activity 2-1: To review the present system of standard and curriculum development and revision Activity 2-2: To revise a standard and a curriculum for a pilot training course Activity 2-3: To design a pilot course Activity 2-4: To develop guidelines for training materials Activity 2-5: To prepare the necessary equipment for the pilot course Activity 2-6: To conduct instructor training for pilot course Activity 2-7: To implement a pilot course Activity 2-8: To identify the problems of a pilot course and reflect it in the revised standard and curriculum</p> <p><b>Output 3</b> Activity 3-1: To plan training monitoring and evaluation Activity 3-2: To conduct the training course evaluation Activity 3-3: To conduct the training course monitoring</p>	<p><u>Japanese Side:</u> 1. Dispatch of Japanese experts 2. Provision of equipment 3. Training of counterpart personnel in Japan 4. Supplementary budget for local expenditure</p> <p><u>Iranian Side :</u> 1. Counterpart personnel - Principal Advisor / Head of the Japan Desk - Deputy of Technical and Training Affairs - Deputy of Research and Development - Deputy of Administration and Financial - Deputy of Research and Development from Instructor Training Centre (ITC) - Executive Director of Training and Implementation - Senior staff(s) from ITC - Senior staff (s) from Pilot Regional Office 2. Administrative staff - Secretaries - Translator - Drivers - Accountant 3. Land, buildings and facilities Offices / work space for Japanese experts in TVTO Headquarters 4. Allocation of budget Expenses for the implementation of the pilot training course(s), salaries and other allowances for the Iranian staff</p>	<p>To confirm that TVTO will not be privatized.</p>

**Output 4**

Activity 4-1: To review the pilot training course

Activity 4-2: To summarize the experience and lessons of the pilot training course

Activity 4-3: To develop a plan of training management improvement plan

**添付E：**

**プロジェクト・デザイン・マトリクス（バージョン2）**

## ANNEX IV Project Design Matrix (PDM)

Project Title : **Project on Strengthening the TVT Management Skills in TVTO**

**Ver.2**

Period : **Three and a half Years**

Project Site : **Tehran, Karaj**

Period : **July 2007-December 2010**

Target Group : (Direct) **TVTO staff and instructors**  
(Indirect) **TVTO trainees**

Date : **October 31, 2010**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
The CBT approach becomes a basis of the training structure of TVTO.	<ol style="list-style-type: none"> <li>1. CBT manual (final version) in Persian is produced.</li> <li>2. Representatives (core instructors) of each TVTC take CBT training courses conducted by TVTO.</li> </ol>	<ol style="list-style-type: none"> <li>1. Manual in Persian</li> <li>2. Training record in TVTO</li> </ol>	CBT manual is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	<ol style="list-style-type: none"> <li>1. Pilot training course is planned and implemented twice until the end of the project.</li> <li>2. Experiences and lessons from the implementation of pilot training course are analyzed and reported.</li> <li>3. The trainees' satisfaction rate of pilot training is better than that of other courses.</li> <li>4. Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the Project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training course plan and the Project progress reports</li> <li>2. Pilot training reports</li> <li>3. Pilot training reports</li> <li>4. Plan for training management improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. The government of the Islamic Republic of Iran does not change TVET policies.</li> <li>2. The government of Japan doesn't change its policy of ODA to Iran drastically.</li> </ol>
<b><u>Outputs</u></b>			
<p><u>Output 1:</u> TVTO is able to assess the training needs in labor market more efficiently.</p> <p><u>Output 2:</u> TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.</p> <p><u>Output 3:</u> TVTO improves its monitoring and evaluation system.</p>	<ol style="list-style-type: none"> <li>1-1. TVTO staffs understand the training management process of Japanese training institutions.</li> <li>1-2. Training needs assessment method is revised.</li> <li>1-3. Training needs is assessed and analyzed.</li> <li>2-1. Technical area for pilot training course is selected based on training needs analysis</li> <li>2-2. Training course standard and/or curriculum are developed as a trial.</li> <li>2-3. Pilot training course plans are developed.</li> <li>3-1. Training monitoring and evaluation manual is developed.</li> <li>3-2. Training monitoring and evaluation is conducted and analyzed.</li> </ol>	<ol style="list-style-type: none"> <li>1-1. Evaluation documents of the training in Japan</li> <li>1-2. Manual of Training Needs Assessment</li> <li>1-3. Assessment reports</li> <li>2-1. Assessment reports</li> <li>2-2. Revised standard and curriculum</li> <li>2-3. Pilot training course plan</li> <li>3-1. Manual of Monitoring and evaluation</li> </ol>	The Project's C/Ps from TVTO remain at TVTO HQ and related office.

<p><u>Output 4:</u> TVTO develops a training management improvement plan based on the review of the pilot training course.</p>	<p>4-1.The experience and lessons are summarized as a report. 4-2.A plan for training management improvement is developed.</p>	<p>3-2.Monitoring and evaluation reports  4-1.Pilot training course report 4-2.Plan for training management improvement</p>	
<b><u>Activities of the Project</u></b>		<b><u>Inputs</u></b>	<b><u>Preconditions</u></b>
<p><b>Output 1</b> Activity 1-1: To develop needs assessment study plan for pilot training course Activity 1-2: To establish working group with industry Activity 1-3: To conduct the training needs assessment study Activity 1-4: To select the training course to be revised for pilot training implementation Activity 1-5: To apply the pilot training needs assessment study to other training course</p> <p><b>Output 2</b> Activity 2-1: To review the present system of standard and curriculum development and revision Activity 2-2: To revise a standard and a curriculum for a pilot training course Activity 2-3: To design a pilot course Activity 2-4: To develop guidelines for training materials Activity 2-5: To prepare the necessary equipment for the pilot course Activity 2-6: To conduct instructor training for pilot course Activity 2-7: To implement a pilot course Activity 2-8: To identify the problems of a pilot course and reflect it in the revised standard and curriculum</p> <p><b>Output 3</b> Activity 3-1: To plan training monitoring and evaluation Activity 3-2: To conduct the training course evaluation Activity 3-3: To conduct the training course monitoring</p>	<p><u>Japanese Side:</u> 1. Dispatch of Japanese experts 2. Provision of equipment 3. Training of counterpart personnel in Japan 4. Supplementary budget for local expenditure</p> <p><u>Iranian Side :</u> 1. Counterpart personnel - Principal Advisor / Head of the Japan Desk - Deputy of Technical and Training Affairs - Deputy of Research and Development - Deputy of Administration and Financial - Deputy of Research and Development from Instructor Training Centre (ITC) - Executive Director of Training and Implementation - Senior staff(s) from ITC - Senior staff (s) from Pilot Regional Office 2. Administrative staff - Secretaries - Translator - Drivers - Accountant 3. Land, buildings and facilities Offices / work space for Japanese experts in TVTO Headquarters 4. Allocation of budget Expenses for the implementation of the pilot training course(s), salaries and other allowances for the Iranian staff</p>	<p>To confirm that TVTO will not be privatized.</p>	

**Output 4**

Activity 4-1: To review the pilot training course

Activity 4-2: To summarize the experience and lessons of the pilot training course

Activity 4-3: To develop a plan of training management improvement plan

**添付F：**

**技術協力プロジェクト（職業訓練管理強化プロジェクト）に係る、中間レビュー団とイラン関係官庁間の議事録**



**IN THE NAME OF GOD**

**MINUTES OF MEETING**  
**BETWEEN**  
**THE JAPANESE MID-TERM REVIEW TEAM**  
**AND**  
**THE AUTHORITIES CONCERNED OF THE GOVERNMENT OF**  
**THE ISLAMIC REPUBLIC OF IRAN**  
**ON**  
**THE JAPANESE TECHNICAL COOPERATION**  
**FOR THE PROJECT FOR STRENGTHENING TECHNICAL AND VOCATIONAL**  
**TRAINING MANAGEMENT SKILLS**  
**IN TECHNICAL AND VOCATIONAL TRAINING ORGANIZATION**

The Japanese Mid-Term Review Team (hereinafter referred to as “the Japanese Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) headed by Mr. Nobuyuki KONISHI conducted in the Islamic Republic of Iran from 6<sup>th</sup> December to 16<sup>th</sup> December 2009, the mid-term review of the “Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization” (hereinafter referred to as “the Project”) for the project period from July 2007 to December 2009.

During its stay in the Islamic Republic of Iran, the Japanese Team had a series of discussions with the authorities concerned, jointly reviewed the achievement of the Project, and exchanged views on the project performance based on five (5) criteria for project evaluation.

As a result of the discussions, the Japanese Team and the concerned authorities of the Islamic Republic of Iran authorities agreed on the matter referred to in the document attached hereto.

Tehran, 16<sup>th</sup> December 2009

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Mr. Nobuyuki KONISHI  
Team Leader  
Japanese Mid-Term Review Team  
Japan International Cooperation Agency  
Japan



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Mr. Mohammad Taghi SABERI  
Deputy of Research and Planning/ Project  
Manager  
Technical and Vocational Training Organization  
The Islamic Republic of Iran



## 1. Introduction

### 1.1 Objective of the Mid-Term Review

The Mid-Term Review was conducted with the following objectives;

- (1) To review and confirm the achievement and implementation process of the Project based on the documents such as the Record of Discussion (hereinafter referred to as “R/D”) and the Project Design Matrix (hereinafter referred to as “PDM”). The revision from the original PDM ver.0 to PDM ver.1 is clarified in ANNEX IV.
- (2) To evaluate the activities and achievement in terms of five evaluation criteria, namely Relevance, Effectiveness, Efficiency, Impact and Sustainability
- (3) To conclude whether the Project will be able to achieve the purpose and realize the outputs and to clarify issues and their countermeasures for the remaining period
- (4) To share a common understanding among stakeholders regarding recommendations for further improvements of the Project and the lessons that can be applied to other similar ongoing and future JICA projects

### 1.2 Methodology of the Mid-Term Review

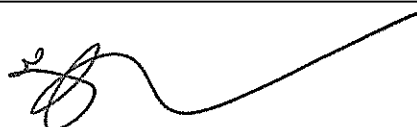
The Project was jointly reviewed in a collaborative manner between the concerned authorities of the Iranian side and the Japanese side. A series of questionnaires and interviews are prepared for different groups of stakeholders. For the Mid-term Review, the Five Evaluation Criteria was applied. The Five Evaluation Criteria is related to PDM as shown in the following table.

**Relationship between PDM and Five Evaluation Criteria**

	Relevance	Effectiveness	Efficiency	Impact	Sustainability
Overall Goal					
Project Purpose					
Outputs					
Inputs					

### 1.3 Members of the Team

No.	Name	Title / Field	Occupation
1	Mr. Nobuyuki KONISHI	Leader	Director Technical and Higher Education Division, Human Development Department, JICA
2	Mr. Mitsunori FURUTA	Vocational Training	Deputy Director (International Cooperation) Employment and Human Resources Development Organization of Japan
3	Mr. Kenichi SHIROZU	Cooperation Planning	Program Officer Technical and Higher Education Division, Human Development Department, JICA
4	Ms. Kinuko MITANI	Evaluation Analysis	Consultant IC Net Limited



#### 1.4 Schedule of the Review Team

See attached ANNEX I

#### 1.5 Major Interviewees by the Team

See attached ANNEX II

### 2. Project Performances and Implementation Process

Achievement of the Project was measured in terms of inputs, activities, outputs and project purpose, all of which were based on the Project Design Matrix (PDM) ver.0. Narrative summary of PDM ver.0 is shown below.

#### Narrative Summary of PDM ver.0 agreed in April 2007

Overall Goal	Unemployment, especially of youth and women is improved
Project Purpose	TVTO*'s training management cycle is improved.
Output 1	TVTO is able to assess the training needs in labor market more efficiently.
Output 2	TVTO develops, reviews and updates the training course standard and curriculum based on the result of the labor market needs analysis.
Output 3	TVTO improves its monitoring and evaluation system.
Output 4	TVTO develops a management improvement plan based on the review of the pilot training course.

\* Technical Vocational and Training Organization (hereinafter referred to as "TVTO")

#### 2.1 Input

##### 2.1.1 Japanese Contribution

###### 1) Dispatch of experts

A total of 8 experts have been assigned by December 2009, namely Chief Advisor, Team Leader, Deputy Team Leader / Vocational Training Management expert 1, Vocational Training Management expert 2, Training Needs Assessment and Analysis expert, Training Standard and Curriculum expert, Training Monitoring and Evaluation expert.

###### 2) Provision of equipment and facilities

The total amount of the equipment provided as of December 2009 is approximately IRR133,187,200, which are used for procuring office equipment such as printers, computers and copy machine.

###### 3) Training for counterparts

A total of 8 persons participated in the study tour in Japan arranged under the counterpart training scheme of the Project. Four persons benefited the training "Vocational Training Management" from August to September 2007, and other 4 persons benefited the same training from June to July 2008.

4) National staff members for the Project

A total of 6 staff members are hired by the Project. They are project coordinator, Industrial Reference Group (hereinafter refer to as “IRG”) coordinator, 2 technical interpretators and 2 assistants.

**2.1.2 Iranian Contribution**

1) Appointment of counterpart personnel

At the beginning of the Project, counterpart personnel were appointed as planned. However, during the implementation of the Project, some counterpart personnel were changed due to internal transfer. The present counterpart personnel are shown in ANNEX III.

2) Land and facilities for the project

Provision of working space, facilities, basic furniture and equipment at TVTO and TVTC No. 4 for the experts from the Japanese side have been provided appropriately. Necessary equipments for the pilot course were procured by TVTO.

3) Local expenses

Administrative and operational costs for electricity, water supply, telephone and furniture have been borne by the Iranian side.

Approximately IRR950,000,000 has been borne by the Iranian side.

**2.2 Achievements of the Project**

The results of the Project are highlighted below.

**Results of the Project as of December 2009**

	Results
Overall Goal	It is expected that the training management cycle of TVTO will be improved through the efforts made by the Project. Thus, the Project is expected to contribute in increasing the number of employable youth and women after 3 to 5 years after the completion of the Project.
Project Purpose	The project purpose is most likely achieved due to the effective efforts made by the Iranian counterparts as well as the JICA Project Team. The activities of the Project have been either progressed or completed as per the schedule (i.e., conducting needs assessment, organizing the 1 <sup>st</sup> pilot training course).
Output 1	The Project conducted the planned needs assessment in the course of the project implementation. Based on the discussion and agreement between TVTO and the JICA Project Team, “Automotive Repair and Service Sector” was selected as the focus area of the 1 <sup>st</sup> pilot training course.  TVTO has been able to deepen the understanding of the automobile industry’s training needs through the meetings, workshops and trainings in Japan that have



been organized by the Project.

- Output 2 Under the guidance of the experts from the Japanese side, the first needs assessment was conducted to prepare for the 1<sup>st</sup> pilot training course jointly with the Iranian counterparts. The target group of the needs assessment was the automobile industries, especially in the field of repairs and after service. The Project conducted interviews and questionnaires to the IRG members. Based on the needs analysis of the industry, selection of the training subject for the 1<sup>st</sup> pilot training course was concluded as “Electrical Systems in Automotive Technology Course” between TVTO and the Project.
- The trainers who conducted the 1<sup>st</sup> pilot training course commented that the level of one competency out of the six competencies was too high. The Project is currently preparing for the 2<sup>nd</sup> pilot training course by 1) taking the lesson learned from the 1<sup>st</sup> pilot training course, and 2) applying IRG inputs in order to select appropriate competencies.
- Output 3 The Monitoring and Evaluation expert led the development of monitoring and evaluation system applied to the 1<sup>st</sup> pilot training course. Using the developed system, the 1<sup>st</sup> pilot training course was monitored and evaluated.
- Output 4 The Project plans to conduct 2 pilot training courses. The 1<sup>st</sup> pilot training course was completed in November 2009. It is preparing for the 2<sup>nd</sup> pilot training course. After the completion of the 2<sup>nd</sup> course, the Project plans to compile a report that illustrates the lesson learned through the 2 pilot training courses. The purpose of such report will be for TVTO use in improving its training management.
- 

## **2.3 Implementation Process of the Project**

### **2.3.1 Implementation of Activities**

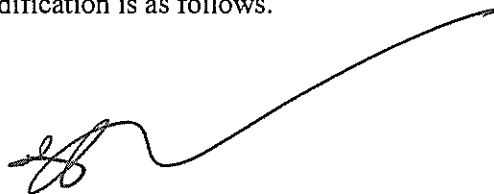
The Project involves the manager and trainers of TVTC No. 4, staff members of Curriculum Development Center (hereinafter referred to as “CDC”) and TVTO headquarters in its implementation so far. It focuses on knowledge transfer from trainer level to top management level in improving the TVTO training management cycle.

### **2.3.2 Project Management**

The Project has been managed jointly by the Iranian side and the Japanese side. The experts and support staff members who are involved in the project implementation are held responsible for the roles and responsibilities defined under the Project in an effective manner.

## **3. Modification of PDM**

Based on the review, the Japanese Team proposed modifications, which was discussed and agreed by Iranian side. PDM ver.0 was revised according to the following modifications and PDM ver.1 was developed as attached in ANNEX IV. Main point of modification is as follows.



### 3.1 Modification of Overall Goal

The initial overall goal “Unemployment, especially of youth and women is improved” is changed to “The National Vocational Qualification in labor force is improved”.

### 3.2 Modification of Output

The initial output 2, “TVTO develops, reviews and updates the training course standard and curriculum based on the result of the labor market needs analysis” was modified to “TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement”. The initial output 4 “TVTO develops a management improvement plan based on the review of the pilot training course(s)” was also modified to “TVTO develops a training management improvement plan based on the review of the pilot training course” to suit to the actual implementation.

### 3.3 Modification of Objectively Verifiable Indicators

At the initial stage, some Objectively Verifiable Indicators were shown as XXX. The Japanese Team and the Iranian side agreed to select the indicators which are applicable to the actual conditions. The followings are the agreed changes.

Item	Ver.0	Ver.1
Indicator of Project Purpose	1. XXX pilot training course is planned and implemented until the end of the 1st phase.	1. Pilot training course is planned and implemented twice until the end of the project.
	2. Experiences and lessons from the implementation of pilot training course are analyzed and reported until the end of the 1st phase.	2. Experiences and lessons from the implementation of pilot training course are analyzed and reported.
Indicator of Output 2		2-1. Technical area for pilot training course is selected based on training needs analysis
	2-1. XXX training course standard(s) and/or curriculum(s) are revised as a trial.	2-2. Training course standard and/or curriculum are developed as a trial.
	2-2. XXX pilot training course plans are developed.	2-3. Pilot training course plans are developed.

### 3.4 Modification of Activities of the Project

Based on the actual inputs, Activities of the Project were revised as shown in ANNEX IV. As involvement of industry is one of the important activities of the Project, “To establish working group with industry” was added as Activity 1-2.

## **4. Results of Mid-term Review**

### **4.1 Relevance**

The relevancy of the Project is found to be high.

To implement the 55<sup>th</sup> article of the 4th program of economic, social and cultural development of the Islamic republic of Iran based on restoring structures, facilities and improving technical and vocational training quality with international cooperation in order to develop stable employment in relation to considerable size of economically active population, the relevancy of the purposes of the project is to improve the National Vocational Qualification (NVQ) among labor force is high in this country.

The Government of Japan has been providing assistance to Iran. JICA issued its cooperation plan for Iran in 2007, which highlighted the importance to assist in poverty reduction and increase of employment opportunities. Assistance extended to the TVT sector was sought as a mean to contribute in increasing employment opportunities in Iran.

### **4.2 Effectiveness**

Based on the Results of the Project as of December 2009 highlighted in page 4 and 5, the project purpose will be achieved by the end of the Project because 1) the expected outputs of the Project have been achieved up to conducting the 1<sup>st</sup> pilot training course, and 2) the project activities have been effectively implemented and/or undertaken by the JICA Project Team as well as the Iranian counterparts.

The experience through planning/implementing/monitoring of the pilot training courses planned in the Project has been created an effective and practical learning opportunity for the Iranian counterpart.

### **4.3 Efficiency**

Based on the ratio between the inputs and outputs of the Project, the efficiency of the Project is high because 1) adequate working space and equipment were provided by the Iranian side, 2) appropriate experts from both the Iranian side and the Japanese side have been placed, 3) the cooperation between the Project and the IRG has been established, and 4) the implementation of the 1<sup>st</sup> pilot training course was completed as per the schedule.

### **4.4 Impact**

The Japanese Team found the progress of the Project very effective. The Project has succeed in 1) the establishment of the cooperation between TVTO and the automobile industry, 2) achievement of the purpose of the 1<sup>st</sup> pilot training course, and 3) the introduction of the CBT approach to the Iranian side.



Based on the said reasons above, it is expected the training management cycle of TVTO will be improved. The Project will be able to contribute in developing stable employment.

#### **4.5 Sustainability**

Based on the 3 aspects mentioned below, the developed training management cycle as well as the lesson learned through the Project will be applied and/or scaled up by TVTO.

##### **1) Organizational/policy aspect**

The Iranian side has placed counterparts to work with the experts from the Japanese side. The Project is implementing its activities in collaboration with the automobile industry as well as other concerned stakeholders. The automobile industry has been supporting TVTO. TVTO trainers have been trained by the industry, and the industry has been donating teaching equipments/materials to TVTC. Thus, the collaboration between TVTO and the industry is likely to continue after the completion of the Project.

##### **2) Financial aspect**

The Iranian side has been providing sufficient financial assistance to the Project. Therefore, the Project is expected to complete its activities without any financial issue.

##### **3) Technical aspect**

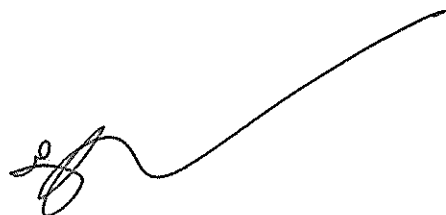
TVTO is currently exploring the effectiveness and relevancy of CBT approach to the TVT sector in Iran. Through the Project, CBT experts have been placed to work with the Iranian counterparts to conduct pilot training courses to examine its effectiveness and relevancy. The Iranian counterparts are developing skills which are needed in CBT introduction in a practical manner, which will contribute in improving their capacity in planning/implementing/monitoring training courses offered by TVTO. Thus, it is expected that the Iranian counterparts will be able to obtain good knowledge and know-how to apply CBT approach to TVTO activities by the end of the Project.

#### **5. Recommendations**

The following recommendations are made based on the result of the mid-term review by the Japanese Team.

##### **5.1 Establishment of the CBT Approach Implementation Structure**

It is recommended that TVTO establishes a CBT approach implementation structure. The implementation structure covers conducting training needs assessment from industries, improving knowledge and skills of trainers, procuring training materials and equipments. The IRG is a good example in involving industries.





To account the sustainability of the Project, it is recommended that a working group be established in TVTO to introduce the CBT approach in a systematic manner in TVTO. The working group shall analyze current vocational training system in Iran and develop the CBT approach introduction plan. The experts from the Japanese side shall play a supporting role in the development of the training management improvement plan.

### **5.2 Exchange of Experience on the CBT approach between CDC and the Project**

In order to implement the CBT approach, further commitment and ownership of TVTO is indispensable. It is necessary to create more opportunities to exchange experiences on the CBT approach between CDC and the Project.

### **6. Conclusion**

The Japanese Team concluded that the project purpose would be achieved by the end of the project period.

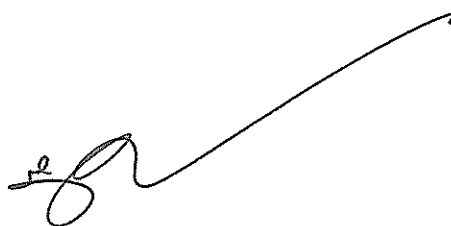
The Japanese Team found the achievement in conducting the 1<sup>st</sup> pilot training course. As per the Five Evaluation criteria applied by JICA, the Japanese Team made an assessment of the project progress. The relevance, efficiency, effectiveness, impact and sustainability of the Project seem to be high.

ANNEX I Schedule of the Mid-Term Review

ANNEX II List of Major Interviewees

ANNEX III Counterpart Personnel

ANNEX IV Project Design Matrix (PDM) Ver.1



ANNEX I Schedule of the Mid-term Review

Date			Evaluation Team			Place
			<u>Mr.Nobuyuki Konishi</u> Team Director Technical and Higher Education Division, Higher Education and Social Security Group, Human Development Department, JICA	<u>Mr.Mitsunori Furuta</u> Deputy Director (International Cooperation) Employment and Human Resources Development Organization of Japan	<u>Mr.Kenichi Shirozu</u> Program Officer Technical and Higher Education Division, Higher Education and Social Security Group, Human Development Department, JICA	
1	5-Dec	Sat				Haneda → Kansai (JL185, 19:50-21:20) Kansai → Dubai (EK317, 23:20-05:40)
2	6-Dec	Sun				Dubai → Tehran (EK971, 07:55-09:35) Meeting with JICA experts: Mr. Nagumo, Ms. Ishimaru, Mr. Ishibashi
3	7-Dec	Mon				9:00 Meeting and Interview TVTC No.4 : Mr.Najibzade and 3 C/P Instructors 11:30 Meeting with JICA expert: Mr. Kevin Observation: TVTC No.4 14:00 Meeting and Interview: 3 C/P Instructors 16:30 JICA IRAN OFFICE
4	8-Dec	Tue				8:30 Meeting with JICA Expert@TVTO 10:00 Meeting with TVTO (overall explanation of survey) Mr.Saberi Individual Meeting and Interview: Ms.Jaymand/Mr.Gofran Meeting with JICA expert: Mr. Roger
5	9-Dec	Wed				9:00-11:00 IRG@Mega Motors 12:00-14:00 IRG@SAIPA Yadak Meeting with JICA expert: Mr. Motomura
6	10-Dec	Thu	Tokyo (Haneda) → Osaka → Dubai	Drafting Report Internal Meeting	Drafting Report Internal Meeting	Drafting Report Internal Meeting
7	11-Dec	Fri	Dubai → Tehran (9:35) Internal Meeting	Internal Meeting	Internal Meeting	Internal Meeting
8	12-Dec	Sat				10:00 IRG@Irankhodro Meeting with JICA expert
9	13-Dec	Sun				9:30 Meeting and Interview: Participants of the training ,TVTC No.4 11:00 Ceremony for cetification TVTC No.4 14:00 Meeting and Intreview: CDC
10	14-Dec	Mon				9:00 ITC(Instructor Traing Center)/Meeting with TVTO
11	15-Dec	Tue				Meeting with TVTO Revision of Minutes of Meeting Signing of Minutes of Meeting
12	16-Dec	Wed				11:00 Report to JICA Iran Office (with Mr.Fujii Second Secretary, embassy of Japan in Iran) Tehran → Dubai (EK978, 21:20-23:50)
13	17-Dec	Thu		Dubai → Bangkok (EK384, 03:15-12:05)		Dubai → Kansai (EK316, 03:30-17:20) Kansai → Haneda (EK317, 18:45-19:55)

## ANNEX II List of Major Interviewees

### Technical and Vocational Training Organization (TVTO)

Mr. Mohammad Taghi SABERI	Deputy of Research and Planning/ Project Manager
Ms. Jaymand PARISA	Project coordinator

### Curriculum Development Center (CDC), TVTO

Mr. Ramak FARAHABADI	Director General
Mr. Hassan GHOFRAN	Assistant of technical supervisor

### Technical and Vocational Training Center No. 4 (TVTC No. 4), TVTO

Mr. Hemmat Ali NAJIB ZADEH	Manager
Mr. Seyed Mohsen SALIMIAN	Auto mechanic trainer
Mr. Javad RAFATI	Auto mechanic trainer
Mr. Ebrahim KHALILZADEH	Auto mechanic trainer

### Industries Reference Group (IRG)

Mr. Amir FARSI	Central workshops manager	IRAN KHODRO
Mr. Ali Reza GHAAZELI	Deputy, Administration	IRAN KHODRO
Mr. Ghiyasvani	Training manager	Megamotor
Mr. Ali MOHAMADI	Training Expert	Megamotor
Mr. Payman BAYATN	Head, Planning Department for Training	SAIPA YADAK (SAIPA After Service Services Organization)
Mr. A. KARAFI	Training manager	SAIPA YADAK (SAIPA After Service Services Organization)

JICA Project Team

Mr. Yuichiro MOTOMURA

Mr. Tatsuya NAGUMO

Ms. Nakako ISHIMARU

Mr. Toru ISHIBASHI

Mr. Kunitoshi SAITO

Mr. Kevin JACKSON

Mr. Roger DEZILWA

Mr. Perviz IMANI

Team Leader

Vocational Training Management (1)/

Deputy Team Leader

Vocational Training Management (2)

Training Needs Assessment and Analysis

Training Monitoring and Evaluation

Training Standard and Curriculum/

Automotive

Training Standard and Curriculum/

CBT Advisor

JICA Project Support Advisor

## ANNEX III Counterpart Personnel

### Technical and Vocational Training Organization (TVTO)

Mr. Mohammad Taghi SABERI	Deputy of Research and Planning / Project Manager
Ms. Parisa JAYMAND	Office of Research and Planning / Project coordinator

### Curriculum Development Center (CDC), TVTO

Mr. Ramak FARAHABADI	Director General
Mr. Ebrahim AZAD	Technical Supervisor
Mr. Hassan GHOFAN	Assistant of technical supervisor

### Technical and Vocational Training Center No. 4 (TVTC No. 4), TVTO

Mr. Hemmat Ali NAJIB ZADEH	Manager
Mr. Seyed Mohsen SALIMIAN	Auto mechanic trainer
Mr. Javad RAFATI	Auto mechanic trainer
Mr. Ebrahim KHALILZADEH	Auto mechanic trainer
Mr. Nazer NIKORAVAN	Auto mechanic trainer

## ANNEX IV Project Design Matrix (PDM)

Project Title : **Project on Strengthening the TVT Management Skills in TVTO**

Ver.1

Period : **Three and a half Years**

Project Site : **Tehran**

Period : **July 2007-December 2010**

Target Group : (Direct) **TVTO staff and instructors**  
(Indirect) **TVTO trainees**

Date : **December 15, 2009**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
The National Vocational Qualification in labor force is improved.	1. Participation rate in labor force is increased.	1. Statistics of labor employment	Improvement plan is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	<ol style="list-style-type: none"> <li>1. Pilot training course is planned and implemented twice until the end of the project.</li> <li>2. Experiences and lessons from the implementation of pilot training course are analyzed and reported.</li> <li>3. The trainees' satisfaction rate of pilot training is better than that of other courses.</li> <li>4. Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the Project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training course plan and the Project progress reports</li> <li>2. Pilot training reports</li> <li>3. Pilot training reports</li> <li>4. Plan for training management improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. The government of the Islamic Republic of Iran does not change TVET policies.</li> <li>2. The government of Japan doesn't change its policy of ODA to Iran drastically.</li> </ol>
<b><u>Outputs</u></b>			
<b><u>Output 1:</u></b> TVTO is able to assess the training needs in labor market more efficiently.	<ol style="list-style-type: none"> <li>1-1. TVTO staffs understand the training management process of Japanese training institutions.</li> <li>1-2. Training needs assessment method is revised.</li> <li>1-3. Training needs is assessed and analyzed.</li> </ol>	<ol style="list-style-type: none"> <li>1-1. Evaluation documents of the training in Japan</li> <li>1-2. Manual of Training Needs Assessment</li> <li>1-3. Assessment reports</li> </ol>	The Project's C/Ps from TVTO remain at TVTO HQ and related office.
<b><u>Output 2:</u></b> TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.	<ol style="list-style-type: none"> <li>2-1. Technical area for pilot training course is selected based on training needs analysis</li> <li>2-2. Training course standard and/or curriculum are developed as a trial.</li> <li>2-3. Pilot training course plans are developed.</li> </ol>	<ol style="list-style-type: none"> <li>2-1. Assessment reports</li> <li>2-2. Revised standard and curriculum</li> <li>2-3. Pilot training course plan</li> </ol>	
<b><u>Output 3:</u></b> TVTO improves its monitoring and evaluation system.	<ol style="list-style-type: none"> <li>3-1. Training monitoring and evaluation manual is developed.</li> <li>3-2. Training monitoring and evaluation is conducted and analyzed.</li> </ol>	<ol style="list-style-type: none"> <li>3-1. Manual of Monitoring and evaluation</li> <li>3-2. Monitoring and evaluation</li> </ol>	

<p><u>Output 4:</u> TVTO develops a training management improvement plan based on the review of the pilot training course.</p>	<p>4-1.The experience and lessons are summarized as a report. 4-2.A plan for training management improvement is developed.</p>	<p>reports</p> <p>4-1.Pilot training course report 4-2.Plan for training management improvement</p>	
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<u>Activities of the Project</u>	<u>Inputs</u>	<u>Preconditions</u>
<p><b>Output 1</b> Activity 1-1: To develop needs assessment study plan for pilot training course Activity 1-2: To establish working group with industry Activity 1-3: To conduct the training needs assessment study Activity 1-4: To select the training course to be revised for pilot training implementation Activity 1-5: To apply the pilot training needs assessment study to other training course</p> <p><b>Output 2</b> Activity 2-1: To review the present system of standard and curriculum development and revision Activity 2-2: To revise a standard and a curriculum for a pilot training course Activity 2-3: To design a pilot course Activity 2-4: To develop guidelines for training materials Activity 2-5: To prepare the necessary equipment for the pilot course Activity 2-6: To conduct instructor training for pilot course Activity 2-7: To implement a pilot course Activity 2-8: To identify the problems of a pilot course and reflect it in the revised standard and curriculum</p> <p><b>Output 3</b> Activity 3-1: To plan training monitoring and evaluation Activity 3-2: To conduct the training course evaluation Activity 3-3: To conduct the training course monitoring</p>	<p><u>Japanese Side:</u></p> <ol style="list-style-type: none"> <li>1. Dispatch of Japanese experts</li> <li>2. Provision of equipment</li> <li>3. Training of counterpart personnel in Japan</li> <li>4. Supplementary budget for local expenditure</li> </ol> <p><u>Iranian Side :</u></p> <ol style="list-style-type: none"> <li>1. Counterpart personnel <ul style="list-style-type: none"> <li>- Principal Advisor / Head of the Japan Desk</li> <li>- Deputy of Technical and Training Affairs</li> <li>- Deputy of Research and Development</li> <li>- Deputy of Administration and Financial</li> <li>- Deputy of Research and Development from Instructor Training Centre (ITC)</li> <li>- Executive Director of Training and Implementation</li> <li>- Senior staff(s) from ITC</li> <li>- Senior staff (s) from Pilot Regional Office</li> </ul> </li> <li>2. Administrative staff <ul style="list-style-type: none"> <li>- Secretaries</li> <li>- Translator</li> <li>- Drivers</li> <li>- Accountant</li> </ul> </li> <li>3. Land, buildings and facilities <ul style="list-style-type: none"> <li>Offices / work space for Japanese experts in TVTO Headquarters</li> </ul> </li> <li>4. Allocation of budget <ul style="list-style-type: none"> <li>Expenses for the implementation of the pilot training course(s), salaries and other allowances for the Iranian staff</li> </ul> </li> </ol>	<p>To confirm that TVTO will not be privatized.</p>

<p><b>Output 4</b> Activity 4-1: To review the pilot training course Activity 4-2: To summarize the experience and lessons of the pilot training course Activity 4-3: To develop a plan of training management improvement plan</p>		
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**添付G：**

**技術協力プロジェクト（職業訓練管理強化プロジェクト）に係る、終了時評価団と職業訓練庁調査プログラム局局長間の議事録**

**IN THE NAME OF GOD**

**MINUTES OF MEETING**  
**BETWEEN**  
**THE JAPANESE TERMINAL EVALUATION TEAM**  
**AND**  
**THE RESEARCH AND PROGRAMMING DEPUTY, TECHNICAL AND**  
**VOCATIONAL TRAINING ORGANIZATION**  
**ON**  
**THE JAPANESE TECHNICAL COOPERATION**  
**FOR THE PROJECT FOR STRENGTHNING TECHNICAL AND VOCATIONAL**  
**TRAINING MANAGEMENT SKILLS**  
**IN TECHNICAL AND VOCATIONAL TRAINING ORGANIZATION**

The Japanese Terminal Evaluation Team (hereinafter referred to as “the Japanese Team”), organized by the Japan International Cooperation Agency (hereinafter referred to as “JICA”) headed by Mr. Nobuyuki KONISHI conducted in the Islamic Republic of Iran from 24<sup>th</sup> October to 2<sup>nd</sup> November 2010, the Terminal Evaluation of the “Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization” (hereinafter referred to as “the Project”).

During its stay in the Islamic Republic of Iran, the Japanese Team had a series of discussions with the authorities concerned, jointly reviewed the achievement of the Project, and exchanged views on the project performance based on five (5) criteria for project evaluation.

As the result of the discussions, the Japanese Team and the concerned authorities of the Islamic Republic of Iran authorities agreed on the matter referred to in the document attached hereto.

Tehran, 1<sup>ST</sup> November 2010



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Mr. Nobuyuki KONISHI  
Team Leader  
Japanese Terminal Evaluation Team  
Japan International Cooperation Agency  
Japan



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Dr. Ghofrani Mohammad  
Deputy of Research and Planning/ Project  
Manager  
Technical and Vocational Training Organization  
The Islamic Republic of Iran

## 1. Introduction

### 1.1 Objective of the Terminal Evaluation

The Terminal Evaluation was conducted with the following objectives;

- (1) To review and confirm the achievement and implementation process of the Project based on the documents such as the Record of Discussion (hereinafter referred to as “R/D”) and the Project Design Matrix (hereinafter referred to as “PDM”).
- (2) To evaluate the activities and achievement in terms of five evaluation criteria, namely Relevance, Effectiveness, Efficiency, Impact and Sustainability
- (3) To conclude whether the Project will be able to realize the outputs, to achieve the purpose and to clarify issues and their countermeasures for the remaining period
- (4) To share a common understanding among stakeholders regarding recommendations for further improvements of the Project and the lessons that can be applied to other similar ongoing and future JICA projects

### 1.2 Methodology of the Terminal Evaluation

The Project was jointly reviewed in a collaborative manner between the concerned authorities of the Iranian side and the Japanese side. A series of questionnaires and interviews are prepared for different groups of stakeholders. For the Terminal Evaluation, the Five Evaluation Criteria was applied. The Five Evaluation Criteria is related to PDM Ver.2 as shown in the following table.

**Relationship between PDM and Five Evaluation Criteria**

	Relevance	Effectiveness	Efficiency	Impact	Sustainability
Overall Goal					
Project Purpose					
Outputs					
Inputs					

### 1.3 Members of the Team

No.	Name	Title / Field	Occupation
1	Mr. Nobuyuki KONISHI	Leader	Director Technical and Higher Education Division, Human Development Department, JICA
2	Mr. Toshio OSA	Vocational Training	Advisor Kyoto Center Employment and Human Resources Development Organization of Japan
3	Mr. Kenichiro KOMATSU	Cooperation Planning	Associate Expert Technical and Higher Education Division, Human Development Department, JICA
4	Ms. Kinuko MITANI	Evaluation Analysis	Consultant IC Net Limited

#### 1.4 Schedule of the Japanese Team

See attached ANNEX I

#### 1.5 Major Interviewees by the Japanese Team

See attached ANNEX II

### 2. Project Performances and Implementation Process

Achievement of the Project was measured in terms of inputs, activities, outputs and project purpose, all of which were based on the Project Design Matrix (PDM) Ver.2. Narrative summary of PDM Ver.2 is shown below.

#### Narrative Summary of PDM Ver.2 agreed in October 2010

Overall Goal	The CBT approach becomes the basis of the training structure of TVTO*.
Project Purpose	TVTO's training management cycle is improved.
Output 1	TVTO is able to assess the training needs in labor market more efficiently.
Output 2	TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.
Output 3	TVTO improves its monitoring and evaluation system.
Output 4	TVTO develops a training improvement plan based on the review of the pilot training course.

\* Technical Vocational and Training Organization (hereinafter referred to as "TVTO")

### 2.1 Input

#### 2.1.1 Japanese Contribution

##### 1) Dispatch of experts

A total of 9 experts have been assigned by November 2010, namely Chief Advisor, Team Leader, Deputy Team Leader/Vocational Training Management expert I, Vocational Training Management expert II, Training Needs Assessment and Analysis expert, Training Standard and Curriculum expert, Training Monitoring and Evaluation expert.

##### 2) Provision of equipment and facilities

The Project procured office equipments such as printers, computers and copy machine. They are located at the JICA Project Office at ITC until the end of the Project. After the termination of the Project, they will be handed over to the Iranian side according to the decision made by the Iranian side at the time of the project termination.

##### 3) Training for counterparts

A total of 8 persons participated in the study tour in Japan arranged under the counterpart training scheme of the Project. Four persons benefited the training "Vocational Training Management" from

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August to September 2007, and other 4 persons benefited the same training from June to July 2008.

#### 4) National staff members for the Project

A total of 7 staff members are hired by the Project. They are project coordinator, Industrial Reference Group (hereinafter refer to as "IRG") coordinator, 3 technical interpreters and 2 assistants.

### 2.1.2 Iranian Contribution

#### 1) Assignment of counterpart personnel

At the beginning of the Project, counterpart personnel were appointed as planned. However, during the implementation of the Project, some counterpart personnel were changed due to internal transfer. The present counterpart personnel are shown in ANNEX III.

#### 2) Land and facilities for the project

Provision of working space, facilities, basic furniture and equipments at TVTO, TVTC No. 4 and Instructors Training Center (hereinafter refer to as "ITC") for the experts from the Japanese side have been provided appropriately. Necessary equipments for the pilot course were procured by TVTO.

#### 3) Local expenses

Administrative and operational costs for electricity, water supply, telephone and furniture have been borne by the Iranian side.

### 2.2 Achievements of the Project

The results of the Project are highlighted below.

	Results
Overall Goal	It is expected that CBT manual in Persian will be produced by TVTO and CBT training course for representatives of each TVTC will be conducted by TVTO through the use of the outputs of the Project.
Project Purpose	The Project Purpose is going to be achieved by the end of the Project. JICA Project Team is expected to complete the development of the draft final version of "Manual on CBT" and TVTO training improvement plan by the end of the Project.
Output 1	<p>The Project planned and conducted needs assessment to prepare the 2 pilot training courses. Based on the discussion and agreement between TVTO and JICA Project Team, "Automotive Repair and Service Sector" was selected as the focus area of the 1<sup>st</sup> pilot training course. To apply lessons learned and experience that JICA Project Team acquired when conducting the 1<sup>st</sup> pilot training course, the Project selected the same area of focus for the 2<sup>nd</sup> pilot training course. Both TVTO and IRG agreed to the area of focus.</p> <p>The 3 instructors who are part of the Project have gained practical know-how and knowledge on needs assessment during the project implementation. The</p>

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know-how on needs assessment is illustrated in “Manual on CBT”, which is being drafted by the Project.

Output 2

Based on the technical area for the pilot training courses selected according to the needs of the Iranian side, the Project developed unit of competencies and curriculum. Using the developed curriculum and teaching materials exclusively for the pilot training courses, the pilot training courses were conducted twice.

The 3 instructors worked closely with JICA Project Team in preparing and conducting the courses. The necessary steps for the programming and implementation of training courses are captured in “Manual on CBT”, which is under development by the Project.

Output 3

Monitoring and evaluation tools were developed for the pilot training courses. Under the guidance of JICA Project Team, the developed tools were practiced by the Iranian side. During the pilot training courses, the 3 instructors were directly involved in daily monitoring of the courses/trainees as well as evaluation of the courses/trainees, which were new responsibility to them.

The developed monitoring and evaluation tools are included in “Manual on CBT”, which is under production by the Project.

Output 4

The experience and lessons learned through the Project are shared among the concerned Project members. Such experience and lessons learned are highlighted in the reports produced/will be produced by the Project by the end of the Project. A training management improvement plan will be part of the final project report, which is under preparation by the Project.

The reports already produced have been reviewed by the Iranian side. The first draft of the proposed training management improvement plan has been shared with the Iranian side.

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The documents, reports, manual and other related literature produced and submitted from the Project to the Project Manager in the course of the Project are shown in ANNEX V.

## **2.3 Implementation Process of the Project**

### **2.3.1 Implementation of Activities**

The Project involves the management of TVTO and ITC and 3 instructors in its implementation at the time of the Terminal Evaluation. Despite the frequent change in TVTO management, change in the project sites, reduced number of counterparts, JICA Project Team carried out the planned activities as scheduled for the most part.

ITC and IRG are playing critical roles in the Project. ITC provided timely and relevant guidance and assistance in preparing and conducting the 2<sup>nd</sup> pilot training course despite the time constraints that the Project overcome. IRG made extra efforts to improve communication and exchange of ideas/technology between TVTO and industries. In addition, IRG members hosted the trainees of the

pilot training courses to provide on the job training opportunities which were called Industrial Attachment in the Project.

### **2.3.2 Project management**

The Project has been managed jointly by the Iranian side and the Japanese side. All concerned committees and persons from the Joint Steering Committee, IRG, instructors, and experts to support staff members are held responsible to perform the agreed/given roles and responsibilities until the end of the Project in cooperative and effective manners.

It would have been better if the project management structure from the Iranian side had been maintained at minimum change in personnel throughout the project period. It became very challenging for JICA Project Team to institutionalize the technology transferred and apply the outputs produced by the Project in the course of the project implementation.

Supervision of the experts' presence (i.e., the time they arrive and the time they leave) is necessary.

## **3. Modification of the Overall Goal**

The Overall Goal "The National Vocational Qualification in labor force is improved" "is changed to "The CBT approach becomes the basis of the training structure of TVTO".

## **4. Results of Terminal Evaluation**

### **4.1 Relevance**

Relevance of the Project is high.

The Japanese side confirmed to continue its assistance for projects that will contribute in increasing employment opportunities in Iran. Similarly, TVTO explained that not only the achievement of the project purpose will be a contributing factor to assess the improvement of the TVT sector, which is responsible of TVTO.

### **4.2 Effectiveness**

Effectiveness of the Project is high to some extent.

Despite the fact the Project faced many challenges such as the frequent change in TVTO management and change in the Project site, JICA Project Team accommodated the changes in a flexible manner, and implemented the Project as per the planned schedule for the most part. The results of the Project highlighted in page 4 and 5 prove that the project purpose is going to be achieved by the end of the

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*[Signature]*

Project.

### **4.3 Efficiency**

Efficiency of the Project is average.

Both Iranian and Japanese sides provided inputs as per the agreed terms for the Project for the most part. The expected outputs are going to be delivered before the end of the Project despite the fact that the ratio between the inputs and outputs of the Project changed when compared at the beginning of the Project and the time of the Terminal Evaluation. The following factors hindered the efforts to improve the productivity and appropriateness of the Project:

- The number of counterpart personnel availed to the Project was reduced.
- Project management structure was changed a few times.
- The initial project site was not appropriate.

### **4.4 Impact**

The Project is expected to have a positive impact, while no negative impact is expected.

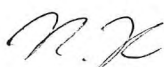
In 3 to 5 years after the end of the Project, the national vocational qualification in labor force is expected to be increased, which is the overall goal of the Project. The outputs of the Project are designed to contribute in the achievement of the overall goal. Examined training management cycle, training management plan and manual on CBT that are under production by the Project shall be made available to all concerned organizations/industries/persons in the TVT sector in Iran in order to meet the required needs to achieve the overall goal in a timely manner.

TVTO is expected to secure the following conditions in order to increase the probability of the achievement of the overall goal. The overall goal is achieved without the direct assistance of the Japanese side:

- The ongoing reform of the TVT sector in Iran is completed in a timely manner.
- The current national vocational qualification/standards are modified accordingly, if CBT approach is approved as the national training approach.
- More instructors in TVT sector in Iran are appropriately trained on CBT application
- IRG model established in the Project is extended to other industries, as needed.

### **4.5 Sustainability**

Some measure in terms of organizational/policy and technical aspects of the Iranian side have to be taken from now on to increase sustainability of the Project. Until the project termination, both sides provide the ground for dissemination of the CBT approach training through the 3 instructors trained in the Project.





### 1) Organizational/policy aspect

The Project's sustainability will be heavily depended on the leadership of TVTO to succeed in the proposed reform of the sector. If TVTO does its best to disseminate the CBT approach to all TVTCs, it can play a positive role in its sustainability.

In regard to the IRG's sustainability, it is important to maintain the partnership between TVTO and the automobile industry, which has been enhanced through the Project at the same level if not adjusted level after the end of the Project. IRG is the engine to secure timely and effective upgrading of training techniques and technology required in Iran. A newly appointed IRG coordinator will be a good asset to IRG to maintain and move forward with the activities and exchange in ideas/information/technology between the TVTO and concerned industries. However such coordinator shall be on board before the end of the Project to secure the project's sustainability. TVOT suggests that JICA will extend its support, as/when required.

### 2) Financial aspect

The Iranian side has been providing sufficient financial assistance to the Project. Therefore, the Project is expected to come to an end without any financial constrain. Even after the end of the Project, it is expected that the Iranian side will continue to improve the training management cycle with no financial problem. However, costs required to apply the developed training management cycle at all TVTCs and other concerned centers and offices are not estimated in the Project. Thus, it is expected that TVTO will make necessary financial assessment and budgeting for application of the management cycle and training methods at all level.

### 3) Technical aspect

The Project examined the relevancy and effectiveness of CBT approach to the TVTO sector in Iran. The results of the 2 pilot training courses conducted in the Project show that CBT approach is well accepted by TVTO and IRG.

It is only 3 instructors from the Iranian side who have been benefitted directly from the Project in terms of technical transfer, including conducting needs assessment, formation of IRG, application of CBT approach, and other activities carried out by the Project. There are instructors at ITC and other concerned persons from the Iranian side who have been exposed to the Project indirectly by attending workshops and seminars conducted by the Project, TVTO and ITC during the project implementation. In order to secure maximum number of instructors as well as management of the Iranian side shall be the beneficiaries of the Project. Thus, it is expected that TVTO will make necessary arrangements to disseminate the technology transferred from the Japanese side to the Iranian side be availed to those who have not been benefitted directly before and after the end of the Project, so that the technology

will be institutionalized in a systematic way.

## **5. Recommendations**

The following recommendations are made based on the result of the Terminal Evaluation.

### **5.1 Implementation of the remaining units**

It is recommended that the 11 remaining units out of 21 will be implemented by ITC. The list of the units is shown in ANNEX VI. Though the counterparts have an important role as core implementation team members, other trainers at ICT should be involved when conducting the remaining training courses in terms of knowledge sharing/transfer. It is needed to maintain the existing IRG in an appropriate way.

### **5.2 Dissemination of the CBT approach to other fields in ITC**

The outputs of the Project should be shared in ITC. It is necessary to disseminate the CBT approach including organizing and steering IRG function (i.e. appointment of IRG coordinator(s)) to other units in automotive sector and/or different sectors by training trainers in ITC in an applicable way. It is not necessary to apply the CBT approach in all field, however the important thing is how to build a mechanism to grasp the needs from industry in a timely manner in order to make the training meet the demands from industry.

### **5.3 Nationwide dissemination of the CBT approach**

It is recommended to create a mechanism for dissemination of the CBT approach nationally. For example, it will be functional to have a training course on CBT in ITC. Such CBT training course will be conducted for training instructors from each TVTC. In addition, "Recommendation for the Way Forward" proposed by the JICA Project Team that illustrates the roadmap for the next 10 years is suggested to be implemented.

### **5.4 Improvement of communication between CDC and ITC**

It is essential to have a close collaboration between CDC and ITC for development of an effective mechanism to disseminate the CBT approach since the curriculum and training course are two sides of the same coin. It is recommended to keep more practical communication between CDC and IT from a demand-driven point of view.

## **6. Conclusion**

It is concluded that the project purpose is going to be achieved by the end of the Project. As per the Five Evaluation criteria applied by JICA, the progress of the project progress is assessed. The



Relevance, Efficiency, Effectiveness, and Impact of the Project seem to be high to some extent, although Sustainability seems to be medium.

Despite the frequent change in TVTO management, the inappropriate allocation of the initial project sites and the reduction of the counterpart numbers, especially in the last 6 months the affect has been minimized by the effort made by the JICA Project Team and the Iranian side. The capacity of instructors has been improving through the establishment of the IRG and conducting the pilot training courses. ITC has been demonstrating the capacity to deliver the project outputs in an effective manner. It is expected that dissemination of the outputs of the project into the whole country will be realized under Iranian strong ownership.

ANNEX I Schedule of the Terminal Evaluation

ANNEX II List of Major Interviewees

ANNEX III Counterpart Personnel

ANNEX IV Project Design Matrix (PDM) Ver.1

ANNEX V List of Documents, Reports, Manual and Other Related Literature

ANNEX VI List of the 11 Remaining Units



## ANNEX I Schedule of the Terminal Evaluation

30-Oct

Date			Evaluation Team			
			Mr.Nobuyuki Konishi Team Leader	Mr.Kenichiro Komatsu Evaluation Coordination	Mr.Toshio Osa Vocational Training	Ms. Kinuko Mitani Evaluation Analysis
1	22-Oct	Fri			Kansai→Dubai (23:15 - 04:45, EK317)	Narita→Incheon(18:40-21:15, Oct 22, JL959) Incheon→Dubai(23:55-04:25, Oct 22, EK 323)
2	23-Oct	Sat			Dubai → Teheran (07:45 - 09:25, EK971) 13:00 JICA OFFICE	
3	24-Oct	Sun			10:00 Meeting with JICA expert (Ms.Ishimaru) in JICA OFFICE 11:00 Interpreter (Ms.Ghazal) in JICA OFFICE 14:00 Meeting with TVTO (Dr.Ghofrani)	
4	25-Oct	Mon			10:00 Meeting with ITC (Mr.Bajolvand) in Karaj 12:30 Lunch 14:00 : Meeting with 3 instructors in Karaj	
5	26-Oct	Tue			09:00-11:00 Meeting with IRG (Mega Motors)	
6	27-Oct	Wed			09:00-11:00 Meeting with IRG (SAIPA Yadak)	
7	28-Oct	Thu	Narita → Dubai (EK319, 21:40 - 03:30, Oct.29)		Minutes of Meeting drafting Internal Meeting	
8	29-Oct	Fri	Dubai → Teheran (EK971, 07:45 - 9:25)			
				13:30 Internal Meeting in Kowsar Hotel 15:30 Meeting with JICA expert (Ms. Ishimaru) Minutes of Meeting drafting		
9	30-Oct	Sat			09:00 Interview with Trainees 10:00 Courtesy call with Head of ITC (Mr.Teimouri) 13:30 Meeting with TVTO (Dr.Ghofrani) 15:30 Meeting with CDC Director (Dr.Khanifar)	
10	31-Oct	Sun			Minutes of Meeting revision 13:30 Internal Meeting in Kowsar Hotel 17:00 Meeting with TVTO (Gr. Ghofrani)	
11	1-Nov	Mon			09:15 Meeting with TVTO, Signing of the Minutes of Meeting (Signer is Dr. Ghofrani)	
12	2-Nov	Tue			14:00 Embassy of Japan JICA Iran office (tentative) Teheran → Dubai (21:20-23:50, Nov.2,EK978)	
13	3-Nov	Wed	Dubai → Kansai (EK316, 03:00-16:50) Kansai → Haneda (EK6252, 18:05-19:15)		Dubai → Kansai (03:00 - 16:50, EK316)	Dubai→Incheon (03:30-16:30, EK 322) Incheon→Narita (18:40-20:45, JL5206)

ANNEX II List of Major Interviewees

JICA Experts

1	Mr. Tatsuya NAGUMO*	Deputy Team Leader/ Vocational Training Management I
2	Mr. Toru ISHIBASHI*	Training Needs Assessment and Analysis
3	Mr. Kunitoshi SAITO*	Training Monitoring & Evaluation
4	Ms. Nakako ISHIMARU	Vocational Training Management II
5	Mr. Roger DEZILWA	Training Standard and Curriculum/ CBT Advisor
6	Mr. Perviz IMANI	JICA Project Support Advisor

\*The Team interviewed these three experts in Japan.

Technical and Vocational Training Organization (TVTO)

7	Dr. Mohammad Ghofrani	Deputy of Research and Planning/ Project Manager
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Curriculum Development Center (CDC), TVTO

8	Dr. Hossein Khanifar	Director General
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Instructors Training Center (ITC), TVTO

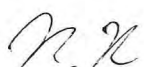
9	Mr. Mohammad Teimoori	Head
10	Mr. Reza Bajoulvand	Deputy of Technical Training
11	Mr. Abbas Karimi	Pedagogy & Entrepreneurship Department
12	Mr. Seyed Mohsen SALIMIAN	Auto Mechanic Trainer
13	Mr. Javad RAFATI	Auto Mechanic Trainer
14	Mr. Ebrahim KHALILZADEH	Auto Mechanic Trainer

Industries Reference Group (IRG)

15	Mr. M. S. Ghiyasvan	Training manager	Mega Motors
16	Mr. Mohammadi	Trainer	Mega Motors
17	Mr. A. Amiri	Training Manager	SAIPA YADAK
18	Mr. Mohammad Reza Seif	Head of Assessment Dept. for Training/ Training Project Manager	SAIPA YADAK

Trainees of the Second Pilot Training Course

19	Mr. Mohsen Amjadian
20	Mr. Reza Pirali



ANNEX III Counterpart Personnel

Technical and Vocational Training Organization (TVTO)

1	Dr. Mohammad Ghofrani	Deputy of Research and Planning/ Project Manager
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Instructors Training Center (ITC), TVTO

2	Mr. Mohammad Teimoori	Head
3	Mr. Reza Bajoulvand	Deputy of Technical Training
4	Mr. Abbas Karimi	Pedagogy & Entrepreneurship Department
5	Mr. Seyed Mohsen SALIMIAN	Auto Mechanic Trainer
6	Mr. Javad RAFATI	Auto Mechanic Trainer
7	Mr. Ebrahim KHALILZADEH	Auto Mechanic Trainer

Curriculum Development Center (CDC), TVTO

8	Dr. Hossein Khanifar	Director General
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## ANNEX IV Project Design Matrix (PDM)

Project Title : **Project on Strengthening the TVT Management Skills in TVTO**

Ver.2

Period : **Three and a half Years**

Project Site : **Tehran, Karaj**

Period : **July 2007-December 2010**

Target Group : (Direct) **TVTO staff and instructors**

Date : **October 31, 2010**

(Indirect) **TVTO trainees**

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumptions
<b><u>Overall Goal</u></b>			
The CBT approach becomes a basis of the training structure of TVTO.	<ol style="list-style-type: none"> <li>1. CBT manual (final version) in Persian is produced.</li> <li>2. Representatives (core instructors) of each TVTC take CBT training courses conducted by TVTO.</li> </ol>	<ol style="list-style-type: none"> <li>1. Manual in Persian</li> <li>2. Training record in TVTO</li> </ol>	CBT manual is applied to other TVTO regional offices.
<b><u>Project Purpose</u></b>			
TVTO's training management cycle is improved.	<ol style="list-style-type: none"> <li>1. Pilot training course is planned and implemented twice until the end of the project.</li> <li>2. Experiences and lessons from the implementation of pilot training course are analyzed and reported.</li> <li>3. The trainees' satisfaction rate of pilot training is better than that of other courses.</li> <li>4. Based on the experience and lessons from pilot training course, a plan for training management improvement is completed at the end of the Project.</li> </ol>	<ol style="list-style-type: none"> <li>1. Training course plan and the Project progress reports</li> <li>2. Pilot training reports</li> <li>3. Pilot training reports</li> <li>4. Plan for training management improvement</li> </ol>	<ol style="list-style-type: none"> <li>1. The government of the Islamic Republic of Iran does not change TVET policies.</li> <li>2. The government of Japan doesn't change its policy of ODA to Iran drastically.</li> </ol>
<b><u>Outputs</u></b>			
<b><u>Output 1:</u></b> TVTO is able to assess the training needs in labor market more efficiently.	<ol style="list-style-type: none"> <li>1-1. TVTO staffs understand the training management process of Japanese training institutions.</li> <li>1-2. Training needs assessment method is revised.</li> <li>1-3. Training needs is assessed and analyzed.</li> </ol>	<ol style="list-style-type: none"> <li>1-1. Evaluation documents of the training in Japan</li> <li>1-2. Manual of Training Needs Assessment</li> <li>1-3. Assessment reports</li> </ol>	The Project's C/Ps from TVTO remain at TVTO HQ and related office.
<b><u>Output 2:</u></b> TVTO develops, reviews and updates the training course standard and curriculum based on the industry training requirement.	<ol style="list-style-type: none"> <li>2-1. Technical area for pilot training course is selected based on training needs analysis</li> <li>2-2. Training course standard and/or curriculum are developed as a trial.</li> <li>2-3. Pilot training course plans are developed.</li> </ol>	<ol style="list-style-type: none"> <li>2-1. Assessment reports</li> <li>2-2. Revised standard and curriculum</li> <li>2-3. Pilot training course plan</li> </ol>	
<b><u>Output 3:</u></b> TVTO improves its monitoring and evaluation system.	<ol style="list-style-type: none"> <li>3-1. Training monitoring and evaluation manual is developed.</li> <li>3-2. Training monitoring and evaluation is conducted and analyzed.</li> </ol>	<ol style="list-style-type: none"> <li>3-1. Manual of Monitoring and evaluation</li> </ol>	



<p><u>Output 4:</u> TVTO develops a training management improvement plan based on the review of the pilot training course.</p>	<p>4-1.The experience and lessons are summarized as a report. 4-2.A plan for training management improvement is developed.</p>	<p>3-2.Monitoring and evaluation reports 4-1.Pilot training course report 4-2.Plan for training management improvement</p>	
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<u>Activities of the Project</u>	<u>Inputs</u>	<u>Preconditions</u>
<p><b>Output 1</b> Activity 1-1: To develop needs assessment study plan for pilot training course Activity 1-2: To establish working group with industry Activity 1-3: To conduct the training needs assessment study Activity 1-4: To select the training course to be revised for pilot training implementation Activity 1-5: To apply the pilot training needs assessment study to other training course</p> <p><b>Output 2</b> Activity 2-1: To review the present system of standard and curriculum development and revision Activity 2-2: To revise a standard and a curriculum for a pilot training course Activity 2-3: To design a pilot course Activity 2-4: To develop guidelines for training materials Activity 2-5: To prepare the necessary equipment for the pilot course Activity 2-6: To conduct instructor training for pilot course Activity 2-7: To implement a pilot course Activity 2-8: To identify the problems of a pilot course and reflect it in the revised standard and curriculum</p> <p><b>Output 3</b> Activity 3-1: To plan training monitoring and evaluation Activity 3-2: To conduct the training course evaluation Activity 3-3: To conduct the training course monitoring</p>	<p><u>Japanese Side:</u> 1. Dispatch of Japanese experts 2. Provision of equipment 3. Training of counterpart personnel in Japan 4. Supplementary budget for local expenditure</p> <p><u>Iranian Side :</u> 1. Counterpart personnel - Principal Advisor / Head of the Japan Desk - Deputy of Technical and Training Affairs - Deputy of Research and Development - Deputy of Administration and Financial - Deputy of Research and Development from Instructor Training Centre (ITC) - Executive Director of Training and Implementation - Senior staff(s) from ITC - Senior staff (s) from Pilot Regional Office 2. Administrative staff - Secretaries - Translator - Drivers - Accountant 3. Land, buildings and facilities Offices / work space for Japanese experts in TVTO Headquarters 4. Allocation of budget Expenses for the implementation of the pilot training course(s), salaries and other allowances for the Iranian staff</p>	<p>To confirm that TVTO will not be privatized.</p>

**Output 4**

Activity 4-1: To review the pilot training course

Activity 4-2: To summarize the experience and lessons of the pilot training course

Activity 4-3: To develop a plan of training management improvement plan

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ANNEX V List of Documents, Reports, Manual and Other Related Literature

List of Administrative Reports

No	Title	Submission Date
1	Inception Report	December 2008
2	First Progress Report	February 2009
3	Annual Final Report (1st Year)	March 2009
4	Second Progress Report	September 2009
5	Annual Final Report (2nd Year)	March 2010
6	Third Progress Report	June 2010
7	Annual Final Report (3rd Year) and Project Completion Report	December 2010

List of Technical Output

No	Title	Status (as of July 2010)
1	Induction Program for Developing and Delivering a Competency Based Curriculum: Overview	Finalized
2	Report on Interview Survey to Define Competency Standard for the First Cycle Pilot Training Course	Finalized
3	Report on Interview Survey to Define Competency Standard for the Second Cycle Pilot Training Course	Finalized
4	Manual on Competency Standard Development	Version 2
5	Manual on CBT Delivery	Version 1
6	Manual on Monitoring and Evaluation	Version 1
7	Workbooks for the 1 <sup>st</sup> pilot course	Finalized
8	Workbooks for the 2 <sup>nd</sup> pilot course	Processing

ANNEX VI List of the 11 Remaining Units

10 out of 21 units have been done by the 2<sup>nd</sup> pilot training course and 11 units are remained as shown below.

No	Unit Code	Unit Title	Status
1	AURC251356A	Read in the workplace	Done
2	AURC270103A	Apply safe working practices	Done
3	AURT270278A	Use and maintain workplace tooling and equipment	Done
4	AURT125667A	Use and maintain basic measuring equipment	
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	
6	AURT217665A	Remove, fit and inspect wheel assemblies	Done
7	AURE218708A	Carry out repairs to single electrical circuits	Done
8	AURE218676A	Test, service and charge batteries	Done
9	AURT202170A	Inspect and service cooling systems	
10	AURT215170A	Inspect and service steering systems	Done
11	AURT216170A	Inspect and service suspension systems	
12	AURT210170A	Inspect and service braking systems	Done
13	AURT306170A	Inspect, service and/or repair clutch assemblies and associated operating system components	
14	AURT206670A	Inspect and service transmissions (manual)	
15	AURT207170A	Inspect and service transmissions (automatic)	
16	AURT201170A	Inspect and service engines	Done
17	AURT203170A	Inspect and service petrol fuel systems	Done
18	AURT204670A	Inspect and service emission control systems	
19	AURT213170A	Service final drive (driveline)	
20	AURT212670A	Service final drive assemblies	
21	AURT200108A	Carry out servicing operations	

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**添付H :**

**2010年6月20日の覚書**

**Memorandum of Understanding (MOU) Between  
Technical & Vocational Training Organization (TVTO)**

**and**

**The Japan International Cooperation Agency (JICA) Project Team**

**for**

**The Project for Strengthening the TVT Management Skills in TVTO**

This MOU was made between the Technical & Vocational Training Organization (TVTO), Instructor Training Center (ITC) and the JICA Project Team (JPT) on the 20<sup>th</sup> of June 2010 at TVTO, Teheran.

  
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Dr. Ghofrani Mohammad  
Deputy of Research and Planning, TVTO

  
\_\_\_\_\_

for Mr. Yuichiro MOTOMURA  
Team Leader, JICA Project Team

## **FACTS**

- (A) TVTC No. 4 was selected as a venue for the 1<sup>st</sup> and 2<sup>nd</sup> Pilot Training Courses of the Project by Tehran Provincial Office of TVTO and authorized by TVTO on February 2009.
- (B) It was confirmed at the Joint Coordinating Committee meeting on February 2010 that the 2<sup>nd</sup> pilot training course would be implemented at TVTC No.4.
- (C) TVTO, however, proposed to change the venue for the 2<sup>nd</sup> pilot training course from TVTC No.4 to ITC on May 2010 for the following reasons:
- ✓ In view of sustainability of the Project, ITC would be more appropriate than TVTC No.4 in implementing the 2<sup>nd</sup> pilot training course, because of ITC's function as the instructor training centre with more capacity than TVTC No.4 in promoting and expanding the CBT system in the TVT sector.
  - ✓ ITC is much better equipped than TVTC No.4, not only for training equipment but also for provision of administrative and logistical facilities. TVTO could therefore implement the 2<sup>nd</sup> pilot training course more effectively at ITC
- (D) In consideration of the above-mentioned advantages, JPT, in case of mutual agreement on the following conditions, agrees to implement the 2<sup>nd</sup> pilot training course at ITC.

## **IMPLEMENTATION STRUCTURE OF TVTO**

The Deputy of Research and Planning will be responsible for overall implementation of the Project as a Project Manager.

Head of ITC will be responsible as a Technical Supervisor.

## **REARRANGEMENT of THE 2<sup>nd</sup> PILOT TRAINING COURSE**

TVTO agrees that the number of units of competency to be delivered in the 2<sup>nd</sup> pilot training course should be reduced because:



- 1) the completion date of the 2nd pilot training course has to remain unchanged (the completion date is 15 September 2010);
- 2) additional logistics for relocation will cause a significant delay in preparation; and
- 3) commuting to and from Karaj will reduce the effective working hours of the JPT

### **COUNTERPARTS**

TVTO and ITC shall:

- ✓ continue to assign all of the current counterpart members on a full-time basis during the entire Project period.
- ✓ assign 2-4 new full-time counterpart members from the automotive training sector in Iran to participate in the Project within three (3) days after this agreement is signed.

### **LOGISTICS**

ITC shall:

- ✓ provide adequate office space for all Project staff (7 JICA Experts, 3 National Staffs of the Project and CPs) at ITC for the duration of the Project
- ✓ allow full access by JPT members to the automotive workshop for the entire Project period
- ✓ provide support in recruiting trainees for the pilot course
- ✓ provide a project coordinator to the Project
- ✓ provide lunch for everyone participating in the Project, including trainees for the duration of the pilot course
- ✓ provide fully functional Internet facility at all times.

TVTO and ITC shall:





- ✓ provide a car for JICA Project Team staff from TVTO to Karaj and payment for transport for Iranian CPs from TVTO to Karaj.

TVTO shall:

- ✓ provide interpreter for JPT when need arises at TVTO, since interpreter of JPT will be transferred to ITC and JPT will have no interpreter at TVTO.
- ✓ Arrange regular meeting for JPT with the Project Manager at TVTO twice a month.

#### **INDUSTRY REFERENCE GROUP (IRG)**

TVTO shall:

- ✓ be responsible for organizing IRG regularly in consultation with JPT.

TVTO and ITC shall:

- ✓ assign a coordinator of IRG for organizing IRG regularly during and after the Project, in consultation with JPT.
- ✓ support the coordinator to maintain involvement of IRG members in the delivery of the pilot training course, including industry attachment.
- ✓ support the coordinator for arranging industry attachment for the trainees in terms of logistics and finance.

#### **CBT WORKING COMMITTEE (CWC)**

TVTO and ITC shall:

- ✓ form the CWC by 20<sup>th</sup> June 2010, which is described in the attachment.
- ✓ operate the CWC as described in the attachment.



## **Attachment: CBT Working Committee (CWC)**

### **Mission of the Committee**

Develop a plan to sustain the pilot program and to extend the CBT approach to the other industry sectors.

### **Activities** should include:

- ✓ continuation of the pilot automotive course in order for the selected trainees to obtain a complete Service Mechanic Certificate (equivalent to Australia Certificate II level)
- ✓ extension of the CBT approach to automotive training to include higher certificate levels in the future.
- ✓ communication of information to key personnel in other sectors of training in TVTO about lessons learned through implementation of the Pilot Courses.
- ✓ develop a plan to extend the CBT approach in TVT throughout Iran.

### **Proposed Composition of the CBT Working Committee**

It is important that Dr Ghofrani makes the final selection of the Committee members.

- ✓ A Chairman (1) : Deputy of Research and Planning of TVTO, Head of ITC or representative of them
- ✓ Secretary: (1) from TVTO or ITC: To arrange meetings and keep records.
- ✓ Members
  - One from 1 IRG member
  - One from current counterparts
  - One from director or manager level of department of research and planning
  - One from director or manager level of CDC
  - One from director or manager level of ITC



✓ Additional Members: (2)

Throughout the duration of the JICA project, the JICA Project Team members shall participate in Working Committee meetings

The Chairperson should be responsible for development of a working plan to extend the CBT approach to other industry sectors.

**Frequency of CBT Working Committee Meetings**

Every week during the initial stage.

A handwritten signature in blue ink, appearing to read "JICA K.S.", is located in the bottom right corner of the page.

**添付I：**

**供与機材リスト**



**添付J：**

**収集資料一覧**

資料リスト

平成 22 年 9 月 14 日作成

主管課長	図書館 受入日

		プロジェクトID	- - -	調査団番号	- - -		
地域	イラン	調査団名 又は 専門家氏名	職業訓練管理強化プロジェクト	調査の種類 又は指導科目	技術協力	担当部課	人間開発部
国名	イランイスラム共和国	配属機関名	職業訓練庁 (Technical Vocational Training Organization)	現地調査期間 又は派遣期間	平成 20 年 11 月～平成 22 年 3 月	担当者氏名	

番号	資料の名称	形態(言語)	種類	発行機関	取扱 区分	図書館 記入欄
	Annual Statistic Report 2007/2008 with Training Plan 2008	図書(ペ)	収集資料	職業訓練庁(TVTO)		
	Annual Statistic Report 2005/2006 with Training plan 2006	図書(ペ)	収集資料	職業訓練庁(TVTO)		
	Annual Statistic Report2003/2004(Training Plan 2003)	図書(ペ)	収集資料	職業訓練庁(TVTO)		
	Progress Report on Project on Strengthening Technical and Vocational Training Management Skills in TVTO	レポート(英)	収集資料	JICA		
	Standards List (translation by ILO)	データ(英)	収集資料	ILO		
	Bylaws of Establishment and Management of the private technical vocational institution (Translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Manual of Skill Assessment and Evaluation (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	The Organization's New System of Standard Development of the "Job Standards and Training Standards"(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Executive Bylaws of Establishing and Managing Technical and Vocational Training Centers(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Training Standard of Automobile Fuel Injection Systems (Mechanics Auto-Mechanics Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		

番号	資料の名称	形態(言語)	種類	発行機関	取扱区分	図書館 記入欄
	Training Standard of Ladies Dress Making (Bridal and Evening Dress Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Training Standard of Floristry (Agriculture-Gardening/Farming Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Training Standard of Commercial Electrician (Grade 1) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Training Standard of Bricklaying(mason) (Civil Engineering Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Certificate for Wooding Cabinet(G-1) (Wooding Industry Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Wooden Cabinet Maker (Grade-1) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Wooden Cabinet Maker (Grade-1)-1(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Wooden Cabinet Maker (Grade-1)-2(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Wooden Cabinet Maker (Grade-1)-3(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Certificate for Automobile Electricity Repairer(Automobile Mechanic Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Automobile Electricity Repairer (Grade-1) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Certificate for Ladies Hair Dressing(Health and Safety Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Ladies' Hair Dressing (Grade-1) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		



番号	資料の名称	形態(言語)	種類	発行機関	取扱区分	図書館記入欄
	Certificate for Cook (Food Industries Group) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Job Analysis Sheet for Cook (Grade-1) (translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Training Standard List(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Final Report of Advisory Activity(translation by JICA)	データ(英)	収集資料	職業訓練庁(TVTO)		
	Evaluation Systems in KOPO	データ(英)	収集資料	職業訓練庁(TVTO)		
	Abstract of Final Report	データ(英)	収集資料	職業訓練庁(TVTO)		
	Laws and Principles of TVT(abstract) (translation by Project)	図書(ペ) データ(英)	収集資料 (翻訳)	職業訓練庁(TVTO)		
	Main Goals and Responsibilities of TVTO (translation by Project)	図書(ペ) データ(英)	収集資料 (翻訳)	職業訓練庁(TVTO)		
	Workbook (AURT200108A) Carry out servicing operation	図書(英)	購入資料	Vetassess		
	Workbook (AURT202170A)/Workbook (AURT202166A) Inspect, service and repair cooling systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT203170B) Service petrol fuel systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT203670A) Service diesel fuel injection systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT205166A) Repair exhaust system components	図書(英)	購入資料	Vetassess		
	Workbook (AURT206670A)/(AURT306666A) Inspect, service and repair transmissions (Manual)	図書(英)	購入資料	Vetassess		
	Workbook (AURT207170A)/(AURT307166A) Inspect, service and repair transmissions (Automatic)	図書(英)	購入資料	Vetassess		
	Workbook (AURT207170A) Inspect and service transmissions (Automatic)	図書(英)	購入資料	Vetassess		
	Workbook (AURT201170A) Inspect and Service engines	図書(英)	購入資料	Vetassess		
	Workbook (AURT210170A)/ (AURT310166A) Inspect, service and repair braking systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT217668A) Select tyres and rimes for specific applications (Light)/ Workbook (AURT217766A) Remove, inspect, repair and fit tyres	図書(英)	購入資料	Vetassess		

番号	資料の名称	形態(言語)	種類	発行機関	取扱区分	図書館記入欄
	and tubes (Light)/ (AURT217606A) Balance wheels and tyres					
	Workbook (AURE218676A) Test, service and charge batteries	図書(英)	購入資料	Vetassess		
	Workbook (AURT212670)/ (AURT313666A) Service and repair final drive assemblies	図書(英)	購入資料	Vetassess		
	Workbook (AURT213170A)/ (AURT313166A) Service and repair final drive (Driveline)	図書(英)	購入資料	Vetassess		
	Workbook (AURT215170A)/ (AURT315166A) Inspect, service and repair steering systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT216170A)/ (AURT316166A) Inspect, service and repair suspension systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT217665A) Remove, fit and inspect assemblies	図書(英)	購入資料	Vetassess		
	Workbook (AURE218708A) Carry out repairs to single electrical units	図書(英)	購入資料	Vetassess		
	Workbook (AURV226108A) Carry our pre-repair operations	図書(英)	購入資料	Vetassess		
	Workbook (AURT222670A) Service air conditioning systems	図書(英)	購入資料	Vetassess		
	Workbook (AURC270103A) Apply safe working practices	図書(英)	購入資料	Vetassess		
	Workbook (AURT306170A) Inspect, service and/ or repair clutch assemblies and associated operating system components	図書(英)	購入資料	Vetassess		
	Workbook (AURT366108A) Carry out diagnostic procedures	図書(英)	購入資料	Vetassess		
	Workbook (AURT271781A) Implement and monitor environmental regulations in the automotive mechanical industry	図書(英)	購入資料	Vetassess		
	(MEM0.5004C) Perform oxy acetylene welding	図書(英)	購入資料	Vetassess		
	Workbook (AURT301166A) Repair engines and associated engine components	図書(英)	購入資料	Vetassess		
	Workbook (AURE321271A) Service and repair electric drive management systems	図書(英)	購入資料	Vetassess		
	Workbook (AURE319166A) Repair charging system	図書(英)	購入資料	Vetassess		

番号	資料の名称	形態(言語)	種類	発行機関	取扱区分	図書館 記入欄
	Workbook (AURT204671A)/ ((AURT304666A) Inspect, service and repair and replace emission control systems	図書(英)	購入資料	Vetassess		
	Workbook (AURE321171A) Service and repair electronic spark ignition engine management systems	図書(英)	購入資料	Vetassess		
	Workbook (AURE320666A) Repair ignition systems	図書(英)	購入資料	Vetassess		
	Workbook (AURE321371A) Service and repair electronic body management systems	図書(英)	購入資料	Vetassess		
	Workbook (AURE19266A) Repair starting systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT270278A) Use and maintain workplace tools and equipment	図書(英)	購入資料	Vetassess		
	Workbook (AURT203170B)/ (AYRT303166A) Service and repair petrol fuel systems	図書(英)	購入資料	Vetassess		
	Workbook (AURT100308A) Carry out workshop practice activities	図書(英)	購入資料	Vetassess		
	Workbook (AURC270688A) Work effectively with others	図書(英)	購入資料	Vetassess		
	Workbook (AURT217606A) Balance wheels and tyres	図書(英)	購入資料	Vetassess		
	Workbook (MEM05050B) Perform routine gas metal arc welding	図書(英)	購入資料	Vetassess		

**添付K :**

**議事録**

## Record of Meeting

Date: 29-November-2008 (15:00-16:00)

Place: Meeting hall at TVTO Deputy Training 5<sup>th</sup> floor

Participants: Stakeholders of JICA-TVTO management skills project (see the attached list)

### **Opening**

Remarks by Dr.Charband (Deputy)

-Comments on resuming the technical cooperation between JICA and TVTO

-Introduction of the participants from TVTO

Congratulatory remarks by Mr.Ashino (Regional representative for JICA Iran) and introduction of JICA Iran staff

Remarks by Mr.Motomura (Chief Advisor for JICA Project Team) and introduction of team members

### **Confirmation of Project Scope**

Dr.Charband started the session by asking whether there occurred any changes except the timing from the TORs shown on the MM (signed April 2007). Chief Advisor explained the project outline consisted of two cycles of pilot training courses, pointing at the schematic chart and referred that he would be delighted to discuss with Dr.Charband in details how they work together with TVTO so that this the schematic chart will be actualized.

Dr.Charband concerned that the chart illustrated well what were described in MM. He invited any questions and requests from the project team for the project start.

### **Setting for the commencement**

Mr.Motomura raised a couple of points as his earliest requests; (1) preparedness of working office for the project team; (2) possibility of holding a guidance seminar for kicking off the project at TVTO, hopefully scheduled on 13<sup>th</sup> or 10<sup>th</sup> December if possible; (3) arrangement of visiting regional training centers and private industries.

Dr.Charband responded that (1) for the working base, one room behind his room is ready; (2) to be discussed in details later; (3) no problem for visit at all so the JICA experts may ask necessary arrangement to Ms.Zamani. Also, for analyzing the conditions of TVTO's performance, some reports such as the one submitted by Mr.Nakano would be useful too.

In addition, he showed his concerns about arrangement of interpreters: he noted considering the volume of the project team (both experts and the counterparts), six for each, it will be necessary at least 4 or 5 interpreters. The qualification of interpreters is also important, so s/he

should have enough knowledge and understanding about TVET related terms. In the past, unfortunately, there happened the conversations with the experts did not go beyond general levels due to the limitation of interpretation.

#### **“Tea-break session”**

Mr.Motomura asked that taking this opportunity of this frank session, it would be appreciated if he would know the preferences of Dr.Charband about potential sector or courses for the pilot implementation. He answered that some ordinary/general type of course will do so that the pilot implementation will give enough impact on the wide ranges of courses. In this regard, industries of home-appliance and industrial machinery might be fine as targeted sectors.

Mr.Ashino asked Dr Charband how has the feedback by the ex-participants been in the JICA’s training in Japan. Dr.Charband said that since the previous phase of cooperation, several officials from TVTO had attended the training in Japan, and the crucial thing was whether the lessons learned there would be applicable for TVTO. He suggested that it would be fruitful if there be a group interview session to discuss these issues frankly as alumni.

He mentioned as far as he understood by the report by his staff returned from the training, the TVET system in Japan is rather different from that in Iran. It seems that the TVET conducted in private sector in Japan are far more vivid and practical. We TVTO also considers the roles as training supplier as public sector, and one of the main roles is to supply the TVET training as basic infrastructure.

Mr. Motomura summarized the background that how TVET in private sector in Japan has developed after World War II, referring its unique employment structure, that is, life-time employment. In life-time employment, where labor force will remain in the company for decades, it is not cost but investment for the companies to shoulder the TVET for their employees. However, in many other societies, including the recent cases in Japan, employees do not remain in the same company until his/her retirement, private sector does not dare to shoulder the TVET cost. Therefore private vocational schools have flourished.

#### **Closing**

Dr.Charband confirmed the tomorrow’s schedule to commence the work. He concluded the session, inviting to an office tour.

END

## Attendants List

<b>TVTO</b>	
Dr.Esfandiyar CHARBAND	Deputy for Training
Mr.Hatamzade	Manager, Executive Training
Mr. Farrokhi Davoud	Vocational Guidance and Consulting Manager (CP for Mr.Ishibashi)
Ms. Zamani Zahra	National Bank Project Secretary (CP for Mr.DeZilwa)
Mr.Asadi Jamshid	Deputy MANAGER(Cp for Mr.SAITO)
Mr.Tarkhan Rezaali	Educational Executive Expert(CP for Mr.NAGUMO & Ishimaru)
Mr.Heros Shabani	Official Interpreter
<b>JICA Iran</b>	
Mr. Makoto ASHINO	Residen Representative
Ms.Natsuko OZAWA	Project Formulation Advisor
Ms.Nayereh MASHAYEKHI	Program Officer
Mr.Majid ALIAKBARIAN	Program Officer
Mr. Vahid	Interpreter
<b>JICA Project Team</b>	
Mr.MOTOMURA Yuichiro	Chief Advisor
Mr. ISHIBASHI Toru	Needs Assessment
Mr. SAITO	Monitoring & Evaluation
Mr. NAGUMO Tatsuya	Training Management
ISHIMARU-Hattori Nakako	Training Management

**Minutes Of Meeting**  
**Between**  
**Technical & Vocational Training Organization (TVTO)**  
**And**  
**The Japan International Cooperation Agency (JICA)**  
**Project Team**  
**For**  
**The Project for Strengthening the TVT Management Skills in TVTO**

The meeting between the Technical & Vocational Training Organization (TVTO) and the JICA Project Team was held at 8:30 on the 8th of December 2008 at a conference room of TVTO, Teheran.

The documents attached contains the minutes of the said meeting, and it is the true record at the meeting and endorsed by both parties.



---

Dr. Esfandiyar Chaharband  
Deputy President, Training Division  
Technical & Vocational Training Organization  
(TVTO)



---

Mr. Toru ISHIBASHI  
Expert on Training Needs Assessment and  
Analysis  
JICA Project Team



## **1.0 Participants:**

Dr. Esfandiyar Chaharband

Mr. Davoud Farrokhi

Ms. Zahra Zamani

Mr. Alishahi

Mr. Toru ISHIBASHI

Mr. Roger DEZILWA

Mr. Kunitoshi SAITO

Mr. Tatsuya NAGUMO

Ms. Nakako ISHIMARU

Mr. Imani Parviz

Ms. Leila Nadimi

Ms. Bahar Hamzhepour

## **2.0 Opening**

Opening remarks by Dr. Chaharband (Deputy President of Training Division)

Welcome by Dr. Chaharband said who was positive that the meeting should be able to resolve a number of issues relating to the JICA Project.

## **3.0 Discussion of Project Framework**

The draft Project Framework developed by the JICA Project Team (attached to this record of meeting) was presented. The main parts of the training management cycle were explained, emphasizing that the Project Team was taking a micro approach to strengthening managerial capability within TVTC.

The following is a summary of the main resolutions:

- Both parties agreed to the proposed Project Framework in principle.
- It was agreed that the main objective is to develop the training management cycle by referring to the Australian CBT system and Japanese management practice.
- The process of training needs analysis proposed in the Framework should be accelerated by showing materials from the Australian CBT modules in the target training areas and getting feedback from industry.
- Australian CBT standards and curriculum are to be adapted and modified as required, in cooperation with the JICA Team, TVTO and ITC.
- Learning strategies and resources in the component relating to curriculum are to be

developed in cooperation between technical training experts of the JICA Team and TVTO staff, with the help of ITC, TVTC and industry. This development will be completed prior to the delivery of the pilot training course.

- The pilot training course will be conducted at a selected TVTC located near or in Teheran.
- All training materials developed and used in the implementation of the pilot project is to be translated by TVTO.
- Interpreters for development of training materials and delivery of training course are to be provided by TVTO.
- TVTO will select candidates of the target TVTC and inform the JICA team by Saturday 13 December for the team to select one TVTC according to criteria proposed in the Framework.

#### **4.0 Closing**

The TVTO side was positive that the meeting had achieved good understanding between both parties. It was agreed that meetings between TVTO and the JICA team should be held regularly, perhaps on a weekly basis.

END

# Project Framework

## Project on Strengthening Technical and Vocational Training Management Skills in TVTO

JICA Project Team

5 December 2008

1

## Issues of the Current TVET Sector

<i>Issue</i>	<i>Approach</i>
1. Relevance to industrial needs	Introduction of CBT approach
2. Managerial capabilities of TVTCs	Development of model training management cycle
3. Information transfer mechanism	Strengthening of vertical linkage by Quality Control Circle (QCC)

2

## Strategy to Upgrade all TVTCs

### In the Project

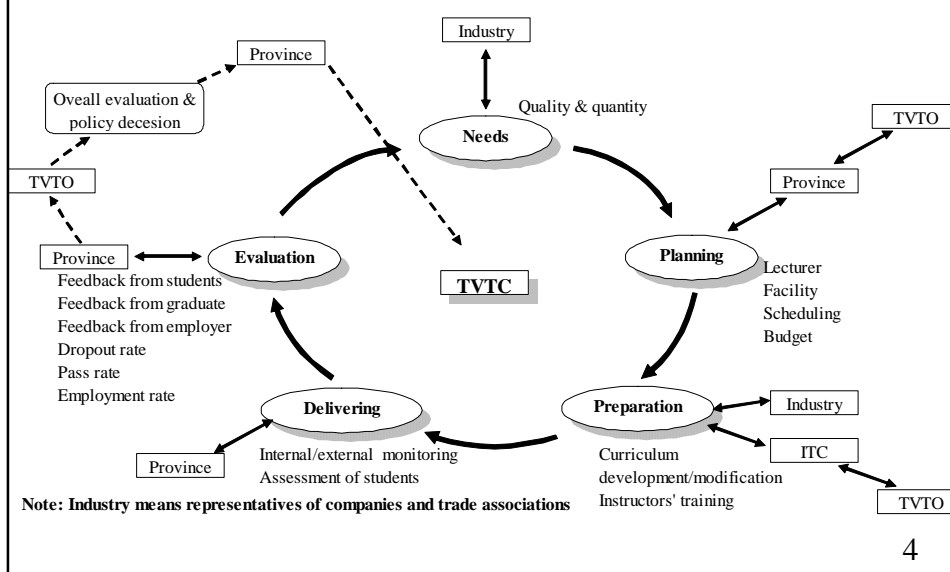
- Develop the training management cycle model in a selected TVTC together with Iranian Counterpart team by implementing two cycles
- Develop a set of manuals for the training management cycle based on experiences and know-how learnt

### After the Project

- Transfer the training management cycle model to all TVTCs by using a set of manuals to strengthen managerial capabilities

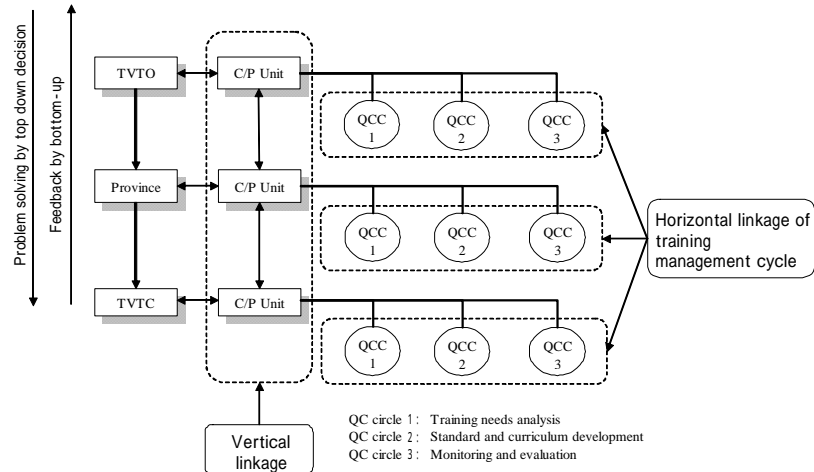
3

## Training Management Cycle



4

## Implementation structure



QCCs include representatives of industries and trade associations as members.

5

## Structure of CBT

(example)

Industrial area	Automotive industry
↓	
Training area	Automotive repair
↓	
Certificate	Grade 2 of automotive repair
↓	
Module	Assembling and disassembling of gear box

Module is a unit of competency with industrial standard.

6

## Structure of module

- |                                       |   |                                   |
|---------------------------------------|---|-----------------------------------|
| 1. Unit of competency                 | } | Defined by                        |
| 2. Elements of competency             |   |                                   |
| 3. Assessment guide                   |   |                                   |
| 4. Pre-requisite knowledge and skills |   |                                   |
| 5. Teaching strategy                  | } | Developed by                      |
| 6. Learning resources                 |   |                                   |
|                                       |   | TVTC with help of<br>TVTO and ITC |

7

## Selection of the target TVTC

### Proposed selection criteria

- Typical TVTC with basic training facilities for lecturers and equipment
- Located near Tehran
- Deliver engineering short courses
- Enthusiastic (Province and TVTC)
- Good relation with the local industry
- English capability (a great advantage)

8

## Process of Training Needs Assessment

*After selection of the target TVTC,*

1. Meeting with representatives of industry and trade association in the region
2. Selection of industrial area
3. Design of training needs analysis
4. Conduct interview survey with managers
5. Conduct questionnaire survey with workers
6. Analyze results to identify training needs in terms of quality and quantity
7. Examine capabilities of the target TVTC
8. Decide training standard and competency for pilot training course

9

## Hypothesis of Training Needs

*Three categories of training needs*

- |                              |  |
|------------------------------|--|
| 1. Employability skills      | Can apply all to courses                           |
| 2. Basic technical skills    | Improvement of existing courses                    |
| 3. Advanced technical skills | Difficulties in preparing lecturers and facilities |

Employability skills include communication in the workplace, working in a team, occupational health and safety, problem solving, cost estimation and entrepreneurship.

10



## Manuals to be developed through the Project

- Training needs analysis and assessment
- Planning for TVTC operation
- General CBT introduction method
- Module development with samples of pilot training course
- Internal and external monitoring methods
- Evaluation methods including feedback from students, graduates and employers, dropout and pass rates and employment rates
- Institutional setting for vertical and horizontal linkages



**Minutes of Meeting  
Between  
Technical & Vocational Training Organization (TVTO)  
And  
The Japan International Cooperation Agency (JICA)  
Project Team  
For  
The Project for Strengthening the TVT Management Skills in TVTO**

The meeting between the Technical & Vocational Training Organization (TVTO) and the JICA Project Team was held at 14:30 on the 20th of December 2008 at a conference room of TVTO, Teheran.

The documents attached contain the minutes of the said meeting, and it is the true record at the meeting and endorsed by both parties.



---

Esfandiyar Chaharband

Deputy President, Training Division  
Technical & Vocational Training  
Organization (TVTO)



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Mr. Yuchiro Motomura

Chief Advisor  
JICA Project Team

## 1.0 Participants

### TVTO

Dr. Esfandiyar Chaharband	Deputy for Training
Mr. Hatamzade	Manager
Mr. Davoud Farrokhi	Vocational Guidance and Consulting Manager
Ms. Zahra Zamani	National Bank Project Secretary
Mr. Tarkhan Rezaali	Educational executive Expert
Mr. Heros	International Department
Mr. Falahi	Director General Of TVTO Tehran province
Mr. Ghasemy Abdollah	Manager of training office, TVTO Teheran Province

### JICA Project Team

Mr. MOTOMURA Yuichiro	Chief Advisor
Mr. ISHIBASHI Toru	Training Needs Assessment
Mr. Roger DEZILWA	Standard and Curriculum
Mr. SAITO Kunitoshi	Monitoring & Evaluation
Mr. NAGUMO Tatsuya	Training Management
Ms. ISHIMARU-Hattori Nakako	Training Management
Ms. Bahar Shoghi	Project Interpreter
Ms. Bahar Hamzapour	Assistant Project Officer
Mr. Imani Parviz	National Consultant

### JICA Iran Office

Mr. ASHINO Makoto	Regional Representative for JICA Iran Office
Ms. Nayereh Mashayekhi	Project Officer for JICA Iran Office

## 2.0 Opening

Opening remarks were made by Dr. Chaharband, thanking to JICA Project team members and TVTO officials, who would participate in the cooperative work between JICA team members and TVTO staff.

## 3.0 Discussion of Inception Workshop

Several proposals concerning work plan based on initial assessment of the situation (the handouts are attached to this record of meeting) were presented by JICA Team regarding:

- Review of the 5 TVTC visits;
- Selection of training area and implementation of pilot course;
- Selection criteria of instructors;
- Schedule of the pilot training course; and,
- Schedule of the project implementation up to March 2009.

Reviewing the result of visiting five (5) TVTCs, JICA project team presented considerations regarding the pilot training course. First, the team highlighted the three (3) TVTCs (No.2, No.5, and No.9) as a potential venue for the pilot training course. Then, it was proposed that in the implementation of the pilot course, selected personnel from various levels would work with JICA Team on a full-time basis, followed by some detailed explanations such as the outlines of course, selection criteria and schedules.

The following is a summary of the main points of discussion:

- The model to be introduced and defined by the implementation of the pilot training course is crucial to the improvement of TVTO, and its outcome should be applicable to all TVTCs.
- Employability of trainee should be a built-in part of the pilot course.
- The Australian module should be adapted to Iranian TVET system.
- In order to nominate the ten counterparts as JICA team proposed, TOR for each position is necessary for TVTO.
- A complete table of task schedule, personnel assignment, and other explanatory information on tasks should be prepared so that the whole project can be understood at a glance.
- More details regarding Monitoring and Evaluation are to be presented in the above table.
- There are concerns regarding the period when none of the JICA team members will be present in Iran. The appointed counterparts should not be left without actual work during the period. Dr. Chaharband suggested to advance the work of translation to the period.

#### **4.0 Closing**

Dr. Chaharband concluded the meeting by summarizing the discussion as follows:

1) For the selection of a TVTC, JICA Team should refer to the recommendation by TVTO Tehran Provincial Office<sup>1</sup>.

2) Auto Mechanic course was selected as the subject of the pilot training course. Some modules related to employability should be included in the course.

3) TVTO accepted the proposed implementation structure and requested that TORs for each counterpart personnel to be selected be provided throughout the project.

4) A detailed table combining work plan and personnel assignment schedule should be prepared with sufficient footnotes on task explanation and abbreviations.

5) During the 2.5 months of absence from Iran by JICA experts , any measures are desirable for the appointed counterparts not to be left without work. It was suggested that a partial relocation of translation task to this period .

6) TVTO will convey their comments on the draft Inception Report to JICA team in a couple of days, after they obtain the comments from TVTO Provincial Office.

Attachment:

Power-point presentation “Joint Inception Workshop on Direction of JICA Project”

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<sup>1</sup> After the meeting, Provincial Director recommended No.4 TVTC as the model center.

# **Joint Inception Workshop on Direction of JICA Project**

## **Project on Strengthening Technical and Vocational Training Management Skills in TVTO**

JICA Project Team

20 December 2008

1

## **Today's Agenda**

- Proposals based on rapid assessment by JICA Team on:
  - Review of the 5 TVTC visits and scenarios (Saito)
  - Selection of training Area and implementation of pilot course (Ishibashi)
  - Selection criteria of instructors (Roger)
  - Schedule for pilot training course (Nagumo)
  - Schedule for project implementation up to March 2009 (Ishimaru)
- Q&A and discussion session (Motomura)

2

## Review of the 5 TVTC Visits and Scenarios

	TVTC	Size in courses and no. of instructors	JICA team comment
1 <sup>st</sup> visit	TVTC No.5	Medium size	<b>Maybe good</b> (Principal was absent)
2	TVTC No.4	Medium size	Neutral
3	TVTC No.2	Medium size	<b>Good</b>
4	TVTC No.1	Small size	Neutral
5	TVTC No.9 (Moshirie)	Large size	<b>Good</b>

3

## Selection of Pilot Training Area

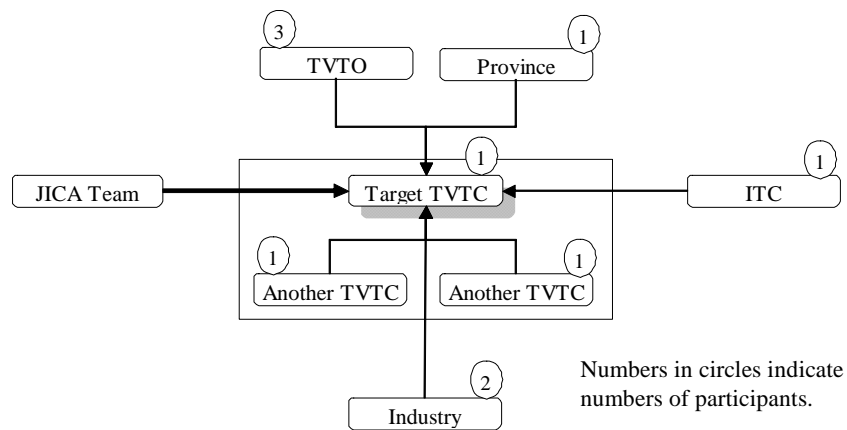
Automotive Technology is proposed because:

- It is the most common and popular training area
- It is delivered by many TVTCs
- There are cooperative relations with industry
- There are continuous training needs
- There is the possibility to recruit appropriate Australian experts

Note: A pilot course will utilize equipment (s) of the selected TVTC, rent from other TVTC/industry or purchase by TVTO.

4

### Implementation structure for pilot training course



Out of the 10 members above, 5 counterpart members work with JICA Team to prepare and deliver the pilot training course on a full-time basis.

## Selection Criteria of Instructors

### •Essential

- Enthusiastic in learning new skills & methods
- Sufficient level of auto mechanical practical skills
- Can commute to Selected TVTC and TVTO

### •Desirable

- Basic level of communication in English
- Sufficient level of reading in English

## Outline of the Pilot Training Course

Training area:	Auto mechanic
Training period:	2 months
Training time:	8:00 am to 12:00 pm
Lecturing hours:	160 hours (= 4 hours x 5 Days x 8 Weeks)
Nominal teaching hours	320 hours (= 160 hour x 2) (160 hours for self-study)
Averagenominal hours per module:	23 hours/module
No. of module included in 2-month course:	14 module (= 320/23)
No. of module included in pilot course:	6-7 modules (Half of 14 because of the first trial in Iran)

Note: The time for afternoon is used for preparation for the following day.

7

## Schedule: for the Pilot Training Course

	2009												
	1	2	3	4	5	6	7	8	9	10	11	12	
Activities for pilot training course													
Instructors training for CBT in general		■											
Preparation by counterpart			■	■	■	■	■						
Curriculum development						■	■	■	■				
Translation								■	■	■			
Instructors' training										■	■	■	■
Delivering pilot training course										■	■	■	■
Input													
JICA subject expert						■	■	■	■	■	■	■	■
Counterpart input (full-time basis)	■	■	■	■	■	■	■	■	■	■	■	■	■

Required full-time counterpart input:

- 2 months from mid January to mid March 2009 for instructors training for CBT in general and others
- 6 months from June to November 2009 for curriculum development, translation and delivery

8

## Schedule:

### overall implementation up to March 2009

	2008	2009		
	12	1	2	3
Development of implementation structure				
Selection of lecturers	■			
Identification of industries	■			
Formation of QCCs (Task Team)		■		
Kick-off meeting			■	
Training needs analysis				
Review of current system of training needs analysis	■			
Preparation of questionnaire	■	■		
Appointment of survey		■		
Implementation of survey		■		
Analysis of survey results			■	
Identification of competencies for pilot training course			■	
Development of <b>Manual for Training Needs Analysis (Draft)</b>			■	■
Standard and curriculum development				
Review of current system of standard and curriculum development			■	
Instructors' training for CBT in general			■	
Development of outline of training package				■
Checking of necessary equipment for pilot training course				■
Monitoring and evaluation				
Review of current system of monitoring and evaluation		■	■	
Review of current management system		■	■	
Development of <b>Manual for Monitoring &amp; Evaluation (Draft)</b>			■	■



## Summary Chart for selecting target center

	<b>Item</b>	<b>First visit (TVTC No. 5)</b>	<b>Second visit (TVTC No. 4)</b>	<b>Third visit (TVTC No. 2)</b>	<b>Fourth visit (TVTC No. 1)</b>	<b>Fifth visit (Moshirie)</b>
1	Size of the center	Medium	Medium	Medium	Small	Big
2	Passing rate (Employment rate)	High (Medium)	Medium (???)		High (Medium)	High (High)
3	Course area (Automobile ?)	13 courses (Yes)	13 courses (Yes)	8 courses (Yes)	7 courses (No)	29 courses (Yes)
4	No. of Instructors years of service	18 15 years	20 (11 permanent) 7 years	16 (11 permanent)	9 (8 permanent) 10 years	51 (50% permanent) 13 years *1 English speaker
5	Facilities and equipments (good for automobile ?)	Medium	Medium	Medium	Fair	Very good.
6	Impression by JICA team	Can't tell	Medium	High	Fair	High
7	Level of center management	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)
8	Relationship with Provincial Office and TVTO HQ	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)
9	Relationship with industry	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)
10	Financial Condition	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)	(Checked by TVTO)
<b>JICA Team summary</b>		<b>?? (maybe good)</b>		<b>Good</b>		<b>Good</b>

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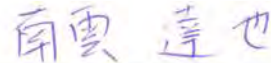
The meeting between the Technical & Vocational Training Organization (TVTO) and the JICA Project Team was held at 10:30 on the 20th of January 2009 at a conference room of TVTO, Teheran.

The documents attached contain the minutes of the said meeting, and it is the true record at the meeting and endorsed by both parties.



---

Mr. Esfandiyar Chaharband  
Deputy President, Training Division  
Technical & Vocational Training Organization  
(TVTO)



---

Mr. Tatsuya Nagumo  
Expert on Training Management / Deputy  
Team Leader  
JICA Project Team

## 1.0 Participants

### TVTO

Dr. Esfandiyar Chaharband  
Ms. Zahra Zamani

Deputy for Training  
National Bank Project Secretary

### JICA Project Team

Mr. ISHIBASHI Toru  
Mr. NAGUMO Tatsuya  
Mr. Imani Parviz  
Ms. Maryam Akbari,

Training Needs Assessment  
Training Management  
National Consultant  
Interpreter / Translator

## 2.0 Discussion

Several agenda were discussed by both parties:

### 1) Report on Inception Workshop of Training Needs Survey

The result of the workshop and implementation schedule were explained by the JICA Project Team. Mr. Chaharband suggested to present a guidance of CBT before the implementation of need survey to enhance motivation of counterparts from industry. Both parties agreed to have an introduction session of CBT at the meeting seminar on 28<sup>th</sup> January.

### 2) Status of Inception Report

Both parties confirmed the contents of Inception Report and TVTO agreed that the JICA Project Team will submit the report to JICA officially.

### 3) Study Tour in Japan (using a JICA scheme of counterpart training in Japan)

TVTO suggested canceling the study tour, unless the destination can be changed to Australia.

### 4) A style of Manual

Both parties agreed to make maximum use of figures and tables in manuals to be developed by the project.

### 5) Event Schedule

The tentative schedule of each event was explained by the JICA Project Team and both parties confirmed the schedule.

### 6) Joint Coordinating Committee (JCC) Meeting

TVTO showed their agreement to organize JCC for effective implementation of the project.

Attachment:

- Excel Fine "Event schedule"
- Inception Report (English)
- Inception Report (Farsi)

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The Project for Strengthening the TVT Management Skills in TVTO**

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The meeting between the Technical & Vocational Training Organization (TVTO) and the JICA Project Team was held at 10:30 on the 3<sup>rd</sup> of February 2009 at the office of Mr.Chaharband, TVTO, Teheran.

The documents attached contain the minutes of the said meeting, and it is the true record at the meeting and endorsed by both parties.

---

Mr. Esfandiyar Chaharband  
Deputy President, Training Division  
Technical & Vocational Training Organization  
(TVTO)

---

Ms. Nakako Hattori-Ishimaru  
Expert on Training Management  
JICA Project Team

## 1.0 Participants

### TVTO

Mr. Esfandiyar Chaharband	Deputy for Training
Ms. Zahra Zamani	National Bank Project Secretary

### JICA Project Team

Mr. ISHIBASHI Toru	Training Needs Assessment
Mr. ISHIMARU-Hattori Nakako	Vocational Training Management
Mr. Roger DeZilwa	Training Standard and Curriculum
Mr. SAITO Kunitoshi	Training Monitoring & Evaluation
Mr. Imani Parviz	National Consultant
Ms. Maryam Akbari,	Technical Interpreter / Translator

## 2.0 Discussion

First, Mr.Chaharband raised questions about the ongoing training needs survey. The major points are summarized as follows:

- the validity of methodology how the project team formulate the questionnaire that are used the ongoing survey;
- the selected list of modules that was used for the interview: whether they are comply with Iranian auto-repair items; to what extent we should rely on the selection by a subject expert in Australia who is supposedly doesn't know about the system in Iranian auto-repairs.

Responding to these points, the team made explanations about the steps of the survey and its methodological background.

Second, Mr.Chaharband expressed his concern as whether the activity currently conducted by the project team is merely focusing on the implementation of some limited modules and lacking the broader perspectives after the project's goal. Also, he mentioned the organization (TVTO) seriously lacks how to conduct need surveys and requested for methodological explanation on what the team is doing (so that he can explain to President of TVTO);

Then, Mr.Chaharband expressed his further requests regarding the needs survey:

- In prior to formulation of questionnaire or interview, one step should be added with a selected area, to compare Australian training package, TVTO curriculum, and what Industry's training.
- Some methodological explanation on what the team is doing (so that he can explain to President of TVTO);
- Manuals is expected to describe how to conduct the process of needs survey, of which methods should be used, what kind of advantage and limitations they contains; and
- The whole training package to be provided, including all the certificates from 1 to 5, (later in the discussion they were confirmed those only related to auto-mobiles.

For continuation, all agreed to have a next meeting, scheduled on Sunday, 8<sup>th</sup> February.

END

**Minutes of Meeting  
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The Project for Strengthening the TVT Management Skills in TVTO**

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The meeting between the Technical & Vocational Training Organization (TVTO) and the JICA Project Team was held at 9:00 on the 9<sup>th</sup> of February 2009 at the office of Mr.Chaharband, TVTO, Teheran.

The documents attached contain the minutes of the said meeting, and it is the true record at the meeting and endorsed by both parties.

---

Mr. Esfandiyar Chaharband  
Deputy President, Training Division  
Technical & Vocational Training Organization  
(TVTO)

---

Ms. Nakako Hattori-Ishimaru  
Expert on Training Management  
JICA Project Team

## **1. Participants**

### **TVTO**

Mr. Esfandiyar Chaharband  
Ms. Zahra Zamani

Deputy for Training  
National Bank Project Secretary

### **JICA Project Team**

Mr. ISHIBASHI Toru  
Mr. ISHIMARU-Hattori Nakako  
Mr. Roger DeZilwa  
Mr. SAITO Kunitoshi  
Mr. Imani Parviz  
Ms. Maryam Akbari,

Training Needs Assessment  
Vocational Training Management  
Training Standard and Curriculum  
Training Monitoring & Evaluation  
National Consultant  
Technical Interpreter / Translator

## **2. Discussion**

Welcome remarks by Mr.Chaharband and approval of three (3) agendas for this meeting by all the attendants.

### **2-1. Training Needs Survey**

-Structure of Australian Training Package was illustrated. Among of which, it was confirmed to which part of this overall structure will be targeted as the selected units for pilot training course both in electrical and employability.

-The remodeled version of method of Training Needs Survey (or called “confirmation of Competency Units with Industry for Pilot Training Course) were presented by steps from 1 to 7.

-Mr.Chaharband insisted TVTO will form another team in parallel with the on-going needs survey team: this second team will work on the remaining competencies in Light Vehicles of Auto mechanics from all levels of Certificate. His aim is to speed up of institutionalization by letting the future task originally scheduled for the second pilot training cycle.

-Project Experts added the above mentioned task as No.8 for this year. However, they noted that further responsibilities of Project Experts for looking after this second team in the following year should be clarified further in another meeting with Chief Advisor and JICA.

-Participants agreed that the importance of the capacity development of the counterparts throughout the project duration.

### **2-2. CBT Curriculum Development Delivery Induction Workshop**

-Basic concepts toward this 10-day training (participatory style) was acknowledged. Some requests were made such as:

--The workshop should cover points differences/comparison between TVTO’s active training system and Australia;

--The style of training operation should be CBT-wise;

--The certificates should be issued by two (2) organizations (JICA and TVTO for each); and

--Documentation for the training is crucial and should be reported after the training.

### **2-3. Schedule**

-Joint Coordination Committee will be held in March, scheduled in the afternoon of 16<sup>th</sup> March.

-Both Inception report were acknowledged and Monthly Report (January) were submitted.

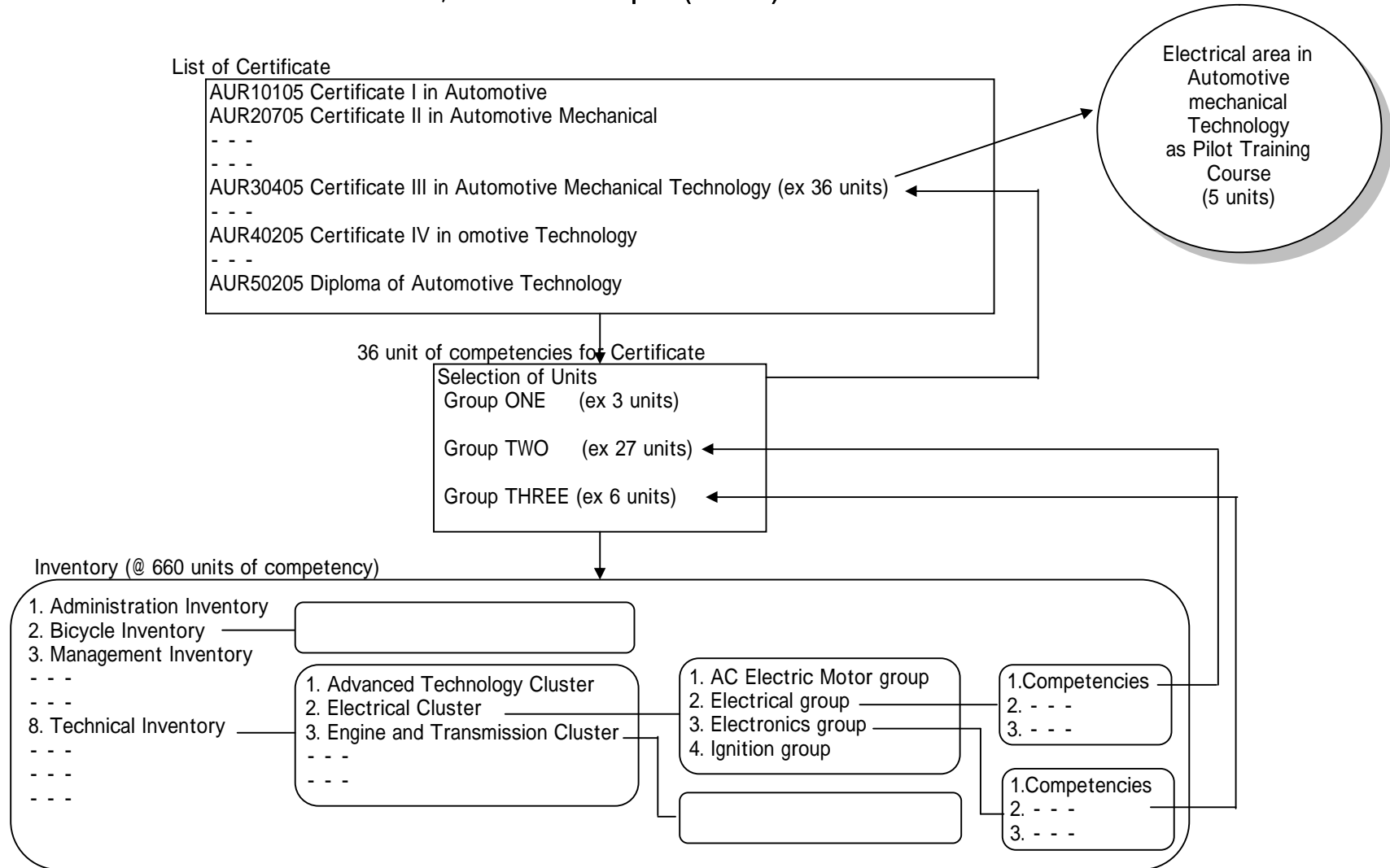
END

**Attachment (Handouts for the meeting)**

1. Overall Structure of Australian Training Package
2. Method of Confirming of Competency with Industry for Training Course
3. CBT Curriculum Development & Delivery Induction Workshop Schedule
4. Work Assignment



## Overall Structure of Australian Training Package ex. Automotive Industry Training Package for Retail, Service and Repair (AUR05)



CBT Curriculum Development & Delivery Induction Workshop  
Terms of Reference

1. Workshop Purpose

The rationale for this workshop is to induct the staff who are participating in the JICA Pilot project in:

- the background of Australian VET reform;
- the process of adoption of a comprehensive CBT approach to vocational education and training in this country and
- key features of CBT curriculum development and delivery that characterise the Australian CBT system.

Additionally, the workshop is intended to provide the Pilot Project counterpart staff with suitable practical experience, to prepare them for participation in the train-the-trainer workshops to be conducted in June-July and the Pilot Training Course to be conducted in October-November.

2. Participants

Participants are to include all counterpart staff who will participate in the the train-the-trainer workshops to be conducted in June-July and the Pilot Training Course to be conducted in October-November. It is intended that the participants will attend all Workshop sessions and complete the prescribed assignment work.

3. Facilitators

The facilitators will be Mr Roger De Zilwa (JICA Project Team), Ms Zamani (TVTO) and Mr Saito (JICA Project Team).

4. Location

*To be confirmed*

5. Duration & Timing

The 10—day induction workshop is intended to commence on 23 February and finish on 10 March. As indicated in the Schedule, the workshops on each day will commence at 9am and conclude at 3pm, with 1 hour break for lunch.

6. Content

The workshop is intended to be a participatory forum in which the 3 main facilitators will present some models and examples, all attendees will be involved in discussions of these models and the participants will complete a *major assignment* which will incorporate some of the strategies and models discussed in the workshop. These major assignments are to be completed in a period of a week and then presented in plenary sessions conducted after the intervening week. The presentation will include a demonstration lesson selected from each participant's assignment.

Topics will include:

- Background and factors leading to national vocational education and training (VET) reform and resultant models of VET management
- CBT approaches in VET curriculum development and delivery with focus on training needs analysis, training course and module development and assessment
- The importance of learning resource production and models of development and distribution of resources
- Training monitoring and evaluation

*(See attached Workshop Schedule)*

CBT Curriculum Development & Delivery Induction Workshop Schedule

Presenters – Mr Roger De Zilwa (JICA Project Team), Ms Zamani (TVTO), Mr Saito (JICA Project Team), Mr Ishibashi (JICA Project Team)

9.00 12 1.00 3.00

Day 1	<ul style="list-style-type: none"> <li>• Pilot Program and Induction Program Objectives</li> <li>• Discussion of Workshop outcomes and major assignment</li> <li>• Vocational Education and Training Reform. Discussion of :             <ul style="list-style-type: none"> <li>▪ Issues relating to TVT (VET) provision</li> <li>▪ Australian experience and issues</li> <li>▪ National reform in Australia and VET organizational structure and responsibilities</li> <li>▪ Discussion of issues related to Iran context</li> </ul> </li> </ul>	Lunch	<ul style="list-style-type: none"> <li>• Competency Based Training (CBT)             <ul style="list-style-type: none"> <li>▪ Definition of CBT</li> </ul> </li> <li>• Explanation of :             <ul style="list-style-type: none"> <li>▪ Types of competency standards</li> <li>▪ Key features of CBT</li> <li>▪ Issues related to application of the CBT approach</li> <li>▪ Qualifications (certification) Credit Matrix</li> </ul> </li> </ul>
Day 2	<ul style="list-style-type: none"> <li>• Identifying Training Needs including:             <ul style="list-style-type: none"> <li>▪ Types of needs analyses and their applications</li> <li>▪ Specific applications and benefits of Australian Needs Analyses &amp; results</li> <li>▪ Discussion of issues arising from recent TNA and methodology in relation to applicability in Iran</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Application of CBT curriculum development in national TVT reform             <ul style="list-style-type: none"> <li>▪ Training Package concept in framing competency standards</li> <li>▪ The Automotive Training Package</li> <li>▪ Positive and negative aspects related to implementation of the Training Package approach</li> <li>▪ Comparisons between the Training package and current curriculum development approach in Iran</li> </ul> </li> </ul>
Day 3	<ul style="list-style-type: none"> <li>• Developing training modules from competency standards             <ul style="list-style-type: none"> <li>▪ Applicability of a modular approach to training</li> <li>▪ Appropriate formats for designing instruction</li> <li>▪ Customization of formats for applicability to Iran TVT system</li> <li>▪ Certification and accreditation systems</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Planning process for CBT lesson/session delivery             <ul style="list-style-type: none"> <li>▪ Breaking down information (task analysis)</li> <li>▪ Planning training sessions</li> <li>▪ Structuring training sessions</li> <li>▪ Developing training strategies &amp; methods</li> </ul> </li> </ul>

Day 4	<ul style="list-style-type: none"> <li>• Planning process for CBT continued <ul style="list-style-type: none"> <li>▪ Breaking down information (task analysis)</li> <li>▪ Planning training sessions</li> <li>▪ Structuring training sessions</li> <li>▪ Developing training strategies &amp; methods</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Focus on CBT Assessment <ul style="list-style-type: none"> <li>▪ Overview of CBT assessment</li> <li>▪ Role of training organizations in assessment</li> <li>▪ Forms of evidence</li> <li>▪ Assessment tools</li> <li>▪ Assessment validation</li> </ul> </li> </ul>
Day 5	<ul style="list-style-type: none"> <li>• Developing Training Resources <ul style="list-style-type: none"> <li>▪ Definition &amp; description of training resources</li> <li>▪ Responsibility for development &amp; production of training resources</li> <li>▪ Models of training resources</li> <li>▪ Development &amp; distribution of resources(issues)</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Delivering CBT Training <ul style="list-style-type: none"> <li>▪ Communication skills</li> <li>▪ Importance of non-verbal communication</li> <li>▪ Questioning techniques</li> <li>▪ Assessing trainees</li> </ul> </li> </ul>
Day 6	<ul style="list-style-type: none"> <li>• Conducting training Evaluation <ul style="list-style-type: none"> <li>▪ What is evaluation?</li> <li>▪ Monitoring and keeping records</li> <li>▪ Who, what, and when do you evaluate?</li> <li>▪ Evaluation methods</li> <li>▪ Reporting as a consequence of evaluation</li> </ul> </li> </ul>		<ul style="list-style-type: none"> <li>• Discussions and individual consultations related to developing individual training module and lesson material</li> </ul>
Day 7	<ul style="list-style-type: none"> <li>• Individual preparation of lesson/session related to selected Unit of Competency and training modules</li> </ul>		<ul style="list-style-type: none"> <li>• Individual preparation of lesson/session related to selected Unit of Competency and training modules</li> </ul>
Day 8	<ul style="list-style-type: none"> <li>• Individual preparation of lesson/session related to selected Unit of Competency and training modules</li> </ul>		<ul style="list-style-type: none"> <li>• Individual preparation of lesson/session related to selected Unit of Competency and training modules</li> </ul>
Day 9	<ul style="list-style-type: none"> <li>• Participant presentation of major assignment material and demonstration lesson</li> </ul>		<ul style="list-style-type: none"> <li>• Participant presentation of major assignment material and demonstration lesson</li> </ul>
Day 10	<ul style="list-style-type: none"> <li>• Participant presentation of major assignment material and demonstration lesson</li> </ul>		<ul style="list-style-type: none"> <li>• Induction Program Evaluation and Review <ul style="list-style-type: none"> <li>▪ Discussion of issues</li> <li>▪ Finalization of course/module development assignment</li> <li>▪ Participant feedback plenary</li> </ul> </li> </ul>

# **Minutes of Joint Coordinating Committee Meeting Between Technical & Vocational Training Organization (TVTO) And The Japan International Cooperation Agency (JICA) Project Team For The Project for Strengthening the TVT Management Skills in TVTO**

## **1.0 Participants:**

### **TVTO**

Dr. Esfandiyar Chaharband  
Mr. Amir Mir  
Mr. Mohammad Taghi Saberi  
Mr. Davoud Farrokhi  
Mr. Alireza Hatamzadeh  
Ms. Zahra Zamani  
Mr. Forou'i  
Ms. Fereshteh Khorshidi  
Ms. Elham Seifi

### **JICA Project Team**

Mr. Yuichiro MOTOMURA  
Mr. Tatsuya NAGUMO  
Mr. Toru ISHIBASHI  
Mr. Roger DEZILWA  
Mr. Kunitoshi SAITO  
Mr. Parviz Imani  
Mr. Mojtaba Ahmad Khan  
Ms. Maryam Akbari  
Ms. Bahar Hamzehpour

### **JICA**

Mr. Kenichi SHIROUZU  
Ms. Natsuko OZAWA

## **2.0 Opening**

Opening remarks by Mr. Chaharband (Deputy of Training Division)

Welcome by Mr. Chaharband who started by telling the members about the background of the MOU signed in 2007 on strengthening training management cycle, which expected 4 outputs:

1. meeting training needs in the job market;
2. revising the training program based on the need survey of the first output;
3. improvement of monitoring and evaluation of training courses; and
4. developing the final model on improving training management cycle

We both worked together to reach a common Plan of Operation (PO). Two groups are working together so far as planned on the PO. One of them, Iranian group, whose experts and relevant deputy members are present in the meeting. The other group, the Japanese experts, is present here also. In the job division, it became clear that who is responsible to do which activity so that we can progress the tasks determined on the PO. It is expected that Iranian side receives monthly report, which the Japanese team have punctually provided us with. In addition to the monthly reports, seven reports are expected to be produced and be submitted by the JICA Project Team during the project period (two-year and one month). Mr. MOTOMURA will submit the third report today belonging to 2009.

In order to pave the way practically for the project, a ten-day workshop was conducted for 8 experts from Saipa and Iran Khodro and several instructors from TVTC 4 and TVTO to improve the training capacity. The evaluation result of the workshop showed that it was very effective for the participants, whose documents exist in the project secretariat for those wishing to know about the content of the workshop through Ms. Zamani.

Now, we are reaching the end of the 1st step, which includes needs survey, and are ready to develop the training curriculum for the 1<sup>st</sup> pilot course which will commence in May in TVTC

No.4. During the needs assessment, the approach taken was a comparative one by taking CBT model of Australia, which the participants in the workshop came to learn. The revisions are based on the competency based system. The details of the program will be presented by Mr. MOTOMURA, followed by any questions of the members to remove any vague areas.

(Here, Mr. Chaharband introduces Mr. Saberi, the Deputy of Research and Planning Division of TVTO, who joined the meeting a bit later)

Then, Mr. MOTOMURA started presenting the report.

1. What kind of issues exists and how are we going to find a solution for them;
2. What to be taken to introduce CBT in TVTO;
3. Overall schedule to introduce CBT;
4. Who will do what;
5. How far will the project go; and
6. What will be done in the coming year

There are 2 issues in Iran's TVTO:

1. How to make TVT more relevant to follow industry needs, as it changes fast.
2. how to make all TVTC's in Iran be more capable to meet industry's needs

The suggestion is to introduce and adapt CBT system from Australia to produce an improved management system of TVT in Iran. He added that there are many people in TVTO who have studies the CBT system but actually it is difficult to implement it here and that the project intends to find a way to implement the system and the steps are presented as follows:

1. CBT is not a bunch of manuals but an application of a mindset to know about the concept of CBT, which will be provided to the C/P's.;
2. Then there would be a step by step description of how to implement the system based on the pilot training course;
3. Apply the model to other training areas. The C/P's will lead the work assisted by the JICA Project Team; and
4. Implement the model nationwide

The first step, which includes TVTO and TVTCs, takes a while to disseminate the concept of CBT throughout TVTO. It also takes a while the concept being accepted. The third step is a planning to implement the model to other areas. This is connected to nationwide and can be started in the second quarter of year2010. The 4th step is to implement the plan. All training area will be implemented after each of the previous step is completed.

Regarding responsibility, two teams, namely Team A and Team B, were explained. Team A consists of the TVTO experts and the JICA Project Team. Team A is responsible to develop the model. Team B consists of Iranian experts in Team A plus other experts introduced by TVTO. The roll of Team B is to disseminate and implement the model. The project's objective is not to develop a model, but the model that can be implemented. The project lasts for two years. The pilot training cycle will be implemented twice, once in year 2009 and the other in year 2010 to test solution to it. Manuals will be developed after each step.

(Here Mr. MOTOMURA shows the steps he explained before on the slide with charts.)

The project has finished the stage 1 “introduction of CBT Concept to TVTO experts” and they are supposed to disseminate the concept to other staff. A manual has been developed according to the measures taken. The JICA Project Team selected the automotive area as a training area for the 1<sup>st</sup> pilot course through a need survey. The Team also identified the equipment needed for the course. The Project (CPs) will 1) procure Equipments in April, 2) prepare training materials from April to June, 3) implements training of trainers from June to Aug, 4) establish Industry Training Advisory Board with industry from June to July, 5) recruit and select trainee from July to September, 6) implement training course from September to November and 7) monitor and evaluate from September to January. For the 2nd cycle, there will be a need survey from Jan. to Feb 2010. The pilot course will be held in TVTC No. 4, with Electric area from G3, which will last 2 months.

Here, Mr. Chaharband thanked the JICA Project Team to patiently work with TVTO to come up with a schedule with both sides' consensus, and added that CBT system is not only restricted to technical area but covers a much wider scope which is the same concept in World Bank Project. In that system, also it was concluded that TVTO system must be improved using CBT system. Obviously, this approach to TVTO is a challenge since the organization must be reformed in different aspects, not all of which is covered by this project but this project could show a direction for this improvement.

(Here, the members started to ask questions.)

Mr. Hatamzadeh, did not have any questions to raise.

Mr. Farrokhi: How do training need survey corresponds with CBT system and the method for needs survey?

Mr. Saberi had four questions:

1. I need more documents for suggestions, but I would like to know if CBT system is implemented in Japan or not, if not what is the system being implemented, since according to my understanding, CBT system as in this project is not implemented in Japan.
2. Based on the fact that need assessment model varies depending on different areas and country parameters, so how can the need assessment model, used in auto mechanic area for pilot course, be used in other areas?
3. According to the difference in approach and content in training plan and curriculum, is what you are doing in the project concerns training planning or curriculum? If it is training planning and curriculum, which is good and defined by UNESCO it is very proper, but in planning part in slide 8, curriculum is not mentioned. What is the place of curriculum in the cycle?
4. Based on a meeting of TVT principals all around the world held in Bon, a major issue mentioned in this meeting and similar meetings is leading the instructors and training towards general training (related to managerial skills, etc) as opposed to technical training. Thus, could you explain more about the direction of the project regarding technical and technical training?

The answers:

The reason why Japan has not implemented CBT is because after World War II, each company tends to recruit employers for lifetime. Since the employer knows that the employee would stay in the company for his life, the company technical schools provided for the employee in training courses that lasts almost two years. That is why CBT is not very popular so far but things are

changing in Japan. They are moving towards CBT. But because we are out of the system, we can have an impartial look and its processes. The team we have now, has an expert on monitoring and the system itself. Iran is not Australia so adaptation must be made. Also, by planning I mean the planning of the whole cycle not only curriculum with a more comprehensive plan. Regarding the 4<sup>th</sup> question, it is exactly the point to follow and responsible to industry needs, so if industry needs more general training, we should respond to that. For example, in Germany, the subjects are moving towards general training but in China more TVT training is needed. This is defined according to the industry structure of the country. In addition needs assessment must be conducted zone-wise, e.g. in different place like in different countries, and the method for needs assessment differs

Mr. Ishibashi continued that technologies and training needs assessment in the world are similar. So regarding auto mechanic, the subjects are the same but the priorities are different. So we use the training package in auto mechanic of Australia. There are 21 units of competency. With the assumption that the units needed in Iran might be the same, we asked the industry to confirm the priorities as seen by industry in Iran. Because the priorities differ in different companies regarding what they do and their size, the findings would be gained after the first pilot training course.

Mr. Saberi. What model are you using in needs assessment? Also, because we don't want to produce a new cycle but benefit of the past achievements, how can we apply the model in Iran in different sector, province and local? What model have you chosen for the needs assessment, was it interview?

Mr. Ishibashi. It was face-to-face interview. But in the interview both the interviewee and the interviewer were both familiar to or expert on the subject being interviewed. The units of competency related to auto mechanic, also related units to manufacturing can be extracted.

Mr. Saberi. What about the industries that are totally local, like handicrafts?

Mr. Motomura. Developing new units of competency regarding Iranian industries must be developed but the methodology to develop them and how to prepare questionnaires are the same in different areas and industries.

Mr. Saberi. It seems that the needs assessment and standards produced in auto mechanic area are only applicable in this area not in other areas. Even in this area, in different part of the country the results might not be the same.

Mr. Ishibashi. We asked the employer what skills are necessary for new comers. Thus, this could be the same for a large number of jobs regarding the basic competencies.

Mr. De Zilwa added that interviews were conducted through interviews through a full range of representative of different size companies and small auto repair shops.

Mr. Saberi added that even Iran Khodro and Saipa employees are lifelong and inside these companies effective training centers are provided. So the reason for not implementing CBT is not logical.

Mr. De Zilwa. The standards containing skills knowledge and attitudes coming from industries to show the requirements are needed to perform certain jobs. Curriculum defines what plan, general plan, assessment plan and tools, and learning resources are needed to implement those standards.

Mr. Saberi mentioned that this is the process taken in present TVTO too, but he can't see it in the cycle in slide 8. His question is what approach should be taken to include all the components



which is lacking in the slide. Have you developed any standards or are any documents produced?

Mr. De Zilwa added that the objective for the workshop was to teach the participants how to design learning recourses and assessment tools using templates because there is a methodology for every step. In Australia standards are defined by industry but curriculum done by training centers. Participants have the skills to write the standards and also to develop the curriculum for the standards which is related to TVTO and its policies.

Mr. Motomura. In Japan small companies often form trade associations which have a close relationship with government so the smaller companies can communicate their needs to government through the relevant trade associations.

June 27, 2009

Project for Strengthening the TVT Management Skills in TVTO

## Meeting Minute

June 25, 2009 / 9:30-11:30 / CDC Meeting Room

1. Participants:

- Mr. Azad, Mr. Hakimpour, Mr. Ghofran (CDC)
- Mr. Ishibashi, Mr. Dezilwa, Mr. Jackson, Mr. Saito, Mr. Imani, Ms. Akbari:Interpreter (JICA Project Team)

2. Main Points:

- Project office will be ready in one week in the Forsat street. (This will be 10 to 20 minutes from CDC building)
- Project Coordinator has been assigned. Mr. Ghofran.  
We will have weekly meeting on every Monday from 9:00a.m. to share the information about the progress of the project.
- Weekly progress report will be submitted in English and Farsi to CDC on Sunday morning prior to the weekly meeting. Format of weekly report will be suggested by JICA Project Team ->by Roger
- Mr. Azad showed his commitment on the JICA project and successful implementation of Trainer's Training and Pilot Training Course.
- Dr. Ismaili would like to observe Trainer's Training and Pilot Training Course to obtain the CBT method and accepted by JICA Project Team.
- Mr. Azad will participate IRG (Industry Reference Group) 2<sup>nd</sup> meeting on Saturday.
- Mr. Azad understood that Pilot Training Course will focus on entry level of training.
- JICA Project Team understood that Mr. Azad is interested in how to apply result of Project to all other areas of training.

3. Immediate action to be taken

- Reconfirm the data of moving to new project office and location of it. (by Saito)
- Create a draft format of Weekly Report (by Roger)

[end]

July 2, 2009  
Prepared by JICA Team

Project for Strengthening the TVT Management Skills in TVTO

## Meeting Minute

June 29, 2009 / 9:00-10:45 / CDC Meeting Room

1. Participants:

- Mr. Hakimpour, Mr. Ghofran (CDC)
- Mr. Ishibashi, Mr. Dezilwa, Mr. Jackson, Mr. Saito, Mr. Imani, Ms. Akbari:Interpreter (JICA Project Team)

2. Immediate action to be taken

- CDC will arrange to send letters from President of TVTO to Iran Khodro and Auto Repair Trade to ask participation to IRG meeting.  
Condition is to participate meeting for 3 hours every month. Team wants to have 2 senior technician from Iran Khodro and three technicians/engineers from Auto Repair Trade. 3rd meeting of IRG will be Saturday, July 18th. From 9:00a.m.
- CDC will arrange to take Saito to a new building someday in next week.
- Co Coordinator for IRG from CDC will be assigned.

3. Main Point

New Project Office

- -New Project Office will be determined to locate in CDC building or new building in Forsat Street.
- Location has been identified. Address will be informed.

Industry Reference Group (IRG)

- 2nd IRG meeting was organized on June 27.
- IRG meeting will be organized every month.
- Project team requested to assigning Co Coordinator for IRG from CDC.

Trainers' Training

- Trainers' Training has been started from June 28 and total hours will be 200hrs. in 5 weeks. CDC will help anything when problems occur.

Pilot Training Course

- Target trainees of Pilot Training Course are high-school graduate and people with small practical auto mechanic work experiences. Total participants will be 15. About 5 will be from Industry. Pretest will be carried out for recruiting participants for the Pilot.

[end]

July 15, 2009

Project for Strengthening the TVT Management Skills in TVTO

## Meeting Minute

July 13, 2009 / 11:00-13:30 / CDC Meeting Room

1. Participants:

- Mr. Azad, Mr. Ghofran (CDC)
- Mr. Jackson, Mr. Saito, Mr. Imani, Ms. Akbari:Interpreter (JICA Project Team)

2. Immediate action to be taken

CDC will take immediate action below:

- Arrange a visit to possible new project office.
- Search for the document in which tells all the output documents from JICA Projects is to be translated into Farsi.
- Send letter to relevant department to assign CPs to JICA Project

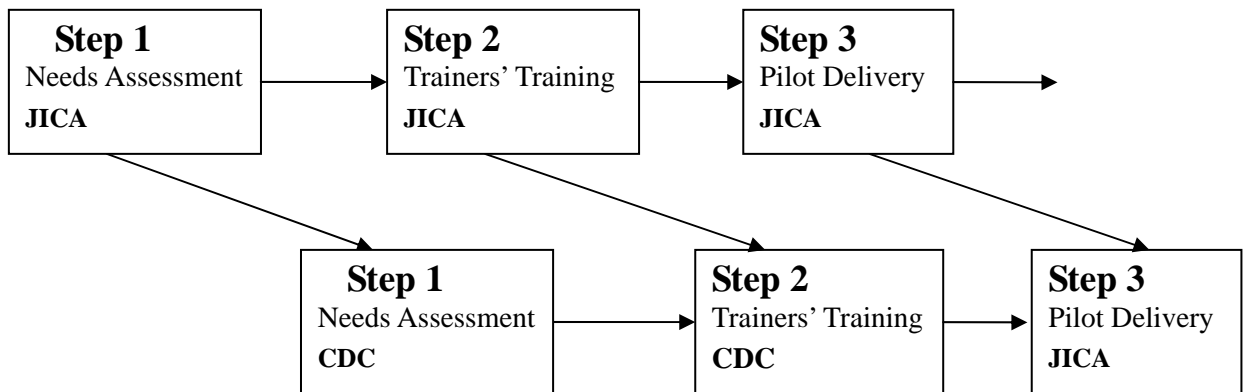
JICA Project Team will take immediate action below:

- Make a report on CP Trainers' Training activities
- Make a list of assignments for CP trainers during JICA Expert absent period.
- Send letter to Mr. Azad about hiring IRG Coordinator with Mr. Mazdarani's CV.
- Make opportunity to communicate between Mr. Azad and CP members
- Provide materials to show process of project activities and theory **and the outcome of the work that has been done** to Mr. Azad

3. Main Points:

- CDC would like to allocate 1<sup>st</sup> floor of CDC building for JICA Project team but most probably new office will be located in a building in Forsat Street. Office will have ADSL.
- Mr. Azad will supervise CPs' activities during no JICA experts are in Iran.
- Invitation letters to IRG members to Iran Khodro and Auto Repair shop Union has been sent from CDC.
- To keep a TVTO car for Trainers Training has been sent from CDC
- Weekly report will be made only in English.
- CDC would like to suggest that CDC will implement pilot course simultaneously JICA Project Pilot course by utilizing experience of the project and check applicability of it into different area. JICA team should take care of CDC's implementation. **JICA will**

act as an advisor when CDC implements its project parallel to JICA's project.



- 3 units of competency have been completed in Trainers' Training.
- Letter for Mr. Nagumo's wife's VISA is out of control of Mr. Azad. ->Will be followed up by Mr. Imani.

[end]

August 1, 2009

Project for Strengthening the TVT Management Skills in TVTO

## Meeting Minute

July 27, 2009 / 9:30-11:00 / CDC Meeting Room

1. Participants:
  - Mr. Azad, Mr. Ghofran (CDC)
  - Mr. Saito, Mr. Imani
2. Main Points:
  - Trainees of Pilot Course should be from industry so that we can evaluate the performance of graduate in the industry.(CDC) -> It will be difficult to ask them to dispatch to training for 2 month, but asking to IRG member companies.(Project)
  - CDC will try to find trainees from Industry for Pilot Course.
  - Project Team is planning to carry out recruitment in below four channels.
    1. IRG member companies
    2. Provincial Office of Tehran (Through TVTCs)
    3. Independent dealers and repair workshops
    4. Job matching agents.
  - CDC accepted that final decision of selecting trainees will be made by Project Team and CP trainers.
  - CDC will provide suggestions on Monitoring and Evaluation. ->Plan of M&E will be sent to Mr. Azad.
  - CDC accepted Mr. Mazdarani to be IRG Coordinator.
  - CDC will do his best to keep present office for the period that no JICA experts are in Iran.
  - Mr. Khalilzad will be transferred to CDC eternally. Mr. Salimian will be transferred to CDC temporary and retune to TVTC after the project.
3. Immediate Actions to be taken from JICA Team:
  - Reconsideration of target trainees for the Pilot Course.
  - Inform Mr. Azad the reason of 6th UC can not be covered.
4. Immediate actions to be taken from TVTO side
  - Follow up on the participation to IRG from Iran Khodro and Repair Workshop Trade Union.

[End]

August 5, 2009

Project for Strengthening the TVT Management Skills in TVTO

## Meeting Minute

August 3, 2009 / 9:00-11:30 / CDC Meeting Room

1. Participants:

- Mr. Azad (10:00-), Mr. Ghofran (CDC)
- Mr. Kevin, Mr. Saito, Mr. Imani, Mr. Salimian, Mr. Rafati (-10:10), Ms. Maryam

2. Main Points:

IRG

- TVTO sent letter to Iran Khodro and Automotive Repair Trade Union. Mr. Mazdarani will visit them to explain details.
- CDC is considering the possibility of payment to IRG members in terms of rules and regulations.

Trainer's Training

- Trainer's Training has been completed and tasks has been confirmed.
- Exhaust fan, air conditions, ADLS installation are not completed yet. ->Will be completed by CDC and Provincial office of Tehran and will be followed up by CDC.

1<sup>st</sup> Pilot Course

- Graduate from lower secondary will be included in a target trainees. Revise the Flyer by adding "or similar level of knowledge".
- Draft Framework of M&E has been submitted to CDC. Mr. Azad would like to give comment on it. CDC want draft Questionnaire of M&E.
- 6<sup>th</sup> UC has been localized and going to be fully covered.

2<sup>nd</sup> Pilot Course

- CDC will be informed process of Needs Analysis before its implementation. ( to be confirmed this sentence)
- CDC will be informed of determined UCs after the needs analysis. ( to be confirmed this sentence)
- Course content should be complete and can provide some qualification to graduate. JPT will select Unit of Competency in that perspective.



- If TVTC No. 7 is completed by the time, CDC will consider the possibility of implementing second Pilot in TVTC 7.
- Length of the course will depend of UCs. About 400hs(3 months) will necessary depend on UCs.
- CDC has been implementing CBT related seminar at TVTO. More people who learnt CBT should involved in 2<sup>nd</sup> Pilot. Trainers who involved in 1<sup>st</sup> Pilot will be leader and positioned to provide advice.
- JPT should not only standby but should commit to carry out some activities.

#### Others

- Mr. Azad is pleased with set of materials of past draft manuals, induction seminar materials, etc. Contents and information are fine.
- CDC will implement pilot course in CBT format following JPT's 1<sup>st</sup> Pilot Course in other 3 trade areas. JPT will support by providing advice.
- Mr. Imani will supervise the counterparts' activities during the period when JPT is absent Iran.

#### Immediate action to be taken

- Will have meeting before JICA Experts leave.
- Provide finalized list of task for CP trainers during expert absence. (JPT)
- Provide finalized M&E Framework. (JPT)
- Provide draft Questionnaire of M&E (JPT)

[end]

14 September 2009

## Minute of Meeting

Meeting at CDC Meeting Room on 14th September 2009 for a periodical meeting

### 1. Attendance:

CDC	2	Mr. Ebrahim AZAD, Mr. Hassan Ghofran
Counterparts	2	Mr. Ebrahim Khalilzadeh, Mr. Salimian Seyed Mohsen
JICA Project Team	3	Mr Nagumo, Mr Imani, Ms Akbari

### 2. Discussions

#### Lease of Mr. Nikouravan from the training division:

The letter to request Nikouravan's participation as full time counterpart from Training Department. Mr Azad said he had written the letter.

#### Overtime and bonus to the instructors:

In response to Mr Khalilzadeh's complaint about being over assigned, Azad said that he has not assigned anything yet.

Mr Azad also requested that a work record of the trainers be given to CDC, so that they can be assigned by CDC when they are free.

#### Project Office:

Mr Azad stated that additional office space will be provided.

#### 2nd Progress Report(Draft):

Mr. AZAD and Mr. Ghofran were requested to review the draft version of the report by 21st September. Both of them agreed.

#### Midterm Evaluation:

Evaluation Team from Japan will arrive around 2nd or 3rd week of November for 2-3 weeks to monitor the progress of the project in comparison with the Project Design Matrix (PDM) in terms of quality and schedule.

Mr. Ghofran accepted to prepare information which the JICA Tokyo HQ requested to prepare for the evaluation by 28th September 2009.

#### Pilot Course:

Mr Azad requested to submit a list of applicant for the course with 1) their name, 2) contact number, 3) contact address, 4) educational background and/or skill level. In addition, he requested to provide information of 1) how each applicant obtained the information of the course; e.g. through the flyers, recommended by somebody, and 2) their motivation, e.g. only to receive a certificate, etc.

There was a plan to have a training of trainers (Mr. Nikouravan train other counterpart) on Electronic Gasoline Injection Systems at TVTC No4 during the week of 15th Aug – 19th Aug. But it was postponed to 15th and 16th September due to absence of other counterparts at the

planned period.

Industry Reference Group (IRG):

The Project Team reported to CDC that two new members joined to IRG.

-END-

28 September 2009

## Minute of Meeting

Meeting at CDC Meeting Room on 28th September 2009 for a periodical meeting

### 1. Attendance:

CDC	1	Mr. Hassan Ghofran
JICA Project Team	3	Mr Nagumo, Mr. Saito and Mr Imani

### 2. Discussions

#### Project Office:

The JPT requested to make Mr. Nagumo use Mr. Khalilzadeh's desk in CDC building. The JPT also suggested making Mr. Ghofran and Mr. Nagumo stay at same room for smooth collaboration. Mr. Ghofran told to forward this request (suggestion) to Mr. Azad..

#### Midterm Evaluation of the Project:

The JPT reclaimed to Mr. Ghofran to provide the data of expenditure by TVTO for the project which was requested by JICA Tokyo Headquarter for midterm evaluation and its deadline was 28th September. Mr. Ghofran explained he needed clarification from Mr. Azad and therefore he could not provide it today. Both of us agreed that Mr. Ghofran would provide it to JPT right after he get a confirmation from Mr. Azad.

#### Pilot Course:

**Training of Trainers:** It was confirmed by both parties that a training of trainers (Mr. Nikouravan train other counterpart) on Electronic Gasoline Injection Systems at TVTC No4 was successfully implemented on 15th and 16th of September.

**Recruitment for Pilot Course:** Pre-test for applicant through TVTC No.4 was done 27th Sep and interview has been done. Pre-test and interview for applicant from industry will be done on 29th.

**Monitoring and Evaluation:** The workshop on monitoring and evaluation of the Project was organized on 26th September to let all counterparts, who will do monitoring and evaluation on the course, have same idea for monitoring and evaluation. The minute of the workshop is attached.

**Equipment and Consumable:** Procurement of goods is behind schedule. Screen of the data projector and table has not been procured yet and need to follow up. All the others had been procured.

#### Industry Reference Group (IRG):

Both party agreed to organize IRG in October.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room on 5th October 2009 for a weekly meeting

### 1. Attendance:

TVTO

CDC

JICA Project Team

1 Mr. Hassan Ghofran

3 Mr Nagumo, Mr. Saito and Mr Imani

### 2. Discussions

#### Pilot Course:

**Recruitment for Pilot Course:** Pre-test and interview were implemented on 27th and on both of 27th and 28th Sep respectively for applicants recruited through TVTC No. 4. For applicant recruited through mega motor, both of pre-test and interview were implemented on 29th Sep. After that, screening was done and the result was notified to CDC. CDC suggested replacing three candidates with others with the reason of 1) their score of pre-test were poor, 2) their job statuses were unsuitable and 3) their educational certificates were unsuitable. The suggestion was accepted and three candidates were replaced with others. The notification of acceptance was sent to selected trainees on 30th September.

**Translation of Workbook:** One part of translation of the workbook is behind the schedule. Translation itself has been completed and it is under typing now.

**Procurement of Equipment:** All equipment has been procured.

**Pilot training course:** The course has been commenced successfully from 3rd October and will last by 25th Nove.

**M&E:** Daily monitoring is on course.

#### Industry Reference Group (IRG):

It is scheduled to be organized on 11th October at the conference room (auditorium type) on 2nd floor of TVTO main building.

The JICA Project Team suggested that Mr. Azad would have brief welcome address to IRG members at the meeting to appreciate their effort, showing his pose that TVTO is studying of standard from industry. Mr. Ghofran promised to discuss this with Mr. Azad.

The JICA Project Team will invite members to the Iranian restaurant near TVTO. So, TVTO does not need to provide lunch for members on 11th October.

The JICA Project Team briefed with new IRG members from Iran Khodro and trade union about role of IRG and provided set of materials for the next meeting so that they would be ready.

Agenda of the meeting are 1) Roles of IRG members, 2) Discussion on units of competencies of "Steering and Suspension Cluster", 3) Pilot Training Course and 4) Future plan of IRG meetings. Mr. Rafati will facilitate 2) Discussion on units of competencies of "Steering and Suspension

Cluster" under guidance of Mr. Mazdarani, a coordinator of IRG.

Draft schedule of need survey for the 2nd pilot course will be informed to IRG at the meeting.

The next IRG meeting will be counted as 4th meeting, although the last meeting, which was scheduled in Aug 2009, was canceled, as official invitation letter sent to the member used the number "3rd" already and may confuse others if we use the number "3rd" again for the next meeting.

**Midterm Evaluation of the Project:**

The JPT reclaimed to CDC to provide the data of expenditure by TVTO for the project which was requested by JICA Tokyo Headquarter for midterm evaluation. Its deadline was 28th September and behind the schedule, due to the delay of developing the list of equipment with its cost.

**Workload of CPs during the pilot course:**

While one CP is delivering a course to trainee, other three CPs mainly support and observe the course. CDC clarified if the three CPs can leave the class and use their time to work other tasks. The JPT explained that the purpose of delivering the course is not only implementing the course to the trainee, but to make CPs to have practical experience through delivering CBT course. In other words, the pilot course is part of Trainer's Training. The JICA Project Team will submit schedule of CPs in the pilot course to Mr. Ghofran ASAP

**Project Office:**

The JPT requested to make Mr. Nagumo use Mr. Khalilzadeh's desk in CDC building. The JPT also suggested making Mr. Ghofran and Mr. Nagumo stay at same room for smooth collaboration. Mr. Ghofran told to forward this request (suggestion) to Mr. Azad..

-END-

19 October 2009

## Minute of Meeting

Meeting at CDC Meeting Room

on 19th October 2009 (10:00-11:30 am) as Weekly Meeting between JICA and CDC

### 1. Attendance:

CDC	1	Mr. Hassan Ghofran
JICA Project Team	4	Mr Kevin Jackson, Mr. Kunitoshi Saito, Mr Imani Parviz, Ms.Nakako Ishimaru

### 2. Discussions

#### **The 2nd Progress Report (English) and Monthly Report for September**

Both of the 2nd Progress Report (English) and Monthly Report for September were submitted to CDC.

\* The reports will be submitted to Mr. Azad and Mr. Saberi. The Farsi translation of the 2nd Progress Report, which is not an obligation of the project team but only prepared for the convenience of CDC, is being proof-read at the moment and will be submitted as soon as this is completed.

#### **Progress of 1st Pilot Course:**

In summary, the course is running quite successfully and completed 2 units of competency since its commencement on 3rd October, thanks to great support from Najibzadeh as well as the staff of TVTC4. Both Kevin and Mr.Saito are conducting course monitoring. In order to check the operation, Kevin is observing the course and consulting with CPs at daily basis. Mr.Saito is conducting interviews with Trainers on weekly basis, which he is drafting a Monitoring check list form to be presented in his working Manual as well as utilized in the second training program.

Beside above, the major concerns are discussed as follows:

#### **Workload of the counterparts beside the delivery of training course**

English Session: Considering the betterment of future technical translation, Project is planning English session for the counterparts. It will be held two(2) hours a day managing time before/after Training course. These sessions will be a necessary and efficient investment for the improvement of technical wording, and the final achievement of the pilot course.

As for the other assignment than those directly related to the project, considering the limited human resources at CDC/TVTO, the project accepts the CPs may some works other than those directly related to the Project, only if the task load is within 3-4 hours per week and the work will be done in TVTC No. 4. However, the project insists that ideally, CPs should be involved the pilot training course fully, and their absence at any time will have a negative impact on the

outcomes of the project. In order to manage task load to CPs, CDC will not give tasks directly to CPs but through Project Team.

\*In order to make this point clearer, the information of actual workload of the counterparts in more details will be informed to CDC very soon.

\*\*Also, related to this agenda, it was requested that the assigned deadline for the assignment as for Training course of Iran Khodro, which Mr.Nikoravan is currently involved, to be postponed by Wednesday.

### **Transportation commuting TVTC and TVTO**

There were inadequacies of car arrangement commuting from TVTC to TVTO for three times. Twice of them, CPs had to wait until the car picked them up after the class ends, and once CPs took a taxi as the TVTO's car arrangement section told and shouldered its charge. The project has asked that this be better managed from now on till the end of the course.

\*CDC will take into consideration about the bill.

### **Lunch reservation at CDC**

Considering the fluctuating number of visitors to the training course such as Mr.Saito and Ishimaru (from six to eight on average), the project asked for permission to be given to Mr.Najib to make request directly to allow for these changes in numbers.

\*CDC will look into a possible solution.

### **The 4th Industry Reference Group**

The 4th IRG was held 11th October as scheduled. The meeting minutes summarizes that most of time was spent for repeating basic explanation to new-comers about the project and CBT models. Because of this, SAIPA Yadak (the old members of IRG) suggested that the project's visited industries this would be more efficient, and allow for more meaningful discussions about the units of competencies.

For the future measure, an option was discussed that the Project raises a few **visits to industry** before the meeting IRG: that is, around 80 % of information collection for needs assessment will be done at industries or workshops, then whose contents would be confirmed at the IRG meeting.

As for **new membership for IRG**, not Iran Khodro (manufacturing industry), but ISACO (Iran Khodro's repair service line) will be suitable in view of our objective.

In order to avoid confusion, title of IRG will be changed to "Automotive Service and Repair Industry" so that it is clear that target industry is service and repair of automotive without including manufactures.

### **Preparation of the second pilot course (April to September 2010)**

The designing the second pilot course, scheduled to be held end of April to the beginning of September 2010 is now undergone: with the given conditions, its framework and sample skill sets should be developed by October to November 2009, followed by selecting skill set in consideration of IRG's opinion (November to December 2009).



The tentative framework of Pilot course 2 was explained briefly as shown on the table below (Source: p.2, Weekly Meeting Agenda, 19th October 2009).

Item	Contents	Status
Area	Automotive Service and Repair	To be discussed
Target Level	TBD (To Be Determined) in consultation with IRG on November 2009	
Unit of Competency	2 Units of Employability Skills (Occupational Health and Safety + Tools) + Technical parts (To be determined in consultation with IRG)	
Target Trainees	TBD in consultation with IRG	
Trainers	Two option Option1: The current four (4) trainers / CPs will deliver the 2nd pilot course Option2: Recruit new four (4) CPs to deliver the 2nd pilot training course. The current four (4) CPs will act as trainers of new trainers. Therefore the total trainers/CPs will be eight (8) excluding Mr. Azad and Mr. Ghofran	

As for **Venue**, if the extension work of TVTC No.7 will be finished soon, ideally, the project suggests an option to have the coming course. On the other hand, however, since the schedule of construction is not known, it is unstable to count on TVTC No.7 as its candidate.

TVTC No.4 will be fair enough considering both of the equipments as well as staff are ready.

TVTC No.9 (*Mousyrie*) can be nice, except its distance from TVTO and Tehran (one-hour drive).

The experts raise an option with the **increased number counterparts** so that CDC/TVTO will be able to obtain more human resource who are familiar with CBT, which will give more stable impact in the long run. In either case, the acting four (4) counterparts are must and should be the core members, since their skills and knowledge have been lifted up considerably day by day. The participants of Roger's Workshop on the overview of CBT, such as those members of KOICA Project, can be candidates for the additional members. But, the project requires the counterparts to be committed full-time would be better four (4) counterparts as it is rather than the increased part-time counterparts. Also, it is requested the nomination of candidates will be done by the end of Dec. 2009 before starting of translation

\*These items will be reported, considered and discussed.

#### **JICA Mid-term evaluation team and JCC**

The possible delay of schedule was reported and the general requirement for JICA's evaluation was explained such as interview with the officials of CDC and TVTO HQs.

The tentative schedule of the coming JCC was informed. As for the membership of JCC, the project will deliver a draft of participant list based on the MOU of JICA.

#### **Office relocation**

Showing the coming experts (Roger and Mr.Ishibashi) and possible recruitment of interpreters accordingly, the project requested the importance of sufficient work space for efficiency of performance.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room

on 27th October 2009 (10:30-11:45 am) as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	2	Mr.Ebrahim AZAD (until 11:15am ) Mr. Hassan Ghofran
JICA Project Team	4	Mr Kevin Jackson, Mr. Kunitoshi Saito, Mr Imani Parviz, Ms.Nakako Ishimaru
TVTO	1	Ms. Parisa Jaymand

### 2. Discussions

#### Progress of 1st Pilot Course:

Kevin reported that the course, now in its 4th week, is running quite successfully. The number of trainees is decreased to 13 from the original number of 14, because one (1) trainee, who is a college student, had to leave several hours for his schooling.

For the trainers, English class are held aiming at lifting up their skills of technical translation: it takes 10 hours a week. For this week, Both Mr.Rafati and Mr.Khalilzade had to leave due to the reasons for each: Mr.Rafati for health problem of his family and Mr.Khalilzad for handing over his ex-work of the equipments storage at TVTC No.9 to his replacement. However, since they are not the trainers timetabled for this week, the training delivery was held as scheduled.

From Mr.Saito, the monitoring and evaluation expert reported that he is now constructing a M/E system while conducting monitoring the 1st pilot course. For the process monitoring, he currently applies observation as well as structured interviews with the trainees and trainers; such information would be crucial data for course monitoring. Midterm monitoring and evaluation is scheduled in the beginning of next week.

Mr Azad stated that the results gained from the evaluation of the course should be meaningful and not accidental. He also insists that there should be some statistical analysis for evaluation and asked about the name of the method.

Mr.Saito and Kevin emphasized that the ultimate goal of the course monitoring is to assess the achievement of competency. In this regard, both graduation rate and employment rate would be the basis for data analysis and feedback data from trainees and trainers is supplementary. Also, Ishimaru pointed out that the monitoring process currently conducted is an attempt to construct a monitoring system that will work as such, its data collection and analysis are oriented are a practical approach rather than a thorough survey.

\*Mr.Azad expressed that he would like to raise his comments for evaluation of the pilot training course in the future after knowing which method is being used by JICA team to evaluate the course.

\*\*The schedule of 1st pilot training course for this week was confirmed. Kevin welcomed everyone to visit TVTC No.4 for observation.

\*\*\*Mr.Saito will prepare a note briefing about his monitoring method for Mr.Azad.

### **Report on the other related tasks**

As for **the 2nd pilot training course preparation**, the framework is still under discussion among the project experts. If there are any further developments, the Team will report to the CDC/TVTO ASAP. What is most needed from CDC/TVTO, is the decision, on the number of counterparts (trainers) who will be released and their appointment date, this information will be needed by the end of December 2009. This is because in January, counterparts training will take place, followed by the translation of workbook by trainers.

Regarding IRG, according to Mr.Mazdrani, the IRG coordinator, since Trade Union has good networks with small workshops, they might contribute for employment of would-be alumni of the 1st pilot training course. In this regard, it is suggested that IRG members will make a visit to the pilot training course some time around at 7th week of the course.

### **Workload of the counterparts beside the delivery of training course**

As for the other assignment than those directly related to the project, Kevin had prepared a note for CDC regarding the actual workload of the counterparts in more details as requested in the last weekly meeting. This will be sent via e-mail immediately after this meeting.

Kevin repeated that ideally, CPs should be involved the pilot training course fully, and their absence at any time will have a negative impact on the outcomes of the project. Also, he pointed out that there has been compromise made by the Project Team accepting that the counterparts who are not timetabled (as the leading Instructor) may do extra work (for the CDC) other than those directly related to the Project, only if the task load is within 3-4 hours per week per person and that the work is done in TVTC No. 4. In order to manage the pilot training course effectively, any request by CDC of the Instructors time, needs to be made directly to the Project Team and not to the trainers themselves.

### **Work schedule**

The schedules of other upcoming events are informed as follows:

- 29 October to 11 December: Mr.Roger DeZilwa, Expert in Training Standard and Curriculum/CBT Advisor
- 28th Nov – 9th Dec 2009 (tentative): JICA Mid-Term Evaluation Team (Delay of Schedule due to no
- 2nd February 2010 (Tentative): Joint Coordinating Committee Meeting

### **Relocation of Project office**

A section at the end corner of 5th floor of TVTO has been offered as the supplementary work space for the project experts. Setting up of this space is in process, arranged by Project

Coordinator, Ms.Parisa Jaymand.

### **3. Closing**

- All the agenda discussed at the meeting will be followed based on each member's responsibility and duties.
- Next weekly meeting will be held on 2nd November at CDC.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room

on 2nd November 2009 (10:10-11:50 am) as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	1	Mr. Hassan Ghofran
JICA Project Team	4	Mr. Roger DeZilwa, Mr. Kevin Jackson, Mr. Kunitoshi Saito, Mr. Imani Parviz, Ms. Nakako Ishimaru
TVTO	1	Ms. Parisa Jaymand

### 2. Discussions

#### Progress of 1st Pilot Course:

Kevin reported that the course, now in its 5th week, is running quite successfully. However, since the competencies start to cover complex subject, the implementation should be flexible in line with the trainees' achievement. CDC will consider the possibility of extending the course duration with regard to the availability of the trainers and the place if the need arises as CBT is competency-based and not scheduled-based. However, the trainees' availability needs to be checked preferably near the end of the course.

As for the feedback from trainers/trainees, Saito made a prompt report based on his mid-term evaluation conducted on 1st November. According to the trainees' answer written in the questionnaire, they, with small deviation, expressed their satisfaction in total except a few complaints on lunch, materials, and textbook. These comments will be collected and become a supplementary data for the overall evaluation in the end. Also, feedbacks from the trainers are obtained through interviews and/or daily consultations.

\*Roger proposed a half-day session to brief basic ideas of Competency Based Training (CBT) and its experiences in Australia. This will be held for both Ms. Parisa Jaymand as Project Coordinator and Mr. Hassan Ghofran as Assistant for Technical Supervisor, so that they obtain a clearer picture on CBT, aiming at supporting their activities with JICA Project Team in the future.

#### Preparation for the 2nd Pilot Course

In preparation for the 2nd pilot course, the attendants discussed various potentials of counterparts as well as assignment of new counterparts. The main points raised in this discussion are:

as the increased number of counterparts, training the 2nd generation, will be a good affect on the impact of project, so JPT recommends TVTO considers this possibility;

It'd be nicer that additional counterparts will be involved full-time as the current. However, in case it is too hard, the experts may consider about good plans of rotations with the combination of both generations;

It is quite effective for JPT and TVTO to hold a CBT induction WS in prior to 2nd pilot course. Ideally, these two should be linked: this is because lectures on CBT, exclusively and with no concrete case studies and practices would dampen its value.

On the other hand, considering merits of involving broader stakeholders from other training areas of TVTO, another option is to have a CBT WS in parallel, say by involving ITC for example, to preparation of 2nd pilot course.

Those trainers (like Mr.Ghasemi, Mr.Khamidikia) who had been involved until CBT induction course in February 2009 by Roger may play a good role to explore the basic concepts of CBT in more practical way.

	<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>
Target	1st generation only	1st +2nd generations	
No. of Counterparts	4	4+4=8	4+4=8
Conditions	Full-time	Full-time is recommended; and Part-time with rotations	Full-time/Part-time with rotations
Remarks		-May recruit alumni of the CBT induction WS (held February 2009).	-Recruit new trainers and train them with CBT induction WS before 2nd pilot training course (February 2010) -alumni CBT WS(2009) will support the WS 2010.

\*JPT asked CDC to inform of their decision about the assignment of counterparts. CDC asked JPT to make a summary of possible scenarios. (see Attachment.)

### **Workload of the counterparts beside the delivery of training course**

As for the other assignment than those directly related to the project, Kevin had prepared a note for CDC regarding the actual workload of the counterparts in more details as requested in the last weekly meeting. This will be sent via e-mail immediately after this meeting.

Kevin repeated that ideally, CPs should be involved the pilot training course fully, and their absence at any time will have a negative impact on the outcomes of the project. Also, he pointed out that there has been compromise made by the Project Team accepting that the counterparts who are not timetabled (as the leading Instructor) may do extra work (for the CDC) other than those directly related to the Project, only if the task load is within 3-4 hours per week per person and that the work is done in TVTC No. 4. In order to manage the pilot training course effectively, any request by CDC of the Instructors time, needs to be made directly to the Project Team and not to the trainers themselves.

### **Work schedule**

Schedule for the coming week are informed as follows:

- Plan of observation tour for IRG members (Week 7)
- Mr.Toru ISHIBASHI, Expert in Training Needs Analysis (22 November to 30 December)
- As for the visit to Tehran for mid-term review of the Project by JICA HQ, official letter will

be sent by JICA (JICA Iran Office). For effective coordination, its details will be delivered as soon as possible.

Table 2 Schedule for mid-term review of Project by JICA HQ (as of 2nd November)

<b>Duration</b>	Arrival on 6th December to Leave on 16th December (11 days in Tehran)
<b>Objectives</b>	Meeting with TVTO and JICA Experts; Interview, observation and other data collection from the stakeholders; Signing MM; Report to JICA Iran and Embassy
<b>Visit members</b>	Mr.Konishi, Mr.Furuta, Mr.Shirouzu (JICA HQ) Ms.Mitani (Consultant/Review Analyst)

Joint Coordinating Committee Meeting is planned on 2nd February 2010.

### 3. Closing

- All the agenda discussed at the meeting will be followed based on each member's duties.
- Next weekly meeting will be held on 9th November at CDC.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room

on 17th November 2009 (10:10-11:50 am) as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	1	Mr. Hassan Ghofran
JICA Project Team	6	Mr. Roger DeZilwa, Mr. Kevin Jackson, Mr. Kunitoshi Saito, Mr. Imani Parviz, Ms. Nakako Ishimaru, Ms. Sara Javari
TVTO	1	Ms. Parisa Jaymand

### 2. Discussions

#### **Progress of the 1st Pilot Course and Related sharing on CBT concepts**

Ms. Ishimaru reported that the course in its 7th week is running quite successfully. There was also the first visit by industry (Mr. Mohamadi, Megamotor) who reported a very positive impression of the progress of the course.

One trainee, however, decided to leave the course. He appeared to have experienced some difficulties with the trainers seemingly because he had been over-confident about his capabilities with some of the course units.

Mr. Saito presented some findings from his mid-term evaluation. His evaluation was conducted by applying interviews and statistical analysis of questionnaires. According to his evaluation report, although there appears to be some concern about the number of some materials and equipments most of the trainees commented that they are acquiring the skills and knowledge incorporated in the course. Mr. Saito has submitted the brief report to Mr. Azad but there has been no response from him to date.

The concept of "resource book" came up for discussion: Roger explained that conventional ideas of "textbooks" are different from the kind of resources used in CBT course delivery. Training resources within the CBT delivery system includes not only textbooks but also a much broader range of resources including relevant and appropriate material sourced through the internet, audio-visual and other computer-generated material developed by trainers and training organizations, actual models and component parts derived from industry and, importantly, workshop manuals produced by manufacturers and service organizations. In CBT it is crucial for the trainees to access, collect, and analyze necessary information which is utilized in the real job settings. Therefore, Roger implied one of Unit of Competency may address "how to read technical materials in workplace."

The unique concepts of CBT should be discussed quite carefully as well as rendered into appropriate Farsi. It is quite essential to work with the trainees in the working place to access the information they need. In connection with this matter, Mr. Ghofran pointed out the importance of providing a glossary of technical terms for the trainees in the 2nd pilot course.

Roger highlighted the concept of assessment in CBT. CBT assessment does not rely on a final examination for overall assessment of their progress in a course. Instead, continuous and



progressive assessment is conducted to monitor whether the standards of competency are achieved in each training session.

By such progressive assessment, the trainees can demonstrate competency continuously, and be accordingly observed by the trainers. For this purpose, the trainers of CBT always possess a portfolio in which they keep track of their trainees' demonstration of competence at each step.

Unlike in the traditional system, the idea of assessment is based on negotiation between the trainer and trainees. That is, the trainers should generally only assess when trainees are ready, and they should be fully aware of the competencies they are going to be assessed against. (This of course does not preclude conducting some final tests – either theoretical or practical - but even these should not be used as devices to "catch trainees out").

Kevin confirmed that in the competency-based system the trainees are assessed only when they are ready. The trainers judge when the trainees are to be assessed either competent or not. In reality, however, it is quite hard for the trainers of the 1st pilot training course to understand such idea of assessment. He stressed that one of the significant features of this project is making a model of delivery and assessment. In many ways this is more important even than the course content. In other words, JPT is an attempt to alter the current 'mind-set' of the providers of TVT so they become more responsive to the labour market.

The plan of induction CBT workshop was postponed to be re-scheduled for broader targets (overall TVTO) as Mr Saberi had requested in the meeting. However, for the sake of JPT's counterparts who need to be fully briefed about the Project and its objectives, there will be a brief training session for Mr.Ghofran and Ms Jaiman in the coming week.

### **Preparation for the 2nd Pilot Course**

With regard to the second pilot course, the table below outlines the proposed key milestones. It is recommended that the number of counterpart trainers be increased for participation in the 2nd pilot course. This has been raised with CDC but so far the response from CDC has not been positive. Roger stressed the importance of sufficient human resources being involved with JPT for introducing and implementing CBT especially with regard to establishing national competency standards and a national TVT system for Iran.

Table 1 Draft Schedule of 2nd Pilot Training Course

<b>Major Tasks</b>	<b>Schedule</b>
Developing framework	Oct – Nov 2009
Developing sample skill set	Oct - Nov 2009
Selecting skill set in consideration of IRG's opinion	Nov – Dec 2009
Translation of workbook by CPs	Jan – Mar 2010
Procurement of equipment if need arises	Feb – April 2010
Implementing "Training of Trainers" and "2nd Pilot Course"	End of Apr – Beg of Sep 2010

Roger reported the framework for the 2nd pilot course is being designed for the trainees to acquire **entry-level** certification for employment in the automotive service and repair industry sector.

An idea of 'work placement' in the middle of the 2nd pilot course was raised by Kevin and Roger: the four (4) weeks of work experience in industry shall be placed within the total of 14-week period of the 2nd pilot.

### **IRG meeting**

There has been significant progress for the experts of JPT to select, target, and recruit the members of IRG that most fit our plans for the new training course. The official invitation letters will be sent to all the participants within the day. JPT will place the coming opportunity as a relatively formal meeting but more importantly, both before and after this meeting, there are precise discussions continuously between TVTO and IRG. In this regard, it is hoped that Mr.Mazdarani (as the JPT's IRG coordinator) shall play an active role to facilitate further communication between IRG members.

In order to obtain sufficient support from industries for competency based training courses, it is clear that building trust among TVTO and the industries is far more essential. JPT suggested that TVTO starts to consider whether and how they will hand over such a role in the long term.

For the coming 5th IRG meeting, however, JPT experts are going to ask for supports from the IRG, or at least comments for the 2nd pilot training course: that is, provision of training equipments, acceptance of work placement, and provision of insurance in case of accidents on the trainees.

### **Work Schedule**

The schedule for the coming week was informed as:

- The 5th IRG Meeting (23rd November) at Olympic Hotel;
- Possible visit to the pilot training course by another IRG member;
- Mr.Toru ISHIBASHI, Expert in Training Needs Analysis (22 November to 30 December);
- JICA Mid-Term Review Team (planned from 6th to 16th December ) that will include the meeting with TVTO: the appointment with Mr.Saberi had been set for the morning of 8th December; and
- Joint Coordinating Committee Meeting: 2nd February 2010 (Tentative): of which a concept of its membership shall be informed to CDC.

### **3. Closing**

- All the agenda mooted in this meeting will be reported and followed based on each member's duties.
- Next weekly meeting will be held on 23rd November at CDC.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room

on 30th November 2009 (10:10-11:50 am) as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	2	Mr.Ebrahim Azad, Mr. Hassan Ghofran
JICA Project Team	6	Mr.Roger DeZilwa, Mr. Kunitoshi Saito, Mr.Toru Ishibashi Mr Imani Parviz, Ms.Nakako Ishimaru
TVTO	1	Ms. Parisa Jaymand

### 2. Discussions

#### Completion of the 1st Pilot Course

JPT reported that practical/theoretical component of Pilot program No.1 is due to conclude on the 25th November. Mr.Azard referred that evaluation on the program should be conducted carefully so that the lessons learned will be great inputs for the preparation for Pilot program No.2. JPT will submit a draft report to CDC in order to show the findings as well as basic concepts of evaluation for this model pilot training course very soon.

#### Preparation for the 2nd Pilot Course

With regard to the second pilot course, the proposed key milestones were pointed out as the table below shows.. It is stressed that the number of counterpart trainers be increased for participation in the 2nd pilot course. This has been raised with CDC for several times and Mr.Azard mentioned clearly that he acknowledged the importance of sufficient human resources being involved with JPT for introducing and implementing CBT and noted that CDC will start the necessary arrangement for this matter.

<b>Major Tasks</b>	<b>By</b>	<b>Schedule</b>	<b>Status</b>
Selecting skill set in consideration of IRG's opinion	JPT/TVTO and IRGs	Nov - Dec 2009	●
Assignment of Counterparts (CPs)	TVTO	Beginning/Dec 2009	
Translation of workbook by CPs	JPT/TVTO	Jan – Mar 2010	
Procurement of equipment if need arises	TVTO	Feb – April 2010	
Implementing "Training of Trainers" and "2nd Pilot Course"	JPT and TVTO	End of Apr – Beg of Sep 2010	

#### IRG meeting

JPT mentioned that a significant progress in selecting, targeting, and recruiting the members of IRG that may most fit the plans for the new training course. For 5th IRG meeting (held on 23rd November), JPT placed the opportunity as a relatively formal meeting but more importantly, both before and after this meeting, there are precise discussions continuously between TVTO and IRG. Thanks to CDC, the official invitation letters was sent to all the

participants on time and obtained the sufficient participation by the members.

In order to obtain sufficient support from industries for competency based training courses, it is clear that building trust among TVTO and the industries is far more essential.

As a result of the 5th IRG meeting, however, JPT experts could take the opportunity to ask for supports from the IRG, and also obtained their comments for the 2nd pilot training course: that is, provision of training equipments, acceptance of work placement, and provision of insurance in case of accidents on the trainees. JPT experts, Mr.Ishibashi has started to visit each participant for following up for more accuracy of data collection and analysis.

### **Work Schedule**

The schedule for the coming week was informed as:

- JICA Mid-Term Review Team (planned from 6th to 16th December ) that will include the meeting with TVTO: the appointment with Mr.Saberi had been set for the morning of 8th December;
- Mr.Motomura Yuichiro (Chief Advisor): 5th to 14th December.
- Joint Coordinating Committee Meeting: 2nd February 2010 (Tentative): of which a concept of its membership shall be informed to CDC.

### **3. Closing**

- All the agenda mooted in this meeting will be reported and followed based on each member's duties.

-END-

18th January 2010

## Minute of Meeting

Meeting at CDC Meeting Room

on 18<sup>th</sup> January 2010 (14:00-15:40 PM) as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC and CPs	3	Mr. Ramak FARAH ABADI, Mr. Seyed Mohsen SALIMIAN Mr. Javad RAFATI
JICA Project Team	4	Mr. Tatsuya NAGUMO, Mr. Kunitoshi Saito, Ms. Maryam Akbari, Ms. Sara JAFARI
TVTO	0	

### 2. Discussions

#### Weekly report:

Since weekly meetings had not been held for more than one month due to changes in personnel and retirement, weekly reports were also not done, since the monthly report has been submitted. The JPT will provide weekly meeting from next weekly meeting.

#### 2nd Pilot Training Course:

The draft schedule network diagram of the second pilot training course was explained.

Mr. Farahabadi and the counterparts required more detailed schedule, as Mr. Farahabadi need it for the necessary administrative arrangements. The JPT agreed to prepare it.

The following are confirmed

- More localization after the textbooks arrive (through meetings with IRG)
- The learning resource should be translated before localizing with IRG.
- More customization should be done. before 23 April 2010
- It is recommended for TVTO to upgrade the counterparts' English competence

The detail of discussion is as follows.

- The JPT confirmed the units of competency have been already fixed with IRG.
- The counterparts showed their worry about the shortage of time for procuring equipments and preparing learning resources, as the number of units of competency increased from 6 to 21. We agreed to see the volume of training resource after Roger arrives on 23rd Jan, which Roger will bring some from Australia.
- Mr. Farahabadi suggested having more IRG meetings in order to localize the units of competency from Australia better and meeting with IRG members after CPs studies learning resource was recommended, as this could be good opportunity for TVTO to gain trust of industry people especially SAIPA.. The JPT explained that TVTO, as a governmental

agency, is to organize IRG meeting with support from the JPT concurrently while the JPT operate the second pilot course. Also the JPT promised CDC to provide information of the need survey (Mr. Ishibashi's report) with IRG members.

- The textbooks need to be translated before giving to IRG, and the customization will be done after translation.
- Because the counterparts need to review training materials and be able to communicate directly with foreign experts, the JPT suggested CPs should have more opportunity to read in English; however, Mr. Farahabadi wanted the counterparts to have more free time for their responsibilities in CDC. Mr. Nagumo suggested the necessity for upgrading the counterparts in 4 levels that should be balanced with each other: 1. CBT knowledge 2. Communication skills with IRG 3. English skill 4. Technical skills.
- In the beginning of Japanese fiscal year JICA experts will support the customization of units of competency through reviewing them.
- The framework of the second pilot course, assignment of the counterparts, training venue and using Workshop of SAIPA at TVTC No. 4 were confirmed.

#### **Schedule:**

The JPT explained Manning Schedule of the JICA Experts.

The JPT explained the Plan of JCC. Most probably, it is scheduled to be organized on 2nd of February 2010 (13th Bahman). The Agenda was reviewed. The expected participants were informed. 20-25 participants were estimated for the meeting. Mr. Farahabadi will discuss with Mr. Saberi about the conference room (auditorium type) in TVTO main building and the other participants that might attend from TVTO by 20<sup>th</sup> Jan (Wed).

#### **Any Other Business:**

CDC will assign CBT experts to review the manual after completion of developing them by the JPT. The review will be started after February 2010. The CBT experts from CDC will review by meeting session..

The JPT explained the schedule of follow up survey of pilot 1 and it was accepted by CDC. Appointment of interview with graduate who got a job have been done since 13<sup>th</sup> January (23 Dey) over phone. The graduates who have not got a job yet have been interviewed over phone only. Face to face interviews for those who got a job already will be done from 23rd Jan. (3 Bahman). Mr. Saito and the counterparts will implement this interview survey. After this survey, they will analyze the results.

Mr. Farahabadi (CDC) will write official letters to authorized dealerships to support interview survey. He will provide a copy of the letter to Mr. Saito upon request.

-END-

1<sup>st</sup> February 2010

## Minute of Meeting

Meeting at CDC Meeting Room

on 1<sup>st</sup> February 2010 as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	5	Mr. Ramak FARAH ABADI, Mr. Seyed Mohsen SALIMIAN Mr. Javad RAFATI, Mr. Ebrahim KHALILZADE Ms. Parisa Jaymand
JICA Project Team	6	Mr. Yuichiro MOTOMURA, Mr. Tatsuya NAGUMO, Mr. Roger DeZilwa, Mr. Kunitoshi Saito, Mr Imani Parviz, Ms. Maryam AKBARI, Ms. Sara JAFARI

### 2. Discussions

#### Developing Workbooks and 2<sup>nd</sup> pilot training course

All participants reviewed CP's work schedule for developing workbooks, which was discussed at the weekly meeting without Mr. Farahabadi's attendance last week. CPs' assignment for developing the workbooks was clarified with Mr. FARAH ABADI.

Mr. Farahabadi demanded the guideline for developing a workbook in CBT method. The JPT responded that the manual will include that.

Mr. Farahabadi also suggested that CPs should be given more time to develop their workbooks. Roger replied that the JPT brought the textbook for the CPs in the Automotive Mechanics and the workbooks. However, he said that there is no formula prescribing these Workbooks to be produced.

Roger mentioned that the CPs' inference of the workbooks from Australia is crucial in translating the workbooks and developing their own. Thus, in the next week refresher course the workbooks will be used as a model to explain to the CPs how to develop workbooks which are customized to the needs of Iran industry, and how to use the workbooks for their own goals. So, the central question will be about the process through which the workbooks which are customized to the needs could be worked out.

Roger also asserted that the 21 units are the basic components of a full mechanics course. However, it will be possible to train full mechanics in the level 3 training course in which 33 units will be included.

Mr. Rafati demanded that the CPs could use other Iranian resources in developing their own resources. In this regard, the JPT explained that there are useful resources in Iran; nonetheless, the difference between those resources is in the approach of CBT which is based on UC, Element and Performance Criteria, and that the final goal in this approach is that the trainee could achieve the competency. If those in Iran compose of all performance criteria, then, we can use them.

Mr. Farahabadi requested that a documentation of the methodology of JICA project will be provided for CDC, so that they will have a source to be referred to in future.

Mr. Farahabadi and the CPs referred to one of the issues in customization that is the misunderstanding of the concept of serviceman from the part of Industry. However, fortunately, in large-scale companies the concept is closer to the Australian CBT.

In this regard, the JPT suggested that the 2nd pilot can be an ongoing educational exercise in which the CPs can be the coordinators with Industry.

#### **CBT Refresher Course for CPs**

Mr. Nagumo clarified Mr. Farahabadi that all the CPs will participate in the refresher course (6-10 February 2010). He also requested for arranging a room for the workshop at TVTO not for a formal lecture but for a discussion.

#### **2-3. Joint Coordination Committee Meeting**

The date of JCC meeting was changed from 2nd to 3rd of February which was still tentative.

#### **2-4. Any Other Business**

One of the issues in the 18th January weekly meeting was Mr. Farahabadi and the CPs' concern regarding the level of training: this issue will be discussed with IRG after CPs develop similar workbooks to the workbooks from Australia.

-END-



5th February 2010

## Minute of Meeting

Joint Coordinating Committee Meeting  
on 3<sup>rd</sup> February 2010

Between TVTO and JICA Project Team For the Project for Strengthening the TVT  
Management Skills in TVTO

### 1. Attendance

#### TVTO

1	Mr. Mohammad Taghi SABERI	Deputy of Research and Planning
2	Mr. Alireza HATAMZADEH	Deputy of Training
3	Mr. Ramak FARAH ABADI	Director General, CDC
4	Mr. Naser SHAMS	Deputy of Advanced Skills
5	Mr. Amir.LARI	Monitoring and Evaluation Expert, Monitoring and Evaluation Department
6	Mr. Alireza Taherpour	KOICA advisor
7	Ms. Parisa JAYMAND	Office of Research and Planning
8	Mr. Hemmat Ali NAJIB ZADEH	Principal of TVTC No.4
9	Mr. Seyed Mohsen SALIMIAN	CDC
10	Mr. Ebrahim KHALILZADEH	CDC
11	Mr. Soheil SHAHRAKI	Principal of TVTC No. 18
12	Mr. Seyed Bagher AZIMIDOKHT	TVTC No. 18
13	Mr. Rouhollah GHASEMI	TVTC No. 18
14	Mr Hossein SOUSANAZAD	TVTC No. 18
15	Ms. Zahra MIRZADE MODARESI	Office of CDC
16	Ms. Leila FARHADI	Office of CDC
17	Ms. Zahra NASIRI MAHD	Office of CDC

#### JICA

18	Mr. Makoto ASHINO	Resident Representative, JICA Iran Office
19	Ms. Natsuko OZAWA	Project formulation Advisor, JICA Iran Office

#### JICA Project Team

20	Mr. Yuichiro MOTOMURA	Chief Advisor / Team Leader
21	Mr. Tatsuya NAGUMO	Vocational Training Management
22	Mr. Roger DeZilwa	Training Standard and Curriculum
23	Mr. Kunitoshi SAITO	Training Monitoring & Evaluation
24	Mr. Imani Parviz	National Consultant
25	Ms. Maryam AKBARI	Interpreter / Translator
26	Ms. Sara JAFARI	Assistant Project Officer

#### Observers

27	Mr. Kazuhisa FUJII	Second Secretary, Embassy of Japan
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## **2. Discussion**

### **Opening remarks by Mr. SABERI (Deputy of Research & Planning)**

Welcome by Mr. SABERI who started by telling that TVTO transferred the JICA Project to the Deputy of Research and Planning in order to unify management of the activities concerning the change of training approach in TVTO at the beginning of 1388 (April 2009). TVTO has also taken many measures to upgrade the training quality. Demand-driven strategy, increase in productivity and privatization are 3 key strategies upon which TVTO has based its activities. The counterparts (CPs), who have gained lots of experience by participating in the Project last year in order to unify technical aspects of the Project, have been relocated to CDC as experts in automotive area. The progress of the Project was well evaluated by the Midterm Evaluation Team from Japan. Moreover, communication with Industry in various occasions, especially at the Hotel Olympics where he attended, paved the way for a demand-driven system and provided more communication with industry. In this JCC meeting, the activities of the Project in the past year and plans of activities for next year will be discussed. The JICA Project Team and TVTO were evaluated efficiently by the Midterm Evaluation Team from Japan regarding the progress of the project. Many other experts of TVTO attended the seminar of CBT approach, presented by Roger De ZILWA and Kevin JACKSON, held on 9th December 2009 for the purpose of disseminating this approach. In order to take more effective measures to disseminate in the 2nd pilot course, Mr. HATAMZADE, the Deputy of Training, Mr. LARI, the Technical Deputy of Monitoring and Evaluation, and other CDC experts in CBT, participated in today's meeting.

### **2.1 Introduction by Mr. MOTOMORA**

Mr. MOTOMORA, the Team Leader of the JICA Project Team, continued by introducing Mr. FUJII, from Embassy of Japan, Mr. ASHINO, Resident Representative of JICA Iran Office, different stages of the projects and the persons responsible for each task.

### **2.2. Result of the Evaluation of the 1st Pilot Course**

Mr. SAITO gave the findings of the 1st Pilot Course Evaluation as follows.

#### **2.2.1. Completion course evaluation**

The trainees' completion rate of the 1<sup>st</sup> pilot course was 96% because one of the trainees did not complete 2 units of competency. The trainees' dropout rate was 14.3%, as 2 trainees out of 14 dropped out from the course. One trainee left in the 2nd week because his university courses overlapped with the pilot course. Another trainee left in the 7th week. He did not follow the direction of the trainers, and disturbed the flow of the class and finally he left by himself. The feedback from the trainees showed that the quality of the trainers was highly evaluated (=17.3 (20: very good, 15: bad)). Moreover, the feedback revealed that the trainees were not well informed of the course in advance. This should be improved for the 2nd pilot course. Learning resources and training materials were well evaluated (=15.9 and 14.8) because of the effort of the trainers. They had to use their personal equipment in the workshop, and divide the trainees in groups, assigning them different tasks, in order to overcome the problem of not having enough equipment.

## **2.2.2. Graduate trainees employment situation**

One graduate is employed as auto mechanic in SAIPA official dealership. Two are employed in automotive-related field but not as auto mechanic. One of these two works in the same SAIPA dealership as a receptionist, and the other has a marketing job in a company that produces training equipment for TVTC's. Both of these graduate trainees were found to use the knowledge they had acquired in the course. The graduate trainee, who has a marketing job, is looking for a job as an auto mechanic. 4 graduate trainees are not employed yet: 1 has decided to go to university, one intends to open his own garage, and the other two are still looking for job. 4 other graduate trainees work in the same companies they worked before, and two have been given more advanced tasks in their present jobs.

## **2.2.3. Follow-up survey**

In the follow up survey, which was conducted two months after the completion of the course, the JICA Expert and CPs visited the graduate trainees who have job as auto mechanic, or a related job. The 6 units of competencies were evaluated well based on how the graduates performed them according to the feedback from both graduates and their employers (=3.1 (3: good, 4: very good). In addition the overall satisfaction of the graduates by their employer was good (=3.1). Finally, the employers were pleased with the follow up survey from TVTO and believed TVTO regarded the training very serious.

## **2.3. Proposed framework of the pilot course (2nd cycle)**

### **2.3.1. Venue of the 2nd pilot course**

Mr. NAGUMO stated that the 2nd pilot course would be implemented in TVTC4 based on an agreement with Mr. SABERI, and Mr. FRAHABADI at a meeting reached on 21st December 2009. He also mentioned that a SAIPA workshop should be available since the roof is high enough to install lifts.

### **2.3.2. Content of the course**

21 units of competencies, mostly from certificate 2 in automotive technology, have been selected related to Retail Service and Repair in Automotive field.

### **2.3.3. Course duration**

Course duration will be roughly 3.5 month (1 month course in workshop + 0.5 month industry attachment + 2.5 month course in workshop + 0.5 month industry attachment)

### **2.3.4 Expected trainers and trainees**

The same trainers from the 1st pilot course are expected to be trainers for the 2nd pilot course and the trainees are expected to be novice although this matter needs to be further discussed. The number of trainees is about 10-15.

### **2.3.5. Schedule of the 2nd pilot course**

The needs survey for the 2nd pilot course was conducted, the result of which led the selection of the skill set for the 2<sup>nd</sup> pilot course. Identifying the equipment should be done in February.

Procurement of the equipment should be done in March and April. Preparing training materials should be taken place from January to April, the training of the trainers in May, and recruitment of the trainees in June. The course will be implemented from July to September, and the monitoring and evaluation will be conducted from July until October.

#### **2.4. The issues to be addressed for expansion of the model**

Mr. MOTOMORA introduced 5 items to be discussed and requests the participants to share any opinion and suggestions. Mr. DE ZILWA started by explaining the first item.

##### **2.4.1. Fast tracking in selecting the units of competencies from other countries**

Mr. DE ZILWA mentioned that the expectation is that the core training in technical fields is the same in all countries. In Australia, it has taken 25 to 30 years to develop competency standards with what has been referred to as CBT approach. And if the units of competencies are selected from Australian training package, and validated by industry personnel, they will be suitable to be used in training in Iran, and it is believed that this assumption is valid because the IRG that have been formed with TVTO, have selected 21 units, leading to a job, out of the units of competencies of Australian automotive training package.

##### **2.4.2. Establishment and operation of IRG**

Units of competencies should come from appropriate industry personnel, so called IRG. IRG needs a coordinator from TVTO who is himself an expert in the field. Also, clear instructions for the establishment and performance of IRG should be provided.

##### **2.4.3. Qualification/certification level**

The qualification/certification should not be based on the duration of the course, but on the job expectation so that the employer knows what to expect from the graduate with confidence and the graduate knows what he should be expected from the employer with confidence.

##### **2.4.4. Reinforcing the training**

In order to implement the course, some points should be taken into consideration. One is the level of the trainer who should, at a minimum, be familiar with the units he wants to deliver. The other issue is that if the training is expected to be at the same level of the industry standards, the equipment should be at that level too, and since technology is moving at a very fast pace, no training organization, even in other countries, is able to keep its level of equipment up to date. It is important that the training organizations form partnership with industry and where training cannot be provided because of lack of equipment, the training takes place in industry. Another issue is that the expectation of industry is always high and it expects training related to all types of new cars. Although this may not seem to take place, some credits, from the units of competencies covered, could be transferred to work place, so that the graduates do not have to go over the same units again.

##### **2.4.5. Redeveloping Quality assurance and continuous improving system**

Mr. SAITO continued to address the issue by pointing to the fact that he realizes that TVTO presently has a Monitoring and Evaluation (M&E) system. However, since the focus of M&E in CBT approach is different, another system of Quality Assurance and a continuous improving

system are required to be developed in TVTO and TVTC level. The M&E conducted by the trainers revealed that they are fully capable to analyze feedback data and provided that they are given appropriate evaluation tool and sustainable guidelines, they are able to conduct that far better. The guidelines should clearly define performance criteria with indicators.

Mr. SABERI continued here by introducing the participants who had just joined the meeting and mentions that KOICA project counterparts would join JICA Project with arrangements done with the Training Department.

## **2.5. Q&A Sessions**

Mr. HATAMZADE, the Deputy of Training in TVTO requested Mr. NAJIBZADE, based on the fact that TVTO's goal is to develop and disseminate this model in all its training management, to mention 3 good points in this project that is not done in TVTO projects to which Mr. NAJIBZADE did not give a clear answer later on.

Mr. HATAMZADE also mentioned that TVTO surveyed 15,000 graduate trainees. According to their statistics, 22% were employed, while 25% trainees were employed in this project. He wants to know if the 3 % difference between these two figures is the result of differences in the approach.

Mr. SAITO answered that the pilot course included only 6 units of competencies that do not make up a skill set comparing to TVTO courses that lead to a job. Mr. DE ZILWA further explained that these 6 units of competencies have been selected from a total 33 units of competency from automotive training package. The employment rate surprised him since these 6 units are too few to lead to a job, and the course aim was to develop a model, but not employment. 2nd pilot course, with 21 units of competencies, is expected to provide much better results.

Mr. HATAMZADE added that if the statistics are not objective, the results should not be mentioned. Mr. MOTOMORA added here that TVTO conducted follow up survey for 15000 graduates, while the Project conducted it for only 12 graduates and therefore those two figures cannot be compared simply. The statistics are not so important, but the experience and lessons learnt are important in this piloting concerning the implementation process.

Mr. SHAMS mentioned that in the slides, the question "Who should the JPT talk to?" was seen. He wanted to know if a managerial issue, out of the meeting issues, exists.

Mr. De Zilwa replied to this question that the important thing is a system with ongoing sustainability and to reach this end, managers in advanced levels should be talked to in order to convey to them the findings and the lessons learnt.

Mr. SHAMS asked again if there were any inefficiency in what the trainers had to do since the trainers' assignments are clearly shown in the table and everybody know who to talk to in the managerial level.

Mr. DE ZILWA responded that the counterparts have been very effective so far in the pilot course as a micro level and with related methodology. However, as the model will be implemented in a much wider scale in the future, the issues of both positive effects and risks should be transferred to managers' level. If TVTO prefer the direction which the Project leads, manager level should be involved.

Mr. SABERI added that the project is like an embryo and it is growing. The managers invited

should be involved so that the strengthening of TVT management can be focalized, and he hoped that with the Deputy of Training and the Deputy of Advanced Skills, the next phase of the Projects will be implemented much well than the first phase. He then mentioned that Mr. AZAD, the ex-technical supervisor of the Project, was retired and Mr. FARAHABADI is presently the technical supervisor of the Project, and because of his job background as industry supervisor in CDC, he has a good understanding and relationship with industry, which helps the project to develop more relationship with industry.

Mr. LARI asked 1) how the "learning resources" were highly evaluated, 2) what does "due to the effort of the trainers" mean and 3) how this leads to a higher evaluation.

Mr. SAITO replied that the evaluations came from feedback from the trainees only, and not from industry. However, some trainees, who evaluated the training equipment well, changed their opinion after they started working.

Mr. LARI then asked if the content of the 1st pilot was proved to be suitable before delivery.

Mr. SAITO answered the 6 units of competencies cannot be said to be good since they are not a skill set, but the elements of each can be said to be good. Mr. DE ZILWA also agreed that these 6 units together cannot be said to be good or not, but the content of each was related to the Iranian industry.

Mr. LARI also cast doubt on the statistical figures saying that they cannot be proved. Mr. SAITO responded that these were only 6 units of competency and the evaluation is not the evaluation of the course but piloting M&E method with a new approach. He continued that these figures are actual figures resulted from trainees feedback. Mr. LARI asked if Mr. SAITO accepted that the figure did not have credit. Mr. IMANI interrupted that the figures are real and the graduates can be visited anytime in case there is a doubt. He also agreed that the method of doing this was important. Mr. MOTOMURA here mentioned that the goal of the pilot was not evaluation but the how to disseminate new approachset is important since the pilot course was focused on only a micro level so far, and that the result of 15000 trainees cannot be compared to 12.

Mr. LARI then asked if the content of the course was validated or not, but he said the JICA Project Team can answer him later. Also, he wished to know how the trainees' level was evaluated.

Mr. DE ZILWA replied that the trainees' competency was assessed constantly upon the fact that if they can perform the task or not by the trainers. He then differentiated between evaluation and assessment. The former is done from outside of the system and is the evaluation of the system and methodology. The latter is done by the trainers. But if the trainers' level is the industry standards, and if the instructions are not clear enough or they do not have related tools, assessment will face problems and that is why it has been addressed as an issue and needs to be discussed.

Mr. SABERI requests Mr. FARAHABADI to invite Mr. LARI to join technical committees for more discussions.

Mr. KHALILZADE requests that the trainees should not be left alone after the pilot course and they should be involved in the next pilot courses so that they become full mechanics. He then gave some accounts of the midterm evaluation and follow up survey and how the counterparts conducted them.

Mr. NAJIBZADE mentioned that enough budgets should be allocated to TVTC so that they do

not face problems during the 2nd pilot course, and that the workshop should be well equipped before the course starts.

Mr. SABRI answered that this should be discussed in a meeting with Mr. FARAHABADI and the JICA Project Team should hand in their requests in advance so that TVTO has enough time to procure them. He also requested Mr. SHAHRAKI to join the technical committees as a representative. Then he asked the JPT to decide the agenda of at least the next 5 technical committees so that he can arrange for the presence of the related manager based on the issue to be discussed in the session.

Mr. SHAHRAKI asked if it would be possible that TVTC7 can be used for pilot courses in the future since this center is designated for automotive. Mr. SABRI answered he would think about this matter later.

Mr. ASHINO mentioned that this is an important meeting since activities of the first half of the project was discussed, and the next half of it was reviewed. His concern was sustainability of this new approach after the project. By the end of the project, 2 pilot courses have been implemented and manuals will have been developed but the important thing is the strengthening of the TVT management, and more managerial involvement should be encouraged for the consistency of the findings after the end of the project.

Mr. SABRI concludes the session by saying that in joint projects, mutual consensus is necessary, and the requirement is that it should move through expertise channel. Presently the technical committees are conducted by trainers, and some more will be added to them. He said there is still not the same understanding in the technical aspect by the two sides. This does not mean there is problem in the activities but that they need more explanation. The meetings like JCC are welcomed to be held every season to convey the findings. Mr. FARAHABADI is the technical supervisor of the Project and any related issues should be referred to him. Ms JAYMAND is the coordinator and has been relocated temporarily to CDC building for smoothing of the progress of the project. Another point is that any correspondence should be sent to Mr. SABRI first as the project manager and he will send these letters or other things to related people.

-END-

18th February 2010

## Minute of Meeting

Meeting at CDC Meeting Room

on 17<sup>th</sup> February 2010 as Weekly Meeting between JICA and CDC

### 1. Attendance

CDC	3	Mr. Ramak FARAH ABADI, Mr. Ebrahim KHALILZADE Ms. Parisa Jaymand
JICA Project Team	6	Mr. Roger DeZilwa, Ms. Nakako Ishimaru, Mr Imani Parviz, Ms. Maryam AKBARI, Mr. Ramin BAGHER, Ms. Sara JAFARI

### 2. Discussion

#### Importance of cooperation with Industry for the 2nd Pilot Course

Mr. Farahabadi and Mr. Khalilzadeh mentioned that Air Toya Company wanted to have a meeting with JICA that could be in the next week.

Roger stated that it is not useful just to have meetings, but the CPs should meet with the industry representatives and explain the project objectives, the CBT approach, the UCs and the expected results in the 2nd pilot course. Also, according to Mr. Imani, the industry companies have approved UCs. Moreover, in the last 2-3 months of the 1st pilot course the content and units of pilot 2 were discussed with the IRG and some of the IRG members had recommendations regarding the technical issues in the UCs. Mr. Imani stressed that the importance to start visiting the Industry regularly from now on.

#### Report on Refreshers' course

Roger reported the refresher course in the last week. He was satisfied with the progress of the CPs and asserted that after finishing the project we will have certainly 4 and hopefully 8 CPs who will have a good understanding of the CBT concept, and this will have good results for TVTO.

#### Procurement of Equipments

JPT have got the list of equipments in TVTC 4, based on which the New Automotive expert from Australia is going to send his version very soon. On the other hand, based on the letter from Mr. Ssaber, the CPs are supposed to make suggestions if any by studying the WBs.

Ms. Ishimaru remarked that TVTO will be informed about Ed's suggestions. She also reminded about considering the procedures and deadlines for procuring the equipments to prevent the future problems.

Mr. Farahabadi promised that the procedures will be done very soon.



### **Work plan for the Customization of UCs (Translation and Development of the WBs)**

Ms. Ishimaru referred to the schedule of CPs' assignments and the list of UCs and CPs' responsibilities for each unit. She maintained that at this moment the concentration is on translation of the WBs. Furthermore, she mentioned that this assignment is part of the CBT approach customized to Iran, and also part of the process of strengthening the capabilities of the CPs as explained by Roger referring to the refresher course. Thus, the objectives of translation assignment are both to prepare for the 2nd pilot course and to increase the capabilities of the CPs. In this regard, the estimated bulk of translation for each CP is 150 pages, including pictures and tables.

It was asserted by JPT that because translation is part of the customization process in Iran and that the CPs may use Iranian resources for developing their own curriculum.

Mr. Farahabadi confirmed that Ms. Jaymand in CDC would monitor the progress of the CPs' assignments.

In the next weekly meeting with CDC on 24<sup>th</sup> February, the counterparts will join to report the progress of their work.

-END-

## Minute of Meeting

Meeting at CDC Meeting Room on 22<sup>nd</sup> May 2010 for a periodical meeting

### 1. Attendance:

CDC	2	Dr. Khanifar, Mr. Hakimpour
JICA Project Team	6	Mr. Motomura, Mr. Nagumo, Mr. De Zilwa, Mr. De Gabriele, Mr. Imani, Mr. Bagher

### 2. Discussions

#### Major Tasks in this Fiscal Year

- Mr. Motomura addressed the session about the introduction of CBT and how it is going to be conducted by the Project in this fiscal year. The main components of project implementation described as '*the tools*', '*human resources*' and '*institutional improvement*' were discussed and made clear.
- Dr. Khanifar acknowledged the importance of these components and confirmed that the 'CBT Working Committee' will be formed to enhance the process of introducing CBT in TVTO in this fiscal year and beyond.

#### Schedule of this fiscal year

- The time table of the Project was presented and discussed.

#### Issue to be addressed

- The JICA Project Team (JPT) reminded CDC about provision of a project office in CDC for the JPT and Dr. Khanifar assured the JPT that it will be provided the day after the meeting (23<sup>rd</sup> May).
- The JPT mentioned the equipment needed for the second pilot course. Mr. IMANI provided Dr. Khanifar the information of the budget allocated to the Project and Dr. Khanifar assured that he would personally attend to this issue.
- Dr. Khanifar suggested that the Project could implement the course at ITC rather than at TVTC No.4. He mentioned that after getting the confirmation from ITC and the JPT, he can arrange for the establishment of the project in ITC. Dr. Khanifar consulted Dr. Ghofrani on this matter by telephone on the spot and it was decided that the JPT and CPs will carry out the pilot course at TVTC No. 4 and the JPT works both in the office within TVTO and a new office in CDC.
- The issue of providing lunch for both the trainers and the trainees during the pilot course was discussed. Dr. Khanifar mentioned that 25 meals would be provided for the trainers and the trainees when the pilot course starts.

- The JPT requested that the CPs would fully assigned to the JICA Project. Dr. Khanifar promised that it would be considered as a high priority. It was noted that with the supervision of Mr. Imani they will be fully assigned to the JICA Project.
- Lack of office equipment was addressed as an issue. It was mentioned that the CPs are in dire need for keyboards, mouse and IP addresses. Dr. Khanifar acknowledged these issues and mentioned that they are expecting the delivery of the equipment and that full connectivity would be established as soon as possible
- Finally JPT referred to the last agreement between JICA and Mr. Fara Habadi about the typing of trainee workbooks. Dr. Khanifar reassured the JPT that CDC will provide typing assistance for the JICA project.

-END-

24 May 2010

## Minute of Meeting

Meeting at Dr. Ghofrani's room on 24th May 2010

### 1. Attendance:

TVTO	1	Dr. Ghofrani,
JICA Project Team	4	Mr. Motomura, Mr. Nagumo, Mr. Imani, Mr. Bagher

### 2. Discussions

- Mr. Motomura reminded Dr. Ghofrani about provision of a project office in CDC for the JPT. Dr. Ghofrani mentioned that he has provided his own personal room in CDC and he will attend the faster process of the moving of furniture.
- Mr. Motomura mentioned the necessary equipment for the second pilot course. Mr. Imani provided Dr. Ghofrani the information of the budget allocated to the Project and Dr. Ghofrani assured that he would personally attend to this issue.
- Dr. Ghofrani repeated Dr. Khanifar's original suggestion that the Project could implement the course at ITC rather than at TVTC No.4. He mentioned that it would be more beneficial for both parties due to the better atmosphere and facilities in this center. However, he mentioned that this matter should be consulted in the Consul of Managers and then decided and in this decision making process the perspectives of JPT will be accounted.
- Mr. Motomura mentioned that although he recognises the advantage of using ITC, he believes that TVTV No.4 will be more suitable for implementing the pilot course considering the objective of the Project.
- Both parties agreed to continue discussion on the pending matters at later occasions.
- Mr. Motomura invited Dr. Ghofrani for a dinner. Dr. Ghofrani mentioned that he will try his best to attend.

## Minute of Meeting

Meeting on 25<sup>th</sup> August 2010 at Deputy of Technical and Training Office

### 1. Attendance:

ITC: 1 Mr. Bajulvand

JICA Project Team 5 Mr. NAGUMO, Mr. DeGabriele, Mr. IMANI, Mr. SAITO, Ms. JAFARI

The JICA Project Team (JPT) presented CBT implementation strategy in ITC to Mr. Bajulvand and the main points were discussed as follows:

تیم پروژه جایکا (JPT) استراتژی اجرای سیستم CBT در مرکز تربیت مربی (ITC) را طرح کرد و نکات اصلی آن را مورد بررسی قرار داد:

### About Working Committee:

### کمیته کاری:

- We will start the working Committee with automotive areas, since current CPs are available to expand CBT through ITC
- As for the Working Committee members, Mr. Bajulvand suggested the Head of Pedagogy instead of the Deputy of Logistics and Administration. His suggestion was accepted by the JPT. The revised members are;
  - Deputy of Technical and Training
  - Head of Pedagogy
  - Deputy of Research and Planning
  - Head of Instruction
  - Selected representatives from JICA counterparts
  - Anybody else that this group feels would add to the successful operation of the Committee
- The first Working Committee meeting will be organized on 4<sup>th</sup> September 2010 (13 Shahrivar 1389), 10:00 AM. Invitation letters will be sent to the committee members.

- ما کمیته کاری را در بخش اتومبیل آغاز خواهیم کرد، زیرا بسط و گسترش CBT در ITC توسط مربیان کنونی امکان پذیر است.
- آقای باجولوند پیشنهاد کردند تا جهت اعضای کمیته کاری، رئیس پداگوژی (علوم تربیتی) جایگزین معاونت اداری و پشتیبانی شود. پیشنهاد ایشان مورد پذیرش JPT قرار گرفت. اعضا پس از تجدید نظر به شرح ذیل می-باشند؛
  - معاونت فنی و آموزش
  - رئیس پداگوژی (علوم تربیتی)
  - معاونت پژوهش و برنامه ریزی
  - رئیس اداره آموزش
  - نمایندگان منتخب از مربیان ایرانی همکار پروژه جایکا
  - هر فرد مسئول دیگری که این کمیته برای اجرای موفق-تر اهداف خود لازم می-بیند
- اولین جلسه کمیته کاری در تاریخ 4 سپتامبر 2010 (13 شهریور 1389) ساعت 10 صبح

## About CBT Workshops for ITC Trainers:

- The CBT workshops will be implemented by CPs for 40 ITC trainers. (2 groups of 20).
- The general training course of CBT methodology will be started on the last week of Ramazan for 3 days (5, 6, 7 September 2010) for the first group and on the following week for the second group. The time of the workshops will be from 8:00 am to 1:00 pm.
- To change recruitment of trainers: new trainers coming to the system (ITC) will ideally have industry experience

End-

## کارگاه آموزشی CBT برای مربیان ITC:

- کارگاه آموزشی CBT توسط مربیان ایرانی پروژه برای 40 مربی مرکز تربیت مربی (در 2 گروه 20 نفری) تشکیل خواهد شد.
- دوره آموزشی عمومی (شناخت اصول و روش CBT) در هفته آخر ماه رمضان به مدت 3 روز 16، 15، 14 شهریور (89) برای گروه اول و هفته دوم برای گروه دوم تشکیل خواهد شد. زمان کارگاه ها 8 صبح تا 1 بعدازظهر می باشد. سایر پیشنهادات:
- تغییر در شیوه جذب مربیان، بدین معنی که مربیانی که از این پس وارد سیستم ITC می شوند دارای تجربه صنعتی باشند

## **Minute of Meeting**

Meeting on 4<sup>th</sup> September 2010 at Deputy of Technical and Training Office

### 1. Attendance:

ITC: 3 Mr. Bajulvand, Mr. Mokarami, Mr. Karimi

JICA Project Team: 7 Mr. NAGUMO, Mr. DeGabriele, Mr. DeZilwa, Mr. IMANI, Mr. SAITO, Mr. BAGHER, Ms. JAFARI

TVTO: 2 Mr. RAFATI, Mr. KHALILZADEH

### **The Roles of Working Committee**

JPT suggested the roles of working committee as follows:

- 1) Selection of additional committee and sub-committee members to take responsibility for specialist areas
- 2) Conducting workshops for ITC staff in CBT methodology and implementation
- 3) Selecting departments and individuals to participate in CBT
- 4) Provide policy input/advise to TVTO in relation to implementing CBT methodology nationally.

Both parties agreed the above roles in principals. In addition to the above, ITC showed their interest to discuss on how to improve trainers' industry attachment training in the committee.

Especially 4) Provide policy input/advise to TVTO in relation to implementing CBT methodology nationally was discussed further. The following shows points of further discussion in the meeting.

- ✓ CBT system is a national approach to be formed within National Skills Organization and the system of developing competency standard should be changed for CBT system from current system, in which developed by CDC in TVTO.
- ✓ However the role of ITC is limited. ITC can provide leadership to trainers in all over the country, but does not have authority to develop competency standards and just follow competency standards developed by CDC. In other words, ITC can only advise by transferring knowledge and methodology to TVTO, but not establish policy.
- ✓ To strengthen this role of the committee, the followings were suggested;
  - Submit a project report to the new TVTO president. Mr. Motomura can do this in his next assignment;

- Mr. Teymouri can explain importance of CBT implementation to the new TVTO president (Mr. Pour Abbas).
- Strengthening linkage between CDC and ITC through CPs, who belongs to CDC and will be able to participate in the committee as representatives of CDC before and after completion of the project.

### **Other discussions**

- It was suggested by Roger that having the experience of Australia in mind, continuing the project up to certificate 3 and diploma it can be illustrated better how to expand CBT.
- It was suggested by Mr. Bajoulvand that the Committee can make documentation so that ITC can use it after completion of the project
- One of the functions of the Committee can be to implement CBT in provinces
- Better to purchase other training packages from Australia, to make ITC trainers to use it and to have industry attachment before JICA experts leave Iran

### **Selecting departments and individuals to participate in CBT**

- It can be suggested that ITC, Deputy of Training and Deputy of Research and Planning work together so that defining duties for ITC and other deputies will pave the way for implementation of CBT nationally.

### **Workshop**

- JPT will organize the workshop, upon request from ITC, about CBT methodology and implementation for the 1<sup>st</sup> batch ITC trainers (around 20 trainers) for three days (5<sup>th</sup>, 6<sup>th</sup> and 7<sup>th</sup> of Sep 2010), from 8:30 AM to 1:00 PM.

### **Schedule of Meeting**

- We shall organize the meeting every Saturday from 10: 30 AM to 12: 00 AM.

-End



## Minute of Meeting

Meeting on 6<sup>th</sup> September 2010 at TVTO

Attendance:

TVTO: Dr. GHOFRANI

JICA Project Team: Mr. NAGUMO, Mr. IMANI, Ms. JAFARI

### 1. Progress of the Project

- Mr. Nagumo submitted Dr. Ghofrani both the final version of the third progress report and the summary of the monthly report for July 2010 in Farsi. Mr. Nagumo also explained the progress of the project.

### 2. Schedule of the Project

- Mr. Nagumo explained to Dr. Ghofrani about the schedule of the project as follows. Dr. Ghofrani confirmed the schedule.

#### ✓ **Manning Schedule of Experts:**

Mr. Toru ISHIBSHI:	9 <sup>th</sup> Sep - 15 Oct
Mr. Yuichiro MOTOMURA:	16 <sup>th</sup> Sep - 23 <sup>rd</sup> Sep
Ms. Nakako ISHIMARU:	27 <sup>th</sup> Sep - 26 <sup>th</sup> Nov

Dr. Ghofrani agreed to arrange a meeting between TVTO president and Mr. Motomura during his stay, 19<sup>th</sup> to 21<sup>st</sup> September 2010.

- ✓ **JICA Terminal Evaluation Team from Tokyo, Japan:** The team will visit TVTO from 24<sup>th</sup> of October to 2<sup>nd</sup> of November to evaluate the Project. JPT will submit their detailed schedule to Dr. Ghofrani.
- ✓ **Joint Coordinating Committee (JCC) Meeting between JICA, TVTO and JPT:** Dr. Ghofrani agreed to have JCC meeting on 1<sup>st</sup> November 2010.

### 3. Counterparts

- Dr. Ghofrani agreed that the CPs would stay at ITC one week more after the completion of the pilot course so that they would work with Mr. Saito on monitoring and evaluation.
- The CPs will have weekly meetings with Mr. Saito for two weeks after they come back to Tehran.

### 4. Working Committee

- The first W.C. meeting was held on Saturday 4<sup>th</sup> September 2010 and will be held regularly every Saturday at 10: 30 AM.
- Dr. Ghofrani agreed that he and Dr. Khanifar would attend the next W.C. meeting; however, since it is still tentative in Iran Parliament to announce the next Saturday as national holiday, in case of being a holiday JPT will notify Dr. Ghofrani of the postponed date.

## **Minute of Meeting**

The 2<sup>nd</sup> Working Committee Meeting on 18<sup>th</sup> of September 2010 at ITC

Attendance:

ITC: 1 Mr. BAJULVAND

JICA Project Team: Mr. MOTOMURA, Mr. NAGUMO, Mr. IMANI,  
Mr. DEZILWA, Mr. DEGABRIEL, Mr. ISHIBASHI,  
Mr. SAITO, Ms. JAFARI, Mr. BAGHER

Presentation of the proposed “Plan for sustainable expansion of CBT” was done by Mr. ISHIBASHI (See the attachment). The main issues discussed include:

- The Project has been conducting the pilot training course for half of certificate 2. Another half is supposed to be accomplished in 2011 by TVTO.
- JPT explained that JPT developed the Manual and the last part of the manual includes plan, role and responsibility of each section in TVTO regarding CBT implementation. JPT also explained that TVTO can implement higher-priority training such as building construction after auto motive.
- Mr. Bajulvand suggested that an internal monitoring team rather than the CPs who had been involved in the delivering the course should monitor both the pilot training course and the Project itself to identify problem instantly.
- Replying to this suggestion, JPT explained that what CBT system could apply for the text is industry feedback: whether or not a trainee achieved a competency.
- Mr. Bajulvand the 3 CPs will most probably fail to sustain CBT
- Mr. Bajulvand suggested including other organizations to sustain CBT and encourage competition among them. That will help better quality of the project. We have only three CPs now and if one CP leaves, the whole effort will be failed.
- Mr. Bajulvand promised to explain to the representative of TVTO president and Mr. Khanifar that due to a number of problems including relocation of the Project from TVTO to ITC and not enough sections being involved now from TVTO, TVTO need to consider how to sustain the outcome of the project, that is, ITC will make a proposal to TVTO for one year extension of the project,
- Mr. Bajulvand requested JPT for organizing a CBT seminar for trainers of private institutions, in order to expand the CBT system beyond the governmental

organizations. Both parties agreed to organize the seminar after 5<sup>th</sup> November 2010.

- For a good report about the project, Mr. Bajulvand needed all documents of the project including the initial agreement between JICA and TVTO in order to discuss the issues in his meeting with Mr. Khanifar. Mr. Nagumo will have a meeting with Mr. Bajulvand to give him a brief explanation for each document.

Other Issues:

- Mr. Bajulvand referred to the meetings he had with JICA Iran office in which it was proposed by JICA Office to conduct training in Afghanistan and the border cities. ITC is waiting for the result.
- There were 6 courses proposed by Japan Government to be conducted in Iran based on training needs of the country especially in building construction. The correspondences were done and ITC wants to know about the final decision.

## **Minute of Meeting**

The CP Meeting was held on 26<sup>th</sup> of September 2010 at ITC

Attendance:

ITC: 1 Mr. BAJULVAND

JICA Project Team: Mr. NAGUMO, Mr. IMANI,

The main issues discussed include:

- **IRG Meeting:** Both parties agreed that JICA Project Team (JPT) will organize Industry Reference Group (IRG) meeting from 11 AM to 12:30 on 29<sup>th</sup> Sep (Wed). Mr. BAJULVAND accepted to request Mr. Teimoori to attend on it. Proposed agendas from Mr. Nagumo were 1) report of the second pilot training course; and 2) present the Manual.
- **Presentation of the Manual developed by the Project:** Mr. Nagumo explained the composition of the Manual developed by the Project to Mr. Bajulvand. Both parties agreed to organize a meeting for JPT to present the Manual to TVTO key stakeholders. The tentative schedule is 6<sup>th</sup> Oct (Wed). JPT requested Mr. Bajulvand to invite Dr. Ghofrani, Mr. Khanifar and Mr. Teimoori to attend. Mr. Bajulvand accepted to invite them. Mr. NAGUMO submitted the draft version of the Manual to Mr. Bajulvand.
- **JICA Terminal Evaluation Team:** Mr. Nagumo submitted the tentative schedule of the JICA Terminal Evaluation Team. He also explained the history of the Project in detail, showing the Record of Discussion (R/D) and Minute of Meeting (M/M) signed on April 2007 and Minute of Meeting on Midterm Evaluation signed on December 2009.
- **A CBT seminar for private management division:** Both parties confirmed to organize this seminar after 6<sup>th</sup> November. The number of participant will be more than 200. Mr. Nagumo will discuss with other members of JPT how many days are appropriate for this workshop. The content is general CBT induction course.

End

## Minute of Meeting

Meeting at 17th October 2010 at ITC

### Attendance

ITC: 1 Mr. BAJULVAND, Mr. MOKARAMI (Research & Planning Department) , Mr.EMADI(Instruction Office)JICA Project Team:  
Ms. ISHIMARU, Mr. IMANI, Ms. JAFARI, Mr. BAGHER

- **Lobby on CBT approach:** Mr.Bajorvand shared that the efforts he has taken to report to President on the importance of CBT approach and JICA project has made fruits. He also had a presentation at the national seminar on TVT held at ITC last weekend, which had good attentions from the participants.
- **Audio-visual documentation of Project:** Mr. Karimi and Mr. Bajulvand suggested making a video of the results and progress of the project. It will include the interviews with the trainees and stakeholders and shows a visual concise documentation from both pilots 1 and 2. The objectives are: to make a better documentation of the project for future references, to provide a better understanding for the managers, and to enable ITC (Mr. Bajulvand) to connect the present project with the previous ones, e.g. the multimedia JICA project.
- **Final Review Mission:** The request letter to TVTO from JICA's for arrangement was received and referred to Dr. Rostami. For the preparation of this, Dr.Rostami is planning to have a meeting on 19<sup>th</sup> October asking for the attendance by all the stakeholders of JICA project team. Mr. Bajulvand suggested to have a meeting with JICA Team one day ahead, reviewing the problems and obstacles that the project team had to encounter, things that distorted the genuine objectives foreseen from the initial stage.
- Mr.Bajorvand refers the name of Chief Adviros, Dr. Parand as the person closely work with President right now.
- It was suggested whether JPT would present the problems within TVTO management and training system:e.g., why TVTO is still following its old ways of making standards and why people in charge did not accomplish what they were supposed to do.
- Ms. Ishimaru suggested that it would be more effective to mention about the progress of the project in the given conditions. Also, the section in the manual for recommendation for future plans and for expansion of CBT system will be useful.
- Mr. Bajulvand held that discussing the shortcoming will be a lesson for future projects, so that there will be a clear understanding in regard for the appropriate venue for training projects.
- **Seminar on CBT system in November:** The scheduled was confirmed as 7<sup>th</sup> November 2010 (16 Aban 1389). The seminar is aimed for private training institutions at ITC, and the expected number of participants would be 60, not 200 as

planned originally. The program will include the whole CBT process from the standards-making to evaluation.

END

## Minute of Meeting

Meeting at 6<sup>th</sup> November 2010 at ITC

### Attendance

ITC: Mr. BAJULVAND, Mr. KARIMI (Research & Planning Department) ,  
Mr.EMADI(Instruction Office)

JICA Project Team: Mr.MOTOMURA, Mr.NAGUMO, Mr.DeZilwa, Mr.DeGabriele, Ms.  
ISHIMARU, Mr. IMANI

- **Lobby on CBT approach:** Mr.Bajorvand reported that Mr.Parand, Deputy of Training of TVTO, has been informed of the JICA project and about the CBT approach.
- **ITC's plan for the future:** ITC is now planning to implement the training course for the remaining 10 UOC in the coming month. It is scheduled that 11 instructors for each speciality will be selected to be responsible for each UOC. Along with ITC, the counterparts of JPT (3 instructors) will supervise the process of operation. ITC asked the JPT members for a few experts to extend their stay for further supports. In this regard, ITC asked about the current status of workbook development for the remaining 11 UOC and estimated time necessary for translation/development of workbooks.
- **Suggestions by JPT for the plans of ITC:** Mr. Motomura appreciated the initiatives of ITC for the future plan. However, he also clearly mentioned due to the conditions of contract between JICA and PADECO, no experts can extend their stay as of now. Thus, it is highly recommended that ITC submit an official request letter for further supports with concrete specification of request to JICA. He also mentioned that in case ITC would take such supports considered as needed seriously, he could convey the message to Mr.Konishi and the director of JICA HQ when he meets them on 16<sup>th</sup> November. In addition, Mr. DeZilwa noted that for these plans to be successful, the considerations and appropriate arrangement for administrative supports to the instructors are crucial as well. Mr. Saito and Mr.DeGabriele also emphasized that it is important that ITC will provide opportunities to assess the competencies covered in the second Pilot Training Course since some of the trainees seemed to develop the competencies which had not achieved as of the training duration.
- **CBT video production:** Based on the suggestions by Mr. Karimi and Mr. Bajulvand, it is reported that JPT has started discussions with the video director of ITC. Rather than making a general introduction of CBT, the video would include more practical aspects such as how to implement CBT. The program is consisted of five (5) parts:

CBT definition; first-track approach; development of curriculum; establish quality assurance system (Monitoring and Evaluation); and implementation in Iran. Mr.Motomura commented that since this development of video production idea by using the facilities assisted by JICA in past would be greatly welcomed by JICA if it'll be referred in the request letter by ITC.

- **Schedule:** The series of schedule were confirmed: CBT induction seminar for the private training institution on 7<sup>th</sup> November 2010 (16 Aban 1389); JCC on 10<sup>th</sup> November 2010. ITC suggested having a closing ceremony, scheduled on 14<sup>th</sup> November tentatively (to be informed to JPT with the details).

END



## Minute of Meeting

Meeting at 7<sup>th</sup> November 2010 at TVTO, 16.40-17.20

### Attendance

TVTO: Dr.Ghofrani

JICA Project Team: Mr.MOTOMURA, Mr.NAGUMO, Mr.DeZilwa, Ms. ISHIMARU, Mr. IMANI, Mr.Ramin

- **Report on Arrival of JPT members:** Mr. Motomura reported the arrival of the JPT members and Dr.Ghofrani welcomed.
- **Preparation of JCC:** The objectives, agenda, and schedule of the Joint Coordination Committee meeting were confirmed. In this JCC meeting, there would be participation of the officials of the Embassy of Japan as well as the JICA Iran office, though the attendances of TVTO side were not predicted as of the meeting. Since the major agenda of JCC is the contents of Final Report, a set of excerpted Farsi translation of Final Report was submitted as an advance information and explained that all the JCC members are expected to read prior to JCC for commentaries. Dr.Ghofrani was noted that he would send the invitation letter for JCC meeting, attached with the copies of the comprehensive version of translation. JPT responded that seven (7) sets of the comprehensive translation would be ready on 8<sup>th</sup>.
- **Schedule:** The upcoming schedule was confirmed as: CBT induction seminar for the private training institution at ITC on 7<sup>th</sup> November; Mr.DeZilwa's briefing on CBT for Dr.Ghofrani at 8.00 am on 8<sup>th</sup> November; and JCC on 10<sup>th</sup> November

## Minute of Meeting

The Working Committee Meeting was held on 13<sup>th</sup> November 2010 at ITC

Attendance:

ITC: 2 Mr. BAJULVAND, Mr. KARIMI

JICA Project Team: 7 Mr. MOTOMURA, Mr. NAGUMO, Ms. ISHIMARU, Mr. DEGABRIELE, Mr. IMAIN, Mr. SAITO, Ms. JAFARI,

The main issue was the plan to expand CBT by ITC. The main points are as follows:

- **Overall Plan:** ITC has a plan to expand the outcome of the JICA Project by implementing remaining units of competency which the Project did not implement in the second pilot training course. ITC will invite around 20 trainers from various provinces to ITC to introduce them CBT approach in TVT training. The design of the plan includes 1) inviting trainers from provinces, 2) introducing CBT approach to them, 3) assigning 1 unit of competency to every two trainers, 4) sending them back to their local TVTCs, 5) having them develop learning materials with assistance from technical translators in their regions, 6) revising the technical content of the training material and 7) implementing them at ITC.
- **IRG:** Mr. DeGabriele suggested ITC should encourage the trainers from the provinces to contact local industries at their place and, if possible, establish local IRG so that they can have consultation with them on process for customizing competency standards, developing curriculum to support training delivery to the prescribed standards and implementation. According to JPT experience of establishing IRG, ITC need to screen IRG members after forming IRG, as it is difficult to have the best membership initially. Also it is important to keep contact with the current IRG members already introduced to TVTO by JPT.
- **M&E:** Mr. Saito suggested gather all the trainers together so that each trainers can gain feedback from others for evaluation stage.
- **Use of Iranian Material:** Mr. DeGabriele suggested the use of some Iranian sources for translation and customization of units of competency and workbooks. However, according to Mr. Imani, almost all of technical workbooks in Iran are translated materials, Mr Degabriele then said that technical material used in workbooks should only be that which is currently used by industry, eg workshop manuals and other industry training materials

- **Use of CPs:** The trainers, who will come from the provinces for the mission of expanding CBT approach in automotive industry sector, will work in cooperation with the project CPs.
- **Use of JICA Experts:** ITC need a support from JICA Experts before they leave and therefore ITC will arrange workshop on 15<sup>th</sup> and 16<sup>th</sup> of November for 20 trainers from provinces to introduce CBT Induction courses.
- **Extension of the Project:** ITC has already submitted that Dr. Ghofrani write a request letter of extending one JICA expert after the termination of the project. Another letter will be also addressed to JICA office in order to accelerate the official procedure.

End

**添付L :**

**CBT導入ワークショップキット**

# CBT Induction Program Objectives

## UNIT 1 *Overview of Australian VET Reform - Background & Context of CBT Application*

### Performance Objectives

At the end of this unit you should be able to:

- Describe the national vocational education and training reform agenda in Australia
- Outline the organizational structure created in Australia to implement TVT reform
- Give reasons for why (or why not) this kind of national reform could be applicable to Iran
- Outline how more industry-relevant training could be achieved on a national level in TVT in Iran

## UNIT 2 *The CBT Approach to Technical and Vocational Training*

### Performance Objectives

At the end of this unit you should be able to:

- Define the purpose of introducing CBT as a useful approach to TVT reform
- Explain the major steps of a systematic, CBT approach to technical and vocational training
- Describe the main features of the CBT model
- Describe the different types of competency standards
- Describe the Australian national qualification/certification system introduced to support national CBT delivery of courses, and explain how it works
- Discuss the positive and negative features of introducing such a model in Iran

## UNIT 3: *Identifying Industry Training Needs*

### Performance Objectives

At the end of this unit you should be able to:

- Describe the main types of needs analyses conducted to develop relevant training programs
- Explain the process already conducted to identify training needs in Australia
- Describe how the experience and achievements in Australia can be used as a basis for developing industry-based curriculum in Iran
- Describe how a needs assessment, using Australian Training package material as a base, can be conducted in Iran

## UNIT 4: *The Training Package Concept of Curriculum Development*

### Performance Objectives

At the end of this unit you should be able to:

- Explain the structure & functions of Australian VET Training Packages with special focus on the Automotive mechanical service & repair sector
- Describe the rules for designing courses using the Automotive Retail Service & Repair Training Package with focus on Inventories, Clusters, Groups and Units of Competency
- Describe a Unit of Competence noting the differences between variations in terminology used in Packages in different sectors and versions
- Select one Unit of Competence and translate into Farsi
- Write up the selected Unit of Competence in a format that would be more appropriate for use in the Automotive mechanical service & repair sector in Iran
- Confirm the information in the selected Unit with relevant personnel in one Automotive mechanical service & repair center
- Amend information to be more relevant and applicable for training in TVT in Iran

## UNIT 5 *Developing a Training Module from a Unit of Competency*

### Performance Objectives

At the end of this unit you should be able to:

- Describe a modular approach to training
- Referring to 1 or more Elements of Competence from the selected Unit of Competence, and following the guidelines of the selected Unit, develop an appropriate training module. (The given template can be used as a guide)
- Explain the concept of Element (task) breakdown
- Describe the process of designing courses comprising appropriate training modules

## UNIT 6 *Developing Training Sessions from a Training Module*

### Performance Objectives

At the end of this unit you will be able to:

- Choose one (or more) learning outcomes from the Elements of Competence in your selected training module that is suitable for delivering one training session, The session must that include both knowledge and skills competency. (The session should be for about 30 minutes duration)
- Plan a training session which includes the following:
  - a) Developing appropriate assessment methods and tools in accordance with the advice provided in the Unit of Competence and the developed Training Module
  - b) Conducting a breakdown of "assessment criteria" to develop training sessions/lessons
  - c) Writing appropriate session/lesson objectives for training sessions
  - d) Structuring sessions referring to key skills, knowledge and attitudes, and arranging the lesson into suitable component parts
  - e) Selecting appropriate training methods/strategies to use to deliver the lesson
  - f) Developing (or adapting/customizing) suitable learning materials/learning resources to support delivery of the lesson

## UNIT 7 *Delivering a CBT Training Session*

### Performance Objectives

At the end of this unit you should be able to describe importance of:

- Preparing the training environment for delivery
- Confirming prior learning of the trainees
- Motivating trainees with appropriate "start-up" strategies and questioning techniques
- Using questioning to maintain logical and sequential flow of the training session
- Catering for individual differences and adopting appropriate "learner-centred" activities to enhance learning

## UNIT 8 *Conducting Training Monitoring and Evaluation*

### Performance Objectives

At the end of this unit you should be able to:

- Explain the importance of maintaining regular and consistent trainee assessment records
- Define the process of training evaluation and explain why the process is important
- Describe appropriate methods of training program evaluation
- Design a suitable evaluation instrument
- Describe what needs to be done with evaluation results
- Discuss the context of training program evaluation in the Iran TVT context and how it can be improved

## UNIT 9 Workshop Assignment Topic - *Present a CBT Session to the Participant Group*

### Performance Objectives

At the end of this unit you will:

1. Translate one Unit of Competence from the Australian Automotive Retail Service & Repair Training Package into Farsi, setting out the various components of the unit in a presentable and accessible way
2. Develop one Training module from your selected Unit of Competence, using the model provided
3. Produce a teaching plan which includes:
  - A task analysis form the UOC
  - Assessment tools
  - Learning outcomes
  - Lesson plan
  - Suitable training methods & techniques.
  - Arrangement of the session
  - Development of appropriate learning resources

CBT Curriculum Development & Delivery Induction Workshop Schedule

9.00	12	1.00	3.00
Day 1	<p><b>UNIT 1 Overview of Australian VET Reform - Background &amp; Context of CBT Application</b></p> <ul style="list-style-type: none"> <li>Describe the national Vocational Education and Training (VET) reform agenda in Australia</li> <li>Outline the organizational structure created in Australia to implement TVT reform</li> <li>Give reasons for why (or why not) this kind of national reform could be applicable to Iran</li> <li>Outline how more industry-relevant training could be achieved on a national level in TVT in Iran (produce a diagram/graphic if possible)</li> </ul>	Lunch	<p><b>UNIT 2 The CBT Approach to Technical and Vocational Training</b></p> <ul style="list-style-type: none"> <li>State the purpose of introducing CBT as a useful approach to TVT reform</li> <li>Explain the major steps of a systematic, CBT approach to technical and vocational training</li> <li>Describe the main features of the CBT model</li> <li>Describe the different types of competency standards</li> <li>Describe the Australian national qualification/certification system introduced to support national CBT delivery of courses, and explain how it works</li> <li>Discuss the pros and cons of introducing such a model in Iran</li> </ul>
Day 2	<p><b>UNIT 3 Identifying Industry Training Needs</b></p> <ul style="list-style-type: none"> <li>Describe the main types of needs analyses conducted to develop relevant training programs</li> <li>Explain the process already conducted to identify training needs in Australia</li> <li>Describe how the experience and achievements in Australia can be used as a basis for developing industry-based curriculum in Iran</li> <li>Describe how a needs assessment, using Australian Training package material as a base, can be conducted in Iran</li> </ul>		<p><b>UNIT 4 The Training Package Concept of Curriculum Development</b></p> <ul style="list-style-type: none"> <li>Explain the structure &amp; functions of Australian VET Training Packages with special focus on the Automotive mechanical service &amp; repair sector</li> <li>Describe the rules for designing courses using the Automotive Retail Service &amp; Repair Training Package with focus on Inventories, Clusters, Groups and Units of Competency</li> <li>Describe a Unit of Competence noting the differences between variations in terminology used in Packages in different sectors and versions</li> <li>Select <b>one</b> Unit of Competence and translate into Farsi</li> </ul>



			<ul style="list-style-type: none"> <li>• Write up the selected Unit of Competence in a format that would be more appropriate for use in the Automotive mechanical service &amp; repair sector in Iran</li> <li>• Confirm the information in the selected Unit with relevant personnel in <u>one</u> Automotive mechanical service &amp; repair center</li> <li>• Amend information to be more relevant and applicable for training in TVT in Iran</li> </ul>
Day 3	<b>UNIT 4 The Training package Concept of Curriculum Development (Continued)</b>		<b>UNIT 4 The Training package Concept of Curriculum Development (Continued)</b>
Day 4	<b>UNIT 5 Developing a Training Module from a Unit of Competency</b> <ul style="list-style-type: none"> <li>• Describe a modular approach to training</li> <li>• Referring to 1 (or more) Elements of Competence from the selected Unit of Competence, and following the guidelines of the selected Unit, develop an appropriate training module. (The given templates can be used as a guide)</li> <li>• Describe the process of designing courses comprising appropriate training modules</li> </ul>		<b>UNIT 5 Developing a Training Module from a Unit of Competency (Continued)</b>
Day 5	<b>UNIT 5 Developing a Training Module from a Unit of Competency (Continued)</b>		<b>UNIT 5 Developing a Training Module from a Unit of Competency (Continued)</b>
Day 6	<b>UNIT 6 Developing Training Sessions from a Training Module</b> <ul style="list-style-type: none"> <li>• Choose an Element of Competence from the</li> </ul>		<b>UNIT 6 Developing Training Sessions from a Training Module (Continued)</b>

	<p>selected training module that is suitable for delivering <b>one</b> training session that includes both knowledge and skills competency. (The session should be for 30 minutes duration)</p> <ul style="list-style-type: none"> <li>• Plan a training session which includes the following: <ul style="list-style-type: none"> <li>g) Developing appropriate assessment methods &amp; tools in accordance with the advice provided in the Unit of Competence and the developed Training Module</li> <li>h) “Breaking down” assessment criteria to develop appropriate training sessions/lessons</li> <li>i) Writing session/lesson objectives for the training session</li> <li>j) Structuring the session referring to key skills, knowledge and attitudes and arranging the lesson into suitable component parts</li> <li>k) Selecting appropriate training methods/strategies to use to deliver the lesson</li> <li>l) Developing (or adapting/customizing) suitable learning materials/learning resources</li> </ul> </li> </ul>		
Day 7	<b>UNIT 6 Developing Training Sessions from a Training Module</b>		<b>UNIT 6 Developing Training Sessions from a Training Module</b>
Day 8	<b>UNIT 6 Developing Training Sessions from a Training Module (continued)</b>		<b>UNIT 7 Delivering a CBT Training Session</b> <ul style="list-style-type: none"> <li>• Preparing the training environment for delivery</li> <li>• Confirming prior learning of the trainees</li> <li>• Motivating trainees with appropriate “start-up” strategies</li> </ul>

			<p>and questioning techniques</p> <ul style="list-style-type: none"> <li>• Using questioning to maintain logical and sequential flow of the training session</li> <li>• Catering for individual differences and adopting appropriate “learner-centered” activities to enhance learning</li> </ul>
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Day 10	<p>Program summary, questions and answers and evaluation</p>		<p>Dissemination Workshop for Training needs Analysis Survey</p>

**Induction Program for  
Developing and Delivering a Competency Based  
Curriculum**

**Overview**

## Technical and Vocational Training Organization

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## **INTRODUCTION**

This document is to be used in conjunction with a participatory workshop. The manual if used without a participatory workshop, is limited in value because it does not sufficiently clarify a number of issues and points.

It is very necessary that people engaged in the process of TVT reform have the opportunity to discuss a number of the concepts of CBT curriculum development and delivery and TVT reform described in the document. It is also important that they have the opportunity to apply some of the recommended approaches and models.

## **FOREWORD**

The term “induction” has been purposely selected. This program is not meant to be a series of academic lectures on CBT and Australian VET reform. It is also not meant to be a “blueprint” for introduction of a CBT system into Iran.

One purpose of the Workshop is to provide information on the background and context of VET reform in Australia and CBT approach was selected as the single, comprehensive approach to this reform. The other purpose is to provide a model of curriculum development and delivery which have has already been developed within the system in Australia, and consider whether this could be feasibly be used to provide for a more industry-driven TVT system in Iran.

A requirement of the workshop participants is that everyone produces a small piece of curriculum (in Farsi) and presents one short piece of training based on the CBT approach. There is an old saying: We remember about 10% of instruction when we listen to it, we remember around 40% when we see it being performed, and over 80% when we actually do (practise) it. So the expectation is that everyone will gain far more appreciation of the approach and alternative models of curriculum development if they have actively participated in the planned activities.

Throughout the workshop I am happy to discuss issues and certainly clarify any points about VET reform and CBT. I am not really interested, at this stage, in either arguing about the acceptability of CBT as a valid approach for TVT/VET, or whether or not it is better than the system that is currently adopted. That is for all participants to decide at a



later date. I am quite prepared to admit that there are other different approaches that have been adopted to solve the problem of providing job-ready trainees, and some of these are probably just as effective or perhaps even more effective.

You may even decide that the system already in place in TVT is either similar or better than the system that we will be discussing. If so, there may be 2 alternatives – ignore the approach and models entirely, or selectively use features from them to enhance the Iranian TVT system.

It is important to remember one of the main objectives of training – to provide people that are able to enter the workforce with as great a degree of “job-readiness” as possible. In the first instance this means preparing people by giving them the technical ability, as well as other attributes, for ENTRY level into the workforce. No one expects graduates from training institutions to enter the workforce with such well developed skills that they can compete with workers who have been in the enterprise for years. It is well known that a substantial amount of the knowledge and skills required to perform the jobs effectively in the workforce need to be learned on the job.

However it is obviously much better for enterprises to recruit entry level workers who are as job-ready as possible. Importantly, it is impossible to identify the knowledge and skills that are needed for job-readiness, on a continuing basis, without actually consulting with people in industry and business (enterprises) about what these requirements are.

In Australia, the initial focus was on providing the knowledge and skills necessary for entry level. As will be discussed later, a great deal of time, money and expertise was directed at setting up a VET system in which Industry is the key player. Now, the effort is also being extended to cater not just for the job entry level, but also for people in the workforce who want to extend their capability. This aspect of VET is generally referred to as *continuing education*. Government-funded education and training providers, known as Technical and Further Education (TAFE) institutes, private providers, known as private registered Training Organizations (Private RTOs) and industry-based providers (Enterprise RTOs) are all committed to delivering needs-based training that:

- Enables people to cope with new technology coming into their workplace
- Change jobs if and when jobs in their sector are lost or diminish (as in the situation currently experienced in many countries)

In this workshop, we will look mainly at the background of VET reform in Australia because it is the system that I am most familiar with. I have also been involved in VET/TVT/TVET reform projects in other countries and will, very occasionally, refer to or make comparisons with the approach adopted there. In most of these cases, such as the Philippines (which is a very good example of how one country's VET reform process and many of its important features can be successfully imported) the model has been very much an adaptive one.

There are many different countries around the world that have been involved in reforming their training systems, and many of them have adopted a CBT approach in implementing this reform. Thus there are models that are discussed and there are many differences in terminology. For example, some people like the Australians refer to the basic curriculum building block as a Unit of Competency. European models refer to "Major Functions", "Functional Modules", "Overarching Modules" and "Areas of Competence".

Terminology is not important and one should not get tied up in the confusion of words. In the Australian system, we do not even use the term "module" anymore because this term was used to describe curriculum before the system was reformed and before CBT was adopted as the main approach to training. In this workshop we will continue to use the word module because it has been used by so many other trainers in other projects – ILO, World Bank etc.

The important thing in all the discussions about the use of CBT method and approach is that the concept is the same. The basic idea is to use a **systematic** approach to identifying the training that needs to be provided, describing as precisely as possible the knowledge, skills (and sometimes even attitudes) that the training participants need to achieve, deliver the training as effectively as possible, assess the trainees to confirm that the trainees can demonstrate everything that they were supposed to achieve and evaluate the whole process to see how it can be improved.

The European Model, for example, as described by Bob Mansfield in his document Competence Based Standards, Training and Learning, is outlined thus:

1. Determine the key purpose
2. Identify the major functions
3. Develop the functional modules

4. Define the areas of competence
5. Develop relevant learning modules

The model adopted in the Australian VET system reflects exactly the same concept as the European one:

- Training Map (far more detailed description)
- Figure on page 6 of Overview)
- Systems (CBT) approach

As you will see, the actual terms used to describe each step (or product) in the sequential process, are different. There is no point in trying to find exact, parallel translations of each term.

The main concept is that:

- it is important to identify, as precisely as possible, the training that is likely to produce the best possible job-read trainees
- break this training down into “manageable chunks” that can be delivered in the most effective and convenient way

## **1. OVERVIEW OF TRAINING REFORM**

### **1.1. What is Vocational Education and Training?**

Vocational education and training (VET) is a commonly used international term that describes the development and improvement of skills and knowledge for the specific purpose of improving a person's capacity to effectively perform a job.

In some countries it is called TVET (technical and vocational education), and in other countries it is called vocational training. In Iran it is called TVT (technical and vocational training).

In most countries, there is generally a lot of overlap between VET and what is called general education. For example, the very important skills of literacy and numeracy are necessary to enable people to perform in any kind of job. Many higher education courses such as Medicine, Pharmacology, Dentistry, Law and so on, train people for very specific areas of work, but the term VET is not generally used to describe higher education courses.

Although there is no clear division between VET and general education, there are a number of points that are very closely associated with VET. They include:

#### *An association with industry*

A major objective of VET is to improve the capacity of people to do a job. Industry, therefore, generally benefits from VET, and improved work capacity can help a company become more productive. Industry is a major stakeholder in VET.

#### *An association with a job or a task*

VET courses are usually associated with particular areas of employment (or tasks) and are different from the more general courses provided by higher education institutes (universities and colleges).

#### *Learning on and off the job*

VET courses often combine off-the-job and on-the-job training. Some courses can be totally job (or work) based, others totally provider (training organisation) based and some mixed.

#### *Skills based*

The main purpose of VET courses is to improve a person's capacity to perform specific jobs or tasks. These jobs or tasks can be broad or narrow, but the key point is that VET courses are designed for particular areas of employment. They provide specific skills that are needed for an area of work. Abstract learning (as in university courses) is not a strong feature of VET. Underpinning knowledge is included for the benefit of improving a person's capacity to work better, to transfer skills (or competencies) from the course to the work situation or from one work situation to another.

While it is difficult to define VET precisely, one can think of it as the sector that is oriented towards:

- Work and employment knowledge and skills
- Industry and productivity
- Learning on and off the job
- Learning in a wide variety of contexts
- Capacity to do the job or task

## **1.2. Factors Leading to VET Reform**

VET has been traditionally the sector for technical and trade training. As new industries such as communications and service industries began to grow, there needed to be much greater industry involvement in training.

In the past decade in many countries, the VET sector has undergone many changes. These changes have been due to:

- globalisation and the need for increased productivity and efficiency to compete with enterprises all over the world
- increased movement between jobs and training
- changes in work arrangements such as increases in part time and casual employment
- growth in small business
- increased demand for multi-skilled employees
- increased demand for flexibility to move between jobs, industries and locations
- new information and communication strategies;
- increased demand for more relevant workplace training.

With all these changes, there has been a greater emphasis on identifying the skills and knowledge needed to undertake various jobs, and the need to develop new and different skills.

## **1.3. Use of Competency Based Training (CBT) in Training Reform**

The concept of CBT emerged in a few countries in the late 1980s. Its main feature in education theory is the principle of an industry-led training system. Previously called “criterion-based assessment and goal-based curriculum”, this approach has been around for some time. Its main advantages are that *specified learning outcomes provide for better teaching practices and more acceptable forms of assessment.*

To deal with the economic and industry changes, it was considered that a competency based approach to training would provide delivery, assessment and certification of skills and knowledge required for effective workplace performance. Individuals would have access to recognized training through more flexible delivery arrangements including on and off the job training, and distance learning through public and private providers.

#### 1.4. The Australian Example

Reform of the Australian VET system came through agreement by Government & industry that CBT should be the main approach for all training.

This agreement led to the concept of *national* competency standards that are developed by *industry*. National competency standards provide the foundation of the national training system. Without competency standards, there would be no real means of setting up and putting into action a national VET system.

Competency standards provide the basis for all VET courses and qualification. They are also the means for common recognition and acceptance of knowledge and skills and qualifications across the country.

VET reform in Australia had its origins in a time of economic crisis. Improved VET was considered essential to allow industry to improve its performance and to be able to compete in the increasingly internationalized economy.

Much of the thinking about VET reform was about meeting the needs of industry as a client and allowing *industry to lead VET in the country*. The mechanism for achieving this has been for industry to specify its own needs through the development of competency standards (and more recently the development of ***Training Packages***).

Another means of for providing industry leadership in the VET reform process has been through industry membership in a number of relevant committees, councils and boards. Government funding set up Industry Training Advisory Boards (now called Industry Skills Councils) for each major industry sector.

The 2 main features of the reformed Australian VET system is that it is:

##### *An open system*

The Government has tried to develop what is known as an open system in the VET reform process; that is a system that allows for a greater range of providers, and for industry and individuals to choose the kind of program that meets their needs.

The open system also allows for public-funded and private providers (or training organizations) to operate within the same system in what is often referred to as a competitive “training market”. The system offers opportunities for registration of private providers, and an increased percentage of Government funding has been made available through open tendering and “user choice”.

##### *A National system*

The purpose of creating the national system is to achieve greater consistency in the recognition of training qualifications. It is also to intend to provide better pathways within the system and between the VET sector and the higher education and schools sector.

The “national” elements that training reform has brought to the VET sector include:

- national industry competency standards
- a national approach towards the recognition of competencies and qualifications
- a national qualifications framework
- a national entry level training system
- national recognition of registered training organizations

In order that training conducted at training organizations would be recognized and accepted by industry, the following 3 main elements were introduced into the national system:

- training packages
- national assessment arrangements
- the Australian Quality Training Framework

It was expected that these elements would provide a direct link between competency standards and learning programs.

It was also expected that there would be greater consistency between qualifications awarded by different training providers.

## 2. CBT CURRICULUM DEVELOPMENT

### 2.1. Definition of Curriculum

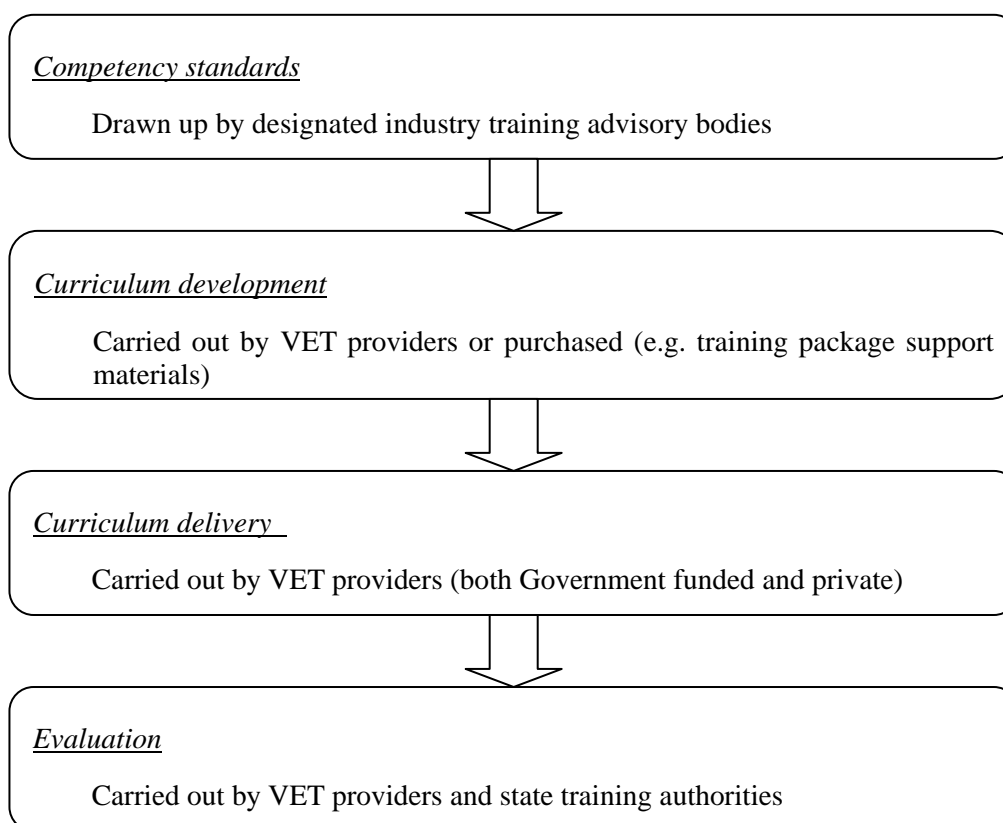
Curriculum has been defined as follows:

- Planned learning experiences
- Offered within an education institution/program
- Represented by a document
- Includes experiences that have resulted from that document.

Point 4 is interesting because it suggests that a curriculum only becomes real when learners become involved in it.

CBT curriculum is referred to as a linear model. The following diagram describes the method of curriculum development for delivery of nationally accredited courses in Australia.

*(If training providers do not want to deliver accredited qualifications, they can develop their curricula in whatever way they prefer).*



#### Further Definitions of CBT Curriculum

The following are 2 broadly accepted definitions of CBT used in the Australian VET context:



- “A way of approaching vocational training that places primary emphasis on what a person can do as a result of training (the *outcome*), and as such it is a shift away from an emphasis on the process involved in the training (the *inputs*). It is concerned with training to specific standards rather than the individual’s achievement relative to others”.
- “Training geared to the attainment and demonstration of skills to meet industry-specified standards rather than to an individual’s achievement relative to others in a group”.

The key points in both definitions are:

- The focus of training is on the *outcome*
- The outcome is measured against *specified standards*, not against other trainees
- The standards relate to *industry*.

## 2.2. Competency Standards

A competency standard is a nationally agreed statement of skills and knowledge required for effective performance in a particular job or job function. Someone who is competent can demonstrate that they have the required skills and knowledge and be able to apply to the standards of performance required in the workplace.

Competency standards do not describe the procedures necessary to perform a particular role. They identify the necessary skills and knowledge that contribute to a job function.

The following are 3 classifications of competency standards:

### Industry standards

Industry standards are national competency standards endorsed for a specific Industry. (Examples include Community Health, Funeral industry and Information Technology Competency Standards)

### Cross-Industry standards

Cross-industry standards are based on competencies that are common to a range of industries. (A good example is the Business Services Training Package)

### Enterprise standards

Enterprise standards consist of the competency standards developed and/or used specifically at enterprise level. (For example, large food chains, department stores, supermarkets and manufacturing plants have developed competency standards for their particular needs).

## **2.3. Key Features of CBT Curriculum**

### Output-Focused Orientation

CBT is always concerned with what the trainee will be able to do at the end of the training. There is not so much concern about what the inputs are. As long as the trainee achieves the listed competencies, it does not matter who taught him or her, how or when the training took place, or what learning resources were used.

*The Training Packages, which are the basis of VET training in Australia (and are discussed in more detail), take this concept to the extreme. The “endorsed” component only specifies the training standards and assessment).*

### Involvement of Industry

The major aim of CBT is to provide workers who are able to perform in industry. Industry, therefore, must be involved at several stages in the training process. Industry is involved in drawing up the competency standards, in providing feedback on delivery and assessment of CBT courses and, in an ideal CBT situation, at least some of the training is delivered in the workplace or at least in a simulated workplace.

### Recognition of Current Competence

Because the main focus of CBT is on outcomes and not inputs, it does not really matter where the individual has gained his or her learning. They may have learned the skill in a previous job or working by themselves informally or at hobby level. It is important that people have the opportunity to be assessed for the skills they already have and are not forced to undertake training for skills or knowledge that they already possess. (Recognition of current competence is also often referred to as recognition of prior learning or RPL).

### Modularization of Delivery

CBT is designed to produce workers with competencies that are specifically related to jobs. Courses, therefore, can be divided into separate *modules* which are now referred to in the Australian VET system as *Units of Competency*. Each unit is broken up into *elements of competence* and can generally be undertaken in a relatively short period of time (typically between 20 – 60 hours). This makes it convenient for people to undertake training that is specifically relevant to their current job, to meet the requirements of newly introduced technology or applying for a new position.

### Self-Paced Delivery

It is possible to deliver CBT in many ways but many VET instructors believe that the only legitimate way of using the CBT approach is to use self-paced delivery. The reason behind this is that trainees should be allowed to achieve competence in their own time and not have a length of time imposed on them. It is believed that trainees should be able to move from module to module in their own time with instructors providing assistance where required. In reality, however, few training

providers are able to offer this degree of flexibility.

#### Assessment based on Demonstration rather than Knowledge

CBT places great emphasis on skill as compared with knowledge. Assessment, in the CBT approach, relates to the student being able to do something rather than knowing things. This has meant that many of the written tests which used to be given to trainees by training providers have had to be replaced with skills tests. One of the disadvantages with this kind of skills testing is that administering these tests to individual trainees can take a longer time. One of the major advantages is that the tests are a far more valid form of assessing the trainee's competence.

#### Flexible delivery

The CBT approach is often associated with flexible delivery – training that can be delivered in a variety of ways to meet the need of different groups of clients/trainees. Flexible delivery can include:

- Choice of the means of training – i.e. Full or part time, face-to-face, on-the-job training and so on
- Choices of ways of learning – i.e. Video, interactive CD Rom, on-line delivery etc.
- Trainee choice in the timing and method of assessment

#### Widely Recognized Competencies

One of the strongest features of CBT is that because the competencies that frame VET courses are clearly described and determined by industry, the trainees will receive not just a qualification but the units of competence they have achieved.

The employer can be assured that an applicant for a job is trained to current industry requirements which are consistent with national standards. Particularly if the curriculum is a national one, competencies can be recognized across an entire nation and, in most cases, internationally as well especially where industry sectors have similar operations (e.g. Hospitality, Auto Service and Repair etc.).

### **3. IDENTIFYING THE NEED FOR TRAINING**

Generally on a national level, there are 4 types of studies that can be conducted to find out what kind of training is required across various industry sectors.

Usually a preliminary analysis is conducted, but if it becomes clear that further detailed information is required, there may need to be a comprehensive workforce study covering ALL 4 types of the following analyses:

- Industry analysis
- Labour market analysis
- Occupational analysis
- Training needs analysis

In most cases it will be clear that a range of issues can be addressed by just 1 of the 4 types of analysis – *this is called fast streaming*.

#### **3.1. Definitions of the Four Types of Study**

##### Industry Analysis

- Determining the boundaries of the industry under consideration
- Examining determinants of the industry's activity levels
- Assessing likely future industry & employment levels in the context of expected movements in these determinants

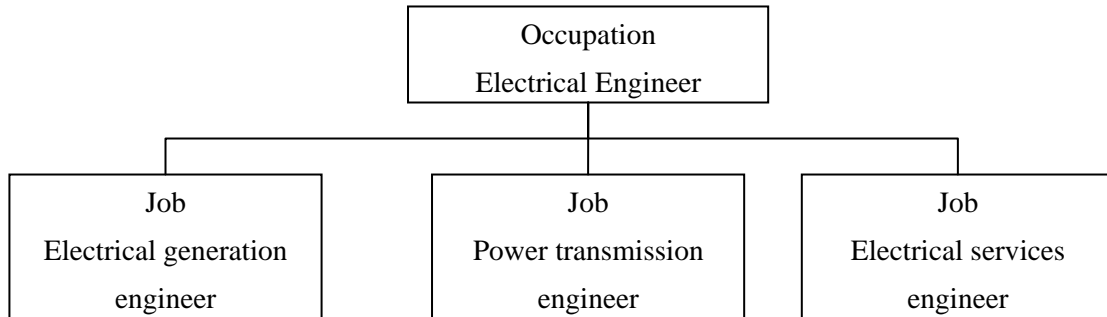
##### Labour Market Analysis

Assessment of the numbers in each occupation or job, in terms of the current & predicted demand for personnel compared with current & predicted availability (supply) of qualified people to fill such positions

##### Occupational Analysis

Identification of current and likely future jobs within an occupation, and the duties and tasks which comprise each job, together with the relevant information. Occupation and job are hierarchical. As indicated in the figure below, an occupation can comprise a number of specializations.

## Example of Occupational Specializations



### Training needs Analysis

Assessment of the differences between the actual condition (what is) and the desired condition (what should be) in performance within an organization or sector in terms of knowledge, skills and attitudes.

#### **3.1.1. Situations Needing Training**

What starts the whole process of a person being trained? We could say, quite simply, that “someone” sees a need for people to know more and be able to do more. Who might that someone be? Here are two typical situations:

##### Situation 1 - Industry

- The company sees a need to purchase new equipment to increase productivity and improve their image overseas.
- A supervisor who works for the company sees a need for the staff in his/her section to learn how to use and maintain the new equipment safely and efficiently.
- A worker in this company sees the need to improve their skills in operating and maintaining the new machinery so that they keep up-to-date in their job.

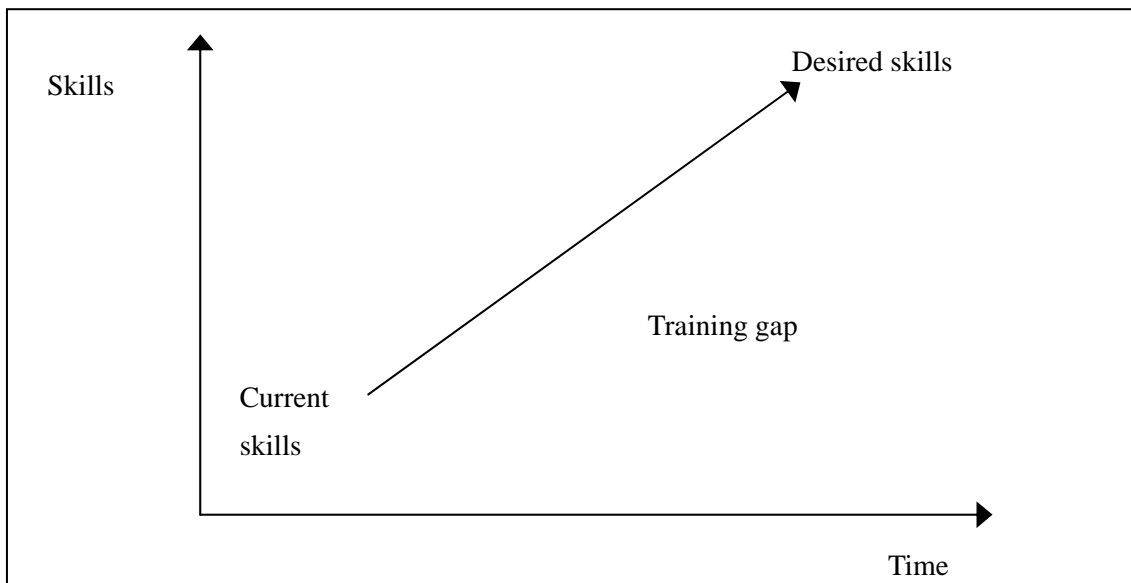
##### Situation 2 – Government Department

- The Government department sees a need for people in the community to become more familiar with how to use computers.
- A project officer who works for this department sees a need for unemployed people in the community to learn basic computing skills for the workplace.
- An unemployed person who is thinking of doing a computer course sees a need to overcome their fear of computers and gain some hands-on experience.

### 3.2. Conducting a Training Needs Analysis

The precise need for training can be identified in two ways – informally or formally. Informally, observing tasks or having discussions with relevant people associated with these tasks can assess the need. The formal way of establishing a training need is to conduct a training needs analysis.

The main intention of conducting such an analysis is to assess the gap between the present job performance and the desired job performance as indicated in the following diagram:



The process involves identifying the skills and knowledge required by workers to perform certain tasks at the desired level and then checking to see how they are performed at present. If the current performance is not at the desired level, a need for training has been identified. By doing this, an organisation has a very clear picture of exactly what training needs to be done. It can tailor a training program to meet these specific needs.

#### Gathering Information

The organisation needs to develop a detailed outline of the skills, knowledge and attitudes needed to perform a particular job. Information could be obtained through, job descriptions procedure manuals, consultations with experts, task analysis and course outlines.

### Measuring Requirements against Current Skills

Having gathered information about the skills and information necessary to undertake particular tasks, the identified skills need to be measured against those which currently exist within the organization. Any gap will identify a need for training.

This can be done in the following ways:

- Questionnaire
- Observation of work skills
- Interview of workers
- Examination of the organization's records
- Group discussion

## **4. TRAINING PACKAGES**

### **4.1. Description of a Training Package**

Training packages form the basis for most Australian VET curriculum. It is important to note that in developing these Training Packages, the Australian federal and State Governments over a period of 20 years sub-contract the conduct of labor market surveys to private consulting firms on an ongoing basis. These surveys provide progressive information and projected numbers of job requirements across all industry sectors.

Federal and State Governments have also set up Industry Training Advisory Bodies, over a period of 20 years, to conduct needs analyses in most industry sectors in putting together the approximately 32 Training Packages.

A Training Package contains many different qualifications from different areas of an industry. Sometimes a Training package can cost up to AUD 1000, but some are cheaper. Registered Training Organizations (RTOs) must buy copies of Training Packages before adding the qualification to their “Scope of Services”. Sometimes the Training Package, and/or its support materials, is available on CD Rom allowing the RTO to adapt (or contextualize) the materials to suit their needs.

#### **4.1.1 What is in a Training Package?**

A Training Package is an integrated set of nationally endorsed units of competence, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Each Training Package:

- provides a consistent and reliable set of components for training, recognising and assessing people’s skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

#### **4.1.2 How do Training Packages fit within the National Training Framework?**

The National Training Framework is made up of the nationally agreed quality arrangements for the vocational education and training sector, the Australian Quality Training Framework (AQTF), and Training Packages endorsed by the National Training Quality Council (NTQC).



#### **4.1.3 How are Training Packages developed?**

Training Packages are developed by Industry Skills Councils or enterprises to meet the identified training needs of specific industries or industry sectors. To gain national endorsement of Training Packages, developers must provide evidence of extensive research, consultation and support within the industry area or enterprise.

#### **4.1.4 How do Training Packages encourage flexibility?**

Training Packages describe the skills and knowledge needed to perform effectively in the workplace without prescribing how people should be trained. Training Packages acknowledge that people can achieve vocational competency in many ways by emphasizing what the learner can do, not how or where they learned to do it. For example, some experienced workers might be able to demonstrate competency against the units of competence, and even gain a qualification, without completing a formal training program.

With Training Packages, assessment and training may be conducted at the workplace, off-the-job, at a training organization, during regular work, or through work experience, work placement, work simulation or any combination of these.

#### **4.1.5 Who can deliver and assess using Training Packages?**

Training and assessment using Training Packages must be conducted by a Registered Training Organisation (RTO) that has the qualifications or specific units of competence on its scope of registration, or that works in partnership with another RTO as specified in the AQTF

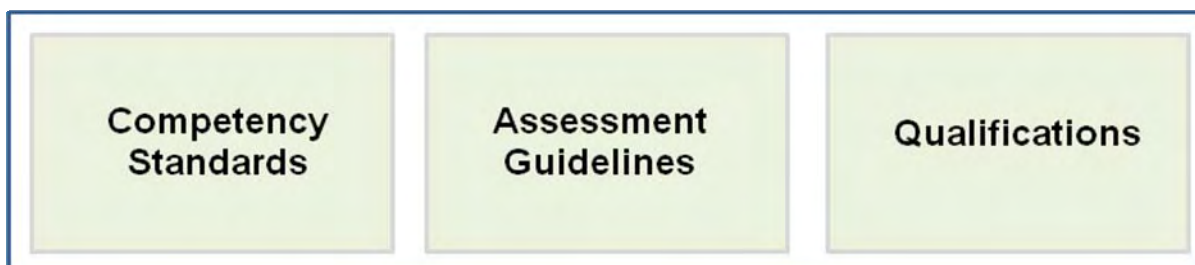
#### **4.1.6 Training Package Components**

Training Packages are made up of mandatory components endorsed by the NTQC, and optional support materials. The nationally endorsed components include the Units of Competence, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.

##### ***Training Package Endorsed & Non-Components***

The nationally endorsed components include the Units of Competence, Assessment Guidelines and Qualifications Framework. These form the basis of training and assessment in the Training Package and, as such, they must be used.

## ***Endorsed Components***



### ***Units of Competence***

Each unit of competence identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competence must be adhered to in training and assessment to ensure consistency of outcomes.

### ***Assessment Guidelines***

The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the *Standards for Registered Training Organisations*. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognized qualifications. Competency Standards

### ***Qualifications Framework***

Each Training Package provides details of those units of competence that must be achieved to award AQF qualifications. The rules around which units of competence can be combined to make up a valid AQF qualification in the Training Package are referred to as the 'packaging rules'. The packaging rules must be followed to ensure the integrity of nationally recognized qualifications issued.

### ***Training Package Support Materials***

The endorsed components of Training Packages are complemented and supported by optional support materials that provide for choice in the design of training and assessment to meet the needs of industry and learners. Training Package support materials can relate to single or multiple units of competence, an industry sector, a qualification or the whole Training Package. They tend to fall into one or more of the categories illustrated below.



Training Package support materials are produced by a range of stakeholders such as RTOs, individual trainers and assessors, private and commercial developers and Government agencies. Where such materials have been quality assured through a process of 'noting' by the NTQC, they display the following official logo. Noted support materials are listed on the National Training Information Service (NTIS), together with a detailed description and information on the type of product and its availability ([www.ntis.gov.au](http://www.ntis.gov.au)).

It is not compulsory to submit support materials for noting; any resources that meet the requirements of the Training Package can be used.

### ***Training Package, Qualification and Unit of Competence Codes***

There are agreed conventions for the national codes used for Training Packages and their components. Always use the correct codes, exactly as they appear in the Training Package, and with the title always following the code.

#### ***Training Package Codes***

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed, for example AUR05. The first three characters are letters identifying the Training Package industry coverage and the last two characters are numbers identifying the year of endorsement.

#### ***Qualification Codes***

Within each Training Package, each qualification has a unique eight-character code, for example AUR20505. The first three letters identify the Training Package; the first number identifies the qualification level (noting that arabic numbers are not used in qualification titles themselves); the next two numbers identify the position in the sequence of the qualification at that level; and the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

### ***Unit of Competence Codes***

Within each Training Package, each unit of competence has a unique code. The unit of competence codes are assigned when the Training Package is endorsed, or when new units of competence are added to an existing endorsed Training Package.

A typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in AURT217108A. The first three characters signify the Training Package (AUR05 Automotive Training Package – Retail, Service and Repair Sector in the above example) and up to eight characters, relating to an industry sector, function or skill area, follow. The last character is always a letter and identifies the unit of competence version. The ‘A’ in the example above indicates that this is the original unit of competence. An incremented version identifier usually means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent. Where changes are made that alter the outcome, a new code is assigned and the title is changed.

### ***Training Package, Qualification and Unit of Competence Titles***

There are agreed conventions for titling Training Packages and their components. Always use the correct titles, exactly as they appear in the Training Package, and with the code always placed before the title.

#### ***Training Package Titles***

The title of each endorsed Training Package is unique and relates the Training Package’s broad industry coverage.

#### ***Qualification Titles***

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

- The qualification is identified as Certificate I, Certificate II, Certificate III, Certificate IV, Diploma or Advanced Diploma
- This is followed by the words ‘in’ for Certificates I to IV and ‘of’ for Diploma and Advanced Diploma
- Then the industry descriptor follows, for example Vehicle Servicing.

For example:

AUR20505 Certificate II in Automotive Vehicle Servicing

AUR50205 Diploma of Automotive Technology.

#### ***Unit of Competence Titles***

Each unit of competence title is unique. Unit of competence titles describe the competency outcome concisely, and are written in sentence case.

For example:

AURT217108A Carry out wheel alignment operations

AURT301357A Rebuild engine components.

#### **4.2. Some of the difficulties in using Training Packages**

Many teachers & trainers have difficulties using the training packages because of their size and, sometimes, language used. There are guides that assist people in using them. For example the Western Australian Government has produced a guide called “Using Training Packages: From Training Package to Learning Program”. In particular this guide helps to bridge the gap between the Training Package itself and the *learning program* that is used to deliver the Package.

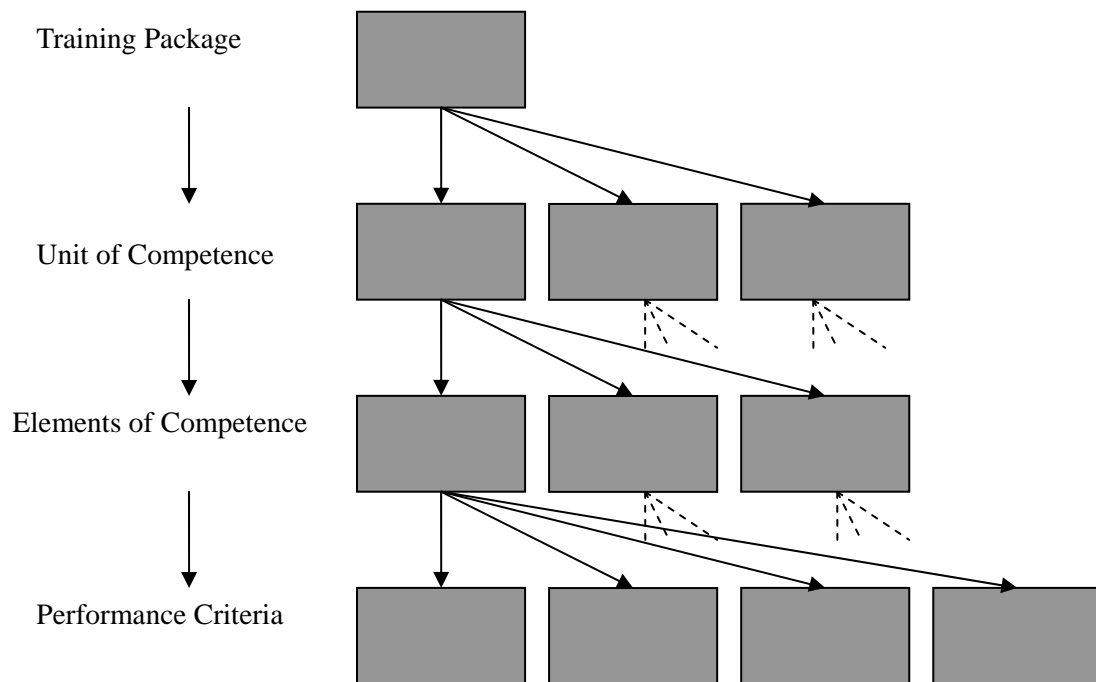
The Guide assists the teachers & trainers with the following decisions:

- Which Training Package best suits your clients?
- What does the Training Package contain?
- Which qualifications from the Training Package offer greatest value?
- What mix of Units of Competency will be offered?
- How will the assessment be conducted?
- What modes of delivery are appropriate?
- What learning and assessment resources will be used?
- What literacy, numeracy, key competencies (employability skills) will be included?

#### **4.3. The building blocks of Training Packages**

The building blocks of Training Packages are *Units of Competence*. These in turn are divided into elements of competency with performance criteria.

The following diagram outlines the relationship between Units of Competence, elements of competency and performance criteria:



#### 4.4. Employability Skills

All training packages include employability skills which the trainers have to enable trainees to achieve as part of undertaking VET courses. The following is a summary of these employability skills:

##### Communication

The ability to interpret the needs of the client. Developing this competency relates to using a range of communication skills such as:

- Listening
- Questioning
- Reading
- interpreting and writing documents
- writing hazard and incident reports
- using effective facilitation and interpersonal skills including verbal and body language which is sensitive to the needs of others
- mentoring, coaching and tutoring techniques

##### Teamwork

- working with colleagues to compare, review, compare and evaluate assessment processes and outcomes
- actively participating in assessment validation sessions
- managing work relationships and seeking feedback from colleagues and clients

on professional performance

- developing and evaluating with others' learning programs, customized for individual or group needs

#### Problem Solving

- identifying hazards and assessing risks in the learning environment
- using time management skills in designing learning programs
- calculating cost of programs, logistics of delivery and accessing appropriate resources
- generating a range of options to meet client needs

#### Initiative and Enterprise

- interpreting the learning environment and selecting delivery approaches which motivate and engage learners
- monitoring and improving work practices to enhance inclusivity and learning
- being creative to meet clients' training needs
- applying design skills to develop innovative and flexible cost effective programs

#### Planning and Organizing

- researching, reading, analyzing and interpreting workplace specifications
- planning, prioritizing and organizing workflow
- interpreting collected evidence and making judgments of competency
- documenting action plans and hazard reports
- working with clients in developing personal or group learning programs

#### Self-management

- working within policy and organizational frameworks
- managing work and work relationships. Adhere to ethical and legal responsibilities
- taking personal role and responsibility in the planning, delivery and review of training
- being a role model for inclusiveness and demonstrate professionalism
- examining personal perceptions and attitudes

#### Learning

- undertaking self evaluation and reflection practices
- researching information and accessing policies and frameworks to maintain currency of knowledge and skills
- promoting a culture of learning in the workplace, seek feedback from colleagues
- facilitating individual, group based and work based learning

### Technology

- using technology to enhance outcomes i.e. online delivery, research using the web
- using student information management systems to record assessments.
- technology and equipment needs are identified and organized prior to training
- ability to use a range of software including presentation packages



## **5. THE PLANNING PROCESS FOR CBT DELIVERY**

Having identified the need for training, the next step is to devise a training program which will provide participants **with** the skills and knowledge to perform their work at the desired level.

Trainees may have been away from a training environment for a long period of time. People have limited concentration spans. Trainees benefit from having the opportunity to go away and consider the information resented or practice the skills learnt before moving on to the next point. For these reasons, it may be more beneficial to run training over a series of shorter sessions rather than one very long session.

### **5.1. Steps in Developing a Training Program**

1. Identify the overall aim (what the training program hopes to achieve – the big picture). For example, the overall aim might be to prevent shutting down the machine due to minor faults.
2. Identify the specific objectives (these are more detailed outcomes that will help achieve the overall aim). For example, one objective might be to ensure that all workers can carry out maintenance procedures for the equipment. Note – there is more detailed information about writing training objectives in the section covering training sessions.
3. Identify the topics that need to be presented. These might include the properties of different lubricants used in the maintenance of the equipment.
4. Put these topics into a logical order.
5. Establish how long it will take to cover each topic.
6. Establish the length of each session.
7. Work out how many sessions will be required.
8. Select an appropriate time and location for the training.
9. Choose appropriate assessment methods.

### **5.2. Breaking Down Information**

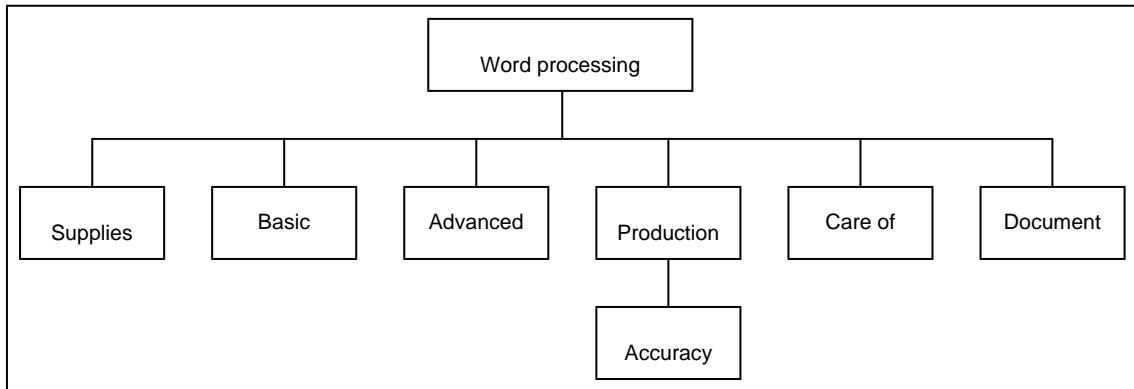
When you are planning a training session, you need to break the information you are giving into “chunks” that are the amount of information a participant can take in at one time. The length of a chunk of information will vary depending on the complexity of what is involved, but on average, a chunk of new information should be no more than fifteen minutes of new information. After this, the learner needs to move on to an activity that consolidates the information by allowing them to apply it in an active way.

As well as identifying the chunks of information, they have to be developed into a sequence that takes the learner through the information in a logical way.

How can you break down information into small pieces? There are two methods you can use, categorizing and brainstorming.

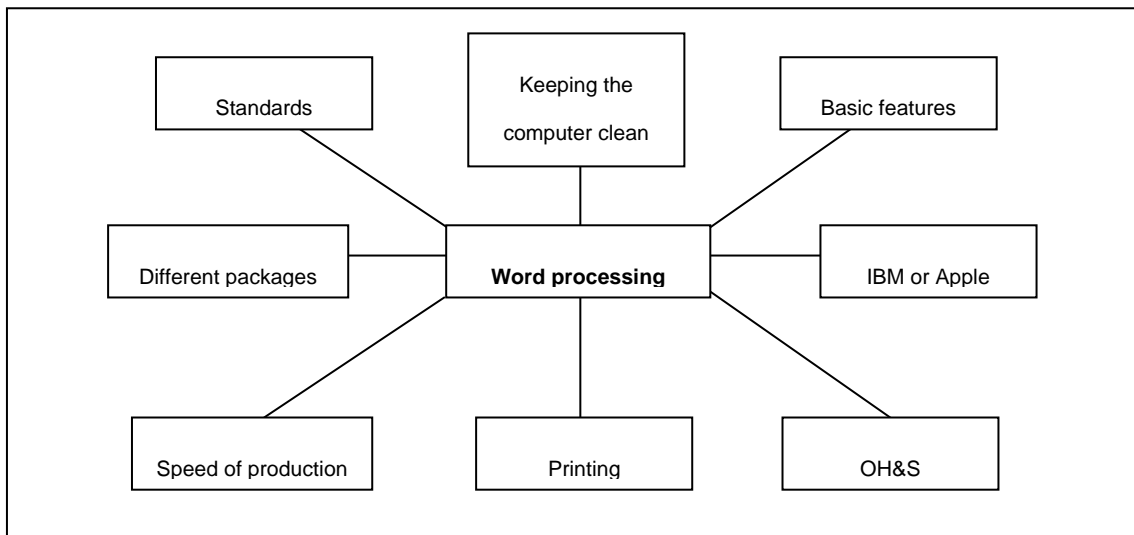
Categorizing Information

When you categorize a subject, you take the whole topic and systematically break it into smaller parts. A flow chart is given below in figure as an example.



5.4 Brainstorming Information

When you brainstorm, you can work in a group which works well, because ideas are drawn from many different directions. The topic is written on a large piece of paper or on a whiteboard and everyone in the group says whatever smaller topics come to mind. An example is given in figure, below.



You could use whichever of these methods suits you, or try another one if you know of other methods.

Once you have broken down the information into smaller topics, you need to sequence them according to importance. The first step is to decide what information is essential to meet the performance criteria of the standard, and then the information that could be covered if there is time to spare. A useful model for this is the “topic target”, where the first priority is what **MUST** be known, the second priority is what **SHOULD** be known

and the third is what COULD be known. You can then apply these three options to the topics you identified above to organise the information accordingly.

### **5.3. Planning Training Sessions**

Consider the following factors when planning a training session:

- Objectives
- Task analysis
- Trainee's current knowledge
- Structure of the session
- Whether you are teaching a skill or knowledge
- Training strategies
- Materials
- Training environment
- Timing
- Assessment methods

#### **5.3.1. Identifying Objectives**

Before beginning to plan each training session it is important to understand what you want to achieve in the session.

You may be supplied with a clear training objective or you may need to develop your own.

In order to develop a training objective you will need to:

- clearly define the skill – what the trainee will do to demonstrate that they have achieved the objective;
- identify the standards by which the skill must be performed – quantity, quality, time;
- Identify the conditions under which the skill must be performed – equipment, with or without supervision.

A training objective helps to answer the following questions:

- What do the trainees need to learn?
- What does the trainee need to be able to do?
- How well do the trainees need to be able to perform the task?
- Can the trainees ask for assistance as they perform the task?
- How much information do the trainees require?
- How will the trainer know when the trainees have learnt the skill?
- What is the best way to present the information?

### Defining Parts of a Training Objective

- The Skill

This is what you want the trainees to learn, what you want them to be able to do. The objective is written with an action word that describes what the trainees will be able to do after the training.

What will the trainees do or say to show that they have gained the skill or knowledge? An objective needs to be clear and specific so that after the training it is possible to check that the trainees have achieved the skill.

- The Standards

These explain how the trainee is expected to demonstrate the skill or knowledge.

- Quantity

This may explain how many times the trainee needs to demonstrate the skill. For example, is it satisfactory if they demonstrate it once straight after the trainer has shown them, or do they need to show the trainer that they can still perform the task in a week's time? It may also mean how many times the trainee can perform the task in a set time.

- Quality

This explains the quality that is expected. It might outline the accuracy to which a product should be made, or the detail that is expected to be given in an explanation, or the quality features of the finished product.

- Time

This gives an estimate of the time taken to achieve competency in the prescribed task.

- The Conditions

This explains the conditions under which the skill needs to be demonstrated. For example, what equipment should be used or can the trainee refer to notes or a manual?

### **5.3.2. Analysing a Task**

In order to develop a training session a trainer must have a detailed knowledge of the skill or information that they will be delivering.

If a trainer is teaching a skill they will need to fully understand all that is involved in competently completing the task.

In order to analyse a task:

1. List each step in logical sequence. It may take some time to identify each step and the correct order.
2. For each step identify:
  - the knowledge that a person must have to complete the step;
  - the skills that the person must have;
  - safety or quality factors that are relevant to the step.

### **5.3.3. Checking the Trainees' Current Knowledge**

If a trainer begins the training at a level which is too low they will cover material that the trainees already know and run the risk of boring the trainees. Trainees may stop listening and then may miss out on important material later in the session.

Trainees may not have the skills or knowledge necessary to form the basis of their learning. If a trainer assumes the trainees have knowledge which they do not have, they may begin too far ahead and the trainees may become confused and frustrated.

A skilled trainer builds on the trainees' experiences. Before planning the session they will speak to the trainees and/or their supervisors to determine the level of their knowledge.

### **5.3.4. Structuring a Training Session**

A training session can be divided into three sections:

- Introduction
- Body
- Conclusion

The **introduction** is the trainer's opportunity to grab the trainees' attention.

In the **introduction** the trainer can:

- establish a comfortable atmosphere;
- check the trainees current knowledge;
- motivate the trainees, develop an interest in the material to be covered;
- link this session to previous sessions if this is appropriate;
- outline the objective, what will be covered in the session;
- set the context for the training.

In the **body** the trainer will present the material to be covered in the session. In the **body** the trainer can:

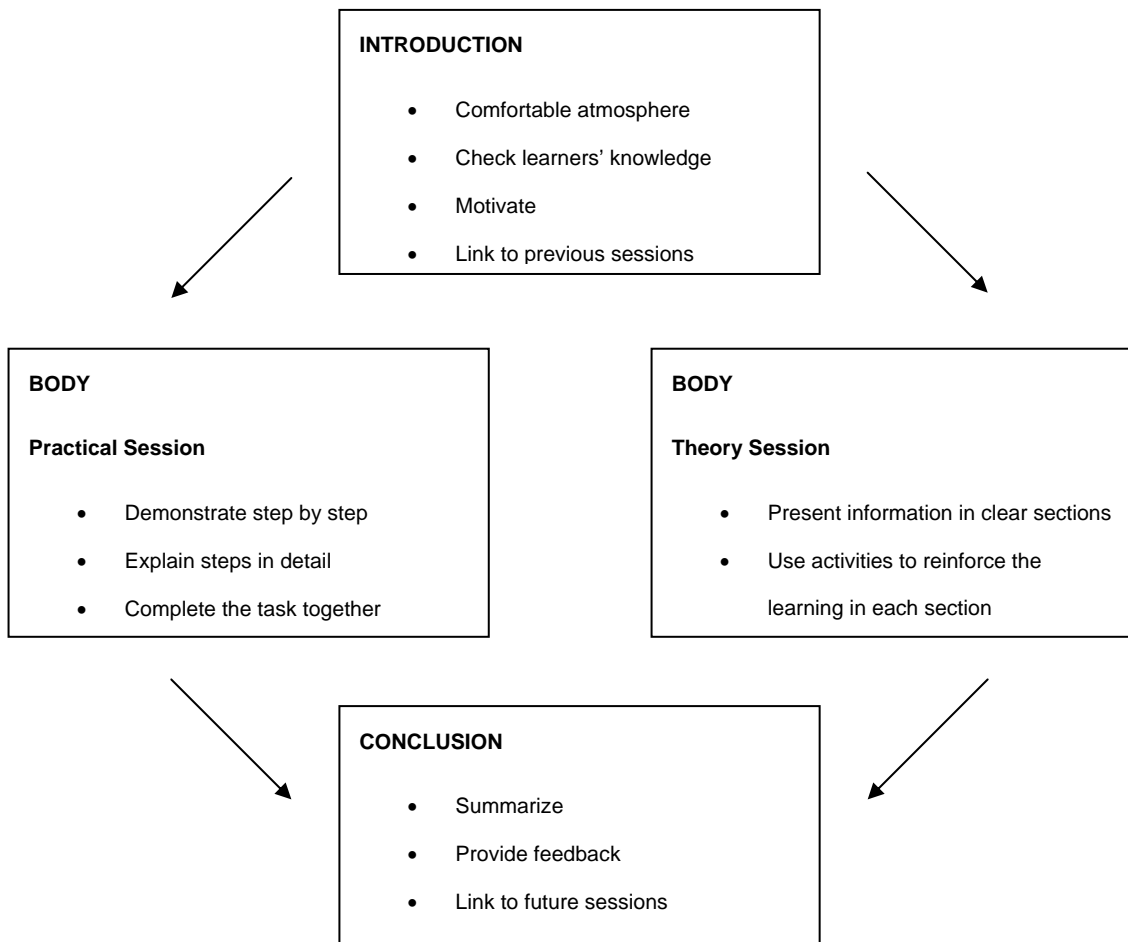
- present information;
- demonstrate;
- use activities to reinforce learning;

- check the level of trainees' understanding;
- provide feedback.

The **conclusion** is the trainer's opportunity to finish off the session leaving the trainees enthusiastic. In the **conclusion** the trainer can:

- summarize the material covered in the session;
- provide feedback about the trainees' progress;
- link the session with future sessions;
- make links between the training and the trainees' work;
- reward the trainee;
- check trainees' understanding.

Planning a Session to Teach a Skill



### 5.3.5. Developing Training Strategies

Trainers use a wide variety of strategies in their training. They aim to use strategies which will interest and stimulate their trainees to learn and develop skills.

A trainer will consider which strategies are the most appropriate to use for:

- The participants in the group – different participants may respond to different strategies.
- The number of trainees in the group – some strategies may not be appropriate for small or large groups.
- The material to be presented – a lecture may not be the most appropriate strategy to use when trying to teach a very practical skill.

Some strategies that could be used include:

- Presentations
- Demonstrations
- Group activities
- Discussions
- Role-plays
- Excursions
- One-to-one instruction
- Assignments

### 5.3.6. Timing

When planning a training session a trainer will also consider time factors.

The time of day that the training will be held.

- When can the trainees be released from their work?
- When will the trainees be most alert and receptive to the training?
- When are the necessary facilities available?

The length of the training session.

- How long can the trainees be released from their work?
- How long will it take to cover the material?
- How long will the trainees be able to concentrate?

Timing within the session.

- How long will each section of the training take?
- Will the trainer run out of time?
- Will there be time to give each section of the session the attention that it requires?

### 5.3.7. Developing Learning Resources

Most likely there are many books and other supporting information available relating to the topic you have selected for development for your learning program. It is often difficult, however, to access this material quickly and there may be other problems with its use (too bulky, no release from the library, etc.).

Sometimes equipment may be installed into your college or institute which may not have any supporting training materials with it or, if materials do come with the new equipment, they may not be suitable for you to use in a teaching-learning situation.

Many of these problems can be overcome if you develop your own learning materials. Some of the reasons you would develop your own learning and teaching materials could be:

- You can make the learning material simpler for your learners to understand by directing it at their language and skill level (some books and publications are very technical and may not suit the level of training you are providing).
- Your own materials will always "work" better for you in the training situation.
- You can add your own sketches, diagrams, pictures and graphs.
- Specific activities or self-help quiz questions can be included in your own materials.
- Providing your own materials indicates to your learners that you are trying to make your training as effective and professional as possible.

#### Developing a handout

A handout is often a printed summary of the lesson, varying in size from one to any number of pages. A hand-out can contain a range of information including:

- Step-by-step procedures on how to perform the job or task.
- The names of books, videos, or other information on the topic and where this is located.
- Labeled sketches on the topic to provide graphic information.
- Explanations of technical terms that are used.
- Safety warnings.
- Special instructions for workshop use - what tools are available, where they are stored, what materials are required and where these materials are located.
- Assignments, activities, exercises for learners to undertake.
- Photographs (some special work required here) of the equipment, the operation, or other techniques.

Handouts are cheap, quick to produce and generally not difficult to develop.



### What to Include on Your Handout

Your handout should be a support to the training - something for learners to take away and remind them of the procedures and processes of the task.

**A basic principle for handouts should be to apply**

**the Kiss Principle ...**

*Keep It Short and Simple*

Some, or all, of the following items are appropriate to include in your handout:

- The objectives of the training session/program - with associated performance, conditions and standard.
- Safety considerations.
- The key points of the lesson - perhaps with some additional information like knacks of the job, tools, etc.
- Labeled diagram, graph, etc.
- Step-by-step checklist of job or task procedures.
- Where further information or assistance, is available.
- Learner assignments, activities, tests.

Before you introduce any pictures or graphs into your handout, make sure that they are relevant to the words and the subject matter, and not covered by copyright. There is no point in having a picture in your handout just for the sake of including some graphics.

### Techniques for producing a handout

There is a wide range of techniques available to produce your handout. Some of these are:

- If possible use a desktop publishing program on a personal computer (MS Word).
- Cuttings - cartoons, graphics, from newspapers or magazines pasted into your handout.
- Clip art books or compact disc art.
- Handwritten. Provided your writing is clear and legible, there is no reason why your handouts cannot be handwritten - although there are more "professional looking" methods.

### Some Ideas for Presenting Your Handout

It is relatively easy to make an ugly-looking handout - but with just a little thought, some care and attention - the results that you achieve with the handout can be impressive. Your learners will learn more and they will appreciate your extra efforts when you provide better quality training materials.

Here are some ideas and guidelines for good looking handouts.

- Lots of white space. Never be afraid of white space. If you examine these notes, look at the white space around the pages (the margins), and the open space between the lines of text and the paragraphs. All this space helps make your handout attractive and easier to read and provides space for learners to make notes sketches if they require.
- Headings and Sub-Headings. Try to make headings and sub-headings present the major ideas. These help learners follow the information logically and quickly allow them find the information required. Material under headings should expand the information of the topic heading.
- Use stars (\*) or dots or other symbols for lists and to convey major ideas.
- Illustrations and pictures should be placed near to the text to which they refer.
- Try not to use too many typefaces or type sizes. Variation is fine, but too many may spoil the look of your handout.
- Photocopy from a prepared original.
- Printed from a computer black and white or color printer.
- Printed out, or projected from a computer using a software program such as Microsoft PowerPoint.

#### **5.4. Assessment Methods**

The aim of a training session is for the trainees to learn new skills and knowledge. At the end of the session, it is necessary to check to see if this has been achieved.

A trainer will want to check that the trainees have learnt the relevant information and processes. A trainer could use a range of strategies to do this. These include:

- a practical exercise;
- oral questions;
- written questions – these could be multiple choice or short answers;
- completion of an assignment/task;
- à simulation exercise;
- comparing previous work performance with new work performance (less wastage, better quality products, improved customer satisfaction). This could be done by consulting work records, speaking with supervisors or other relevant people, or observing the trainee in the workplace.

Often a trainer may use a combination of these. For example, a trainee may be asked to demonstrate a process. As the trainee is demonstrating, the trainer may ask questions.

## **6. DELIVERING CBT TRAINING**

### **6.1. Communication Skills**

A skilled trainer has well-developed communication skills.

Such a trainer is aware of factors that can cause communication to break down:

- using an inappropriate medium
- being distracted or interrupted
- physical factors such as a hearing impediment;
- prejudging the information
- making judgments about the speaker
- feeling uncomfortable

A person using effective listening skills:

- concentrates when someone is speaking to them;
- doesn't interrupt
- faces the speaker
- avoids distractions
- asks questions to check that they heard correctly
- nods head etc to show the speaker that they are listening
- tries to understand the information being conveyed
- keeps an open mind.

A person using effective speaking skills:

- speaks clearly and audibly
- speaks at an appropriate pace – not too fast or too slow
- changes the pitch of their voice
- faces the audience as they speak

#### **6.1.1. The Importance of Non Verbal Communication**

Only a small percentage of the information that we convey to others is communicated through the actual words spoken. Much information is conveyed through:

- gestures;
- facial expressions;
- posture;
- personal space;
- tone of voice.

Trainers need to be aware of non verbal communication so that:

- their nonverbal messages support what they are saying;
- they are perceptive to the messages that the trainees send to them.

### Questioning Skills

Questioning helps a trainer to discover:

- what a trainee already knows;
- what a trainee has learnt;
- areas that the trainee may be unsure of.

### Open Questions

These questions are far more specific, they can be answered with 'yes', 'no' or one word. Such questions can be useful to follow after an open question. A trainee may have given a detailed response but may have missed out one vital point. A trainer may use a closed question to check on that point.

### Tips When Asking Questions

- Only ask questions that you feel that the trainees are able to answer.
- Trainees may require a few seconds to think of a response. Allow them to have a few seconds to think.
- Be prepared to reword the question.
- Trainees may understand the question more clearly if it is worded differently. Try to ask open questions. This may require some practise or you may like to prepare some questions prior to each training session.
- Praise trainees for their responses.
- Use questions to maintain the attention of participants.
- Avoid being predictable in your questioning.
- Use 'safe' questions to involve quiet participants.

### Answering Questions

Trainees will ask many questions of their trainer. If trainees ask a question a trainer can give a clear response straight away. However, the trainer might choose to ask the question to the class. This can often prompt discussion and after the discussion the trainer can clarify relevant details or points. Or another trainee may be able to answer the question. This would allow the trainees to be more involved in their learning.

If a trainer is unable to answer a question they should tell the trainees how to find out the answer or tell them that they will find out and let them know.

### Giving Feedback

Trainees appreciate feedback. It enables trainees to:

- gauge how well they are learning;
- identify areas that are uncertain and develop strategies to;

### Tips for Giving Feedback

- Ask the trainees how they feel they have performed. They may be able to make many of the comments that you intended to make.
- Be aware of the trainee's self esteem. Word feedback so as to help the trainee to improve and learn rather than to point out faults.
- Begin by offering praise then discuss areas that could be improved. Avoid just telling the trainee what they did wrong. Highlight the good.
- Focus on the skill or knowledge rather than the person.
- Show respect for trainees by giving feedback in private. Select an appropriate time and place to give feedback.
- Don't give too much feedback. Give the amount of feedback that you feel the trainee will be able to absorb at the time. If you feel the need to give a great deal of feedback, consider which points will be the most beneficial to the trainee at the time. They may not be able to absorb all that you would like to say, so tell them the points that you feel will benefit them the most.
- You may need to give negative feedback. Be honest when you give such feedback, but give it in a manner which respects the trainee.
- Remember the importance of confidentiality.

### **6.1.2 Learning styles**

Each trainee has his/her own individual style of learning. Individuals differ in the way they organise their experiences into meanings, values and skills. This means that the trainer must take into account the varying styles of learning when preparing and delivering training.

Learners can be divided into three main groups with different styles of learning. Many individuals will keep to one preferred style but in some situations they may like a combination of styles.

The main styles are:

- Visual – preference for seeing what is going on. Learners with this preference enjoy reading, watching TV and like to look at photos, cartoons, plans and pictures. Useful resources to use are posters, charts, graphs, visual displays, booklets, handouts and varieties of colors and shapes.

- Auditory – learning mainly by listening. Auditory learners like to talk and prefer to hear things rather than read them. With these learners it would be good to use question and answer, lectures and stories, audio tapes, discussion pairs or groups, music or slogans.
- Kinesthetic – Learners enjoy learning by doing and remember best through practice. These learners would enjoy learning by team activities, hands-on experience, role-plays and note taking.

### 6.1.3 Barriers to Learning

Trainers are aware that differences exist amongst their trainees but it is not enough just to be aware of such differences. The important point is that the trainer recognises these differences and adopts appropriate strategies to maximise learning. Some differences are:

<b>Possible Barrier</b>	<b>Suggested Solution</b>
<p><b>Language and literacy</b></p> <p>Language difficulties caused by not being familiar with the language and language style being used by the trainer</p>	<ul style="list-style-type: none"> <li>• Modify language use</li> <li>• Use simple texts</li> <li>• Use pictorial learning materials</li> <li>• Use paired “buddy system”</li> </ul>
<p><b>Cultural background</b></p> <p>Socio-economic, religious beliefs, cultural differences, level of support</p>	<ul style="list-style-type: none"> <li>• Positive person assistance, support and advice</li> <li>• Additional training time</li> </ul>
<p><b>Physical impairment</b></p> <p>Poor sight, poor hearing, impaired dexterity, strength level</p>	<ul style="list-style-type: none"> <li>• Prepare seating arrangements</li> <li>• Give additional time to practise</li> <li>• Use pictorial aids</li> </ul>
<p><b>Previous experience/learning</b></p> <p>Level of education, type and degree of</p>	<ul style="list-style-type: none"> <li>• Check previous experiences – can they be used</li> <li>• Support transfer of skills to new</li> </ul>

previous experience	situations
<p><b>Learning styles</b></p> <p>Preferred theory to practice or vice versa, likes constant revision/practice, prefers self paced materials to presentations</p>	<ul style="list-style-type: none"> <li>• Incorporate various training methods so that most can use preferred styles</li> <li>• Encourage self-management of learning but provide advice when needed</li> </ul>
<p><b>Motivation</b></p> <p>Not highly motivated, not interested, history of failure</p>	<ul style="list-style-type: none"> <li>• Counsel where necessary</li> <li>• Identify and talk through motivational and attitudinal issues</li> <li>• Provide encouragement</li> <li>• Relate training to work experience</li> </ul>
<p><b>Personality traits</b></p> <p>Poor self image, loner, insecure about abilities</p>	<ul style="list-style-type: none"> <li>• May be related to poor motivation – counsel where necessary</li> <li>• Use the buddy system</li> <li>• Discuss preferred ways of learning</li> <li>• Encourage group participation</li> </ul>

## 6.2. Assessing Trainees

The job of a trainer is to assist trainees to gain new skills and knowledge. When assessing, the trainer provides the trainees with opportunities to demonstrate they are now competent in these areas.

A trainer will design assessment strategies that:

- will provide a reliable result;
- are fair to all trainees;
- are flexible and suit the individual needs of trainees.

The trainer may consult with the trainees about how they will be assessed and other details of the assessment.

The aim is not to surprise the trainees with a test. It is to allow the trainees to have the

best opportunity to demonstrate that they have gained new skills and knowledge.

### **6.3. Preparing the Training Area**

Importantly, your learners must be encouraged to become involved in the learning experiences. You will need to arrange the classroom or the workshop to reflect this principle.

Some items that you will need to take care of when preparing for classroom presentations are:

- Move tables to form a U-shaped learning environment where learners want to participate with you as the trainer and each other as learners.
- Have your overhead projector and screen set up so that everyone can see easily. The same with your whiteboard. Also make sure you have overhead pens and that they work.
- If you want to prepare some drawings or explanations on the reverse side of the whiteboard, or on butcher's paper, have this ready. Charts, models and so on, which relate to the lesson can also be placed in position before the lesson starts. You can turn them around to face the wall and use them as a "surprise" element in the lesson if you want to.
- Check the lighting. Make sure the lights work and that all learners can see you – the trainer – and what you are doing.

Some items you will need to give attention to when preparing for training presentations in the workshop are:

- Clean the area up – make the workshop neat and tidy. Put away any tools or other materials that are not needed for the lesson. Make your training venue a place where your learners want to be.
  - Turn off any machinery that is not going to be used. Try to create an area without too much noise so that learners can hear you and you are not distracted by other noise.
- \* Arrange the area so that trainees can easily see what you are doing if you are providing practical demonstrations. This could also mean checking and adjusting the lighting in the area.
- \* Samples of work – good and bad – are useful in practical workshop sessions to show learners the quality of work that is expected.



- \* Have all your tools, materials and any other equipment prepared and ready. Make sure the tools work and that the materials are in appropriate condition.
- \* Have any training aids – charts, samples, whiteboards, and so on, ready. Place these in position before the lesson and check that they will be able to be seen by your learners.
- \* Learners will become restless if they can't see, or become uncomfortable. If it's appropriate, a few stools or chairs around the learning area can help overcome this.
- \* Make sure your learners can see your demonstrations and – if necessary – repeat the demonstrations for those who may not have been able to see the first time.
- \* Make sure – during and at the end of the lesson – that you inform your learners of your availability and where and when you will be able to provide any extra help and training assistance that they may require.

#### **6.4. MOTIVATE YOUR LEARNERS**

Preparing your trainees also means encouraging and motivating them to learn. As a teacher and a trainer you will need to adopt a warm, approachable, friendly and confident manner. Introduce yourself and welcome your learners to the training. Use questioning to ask them about their previous experiences of the job. Make them the most important part of the training.

Your approach must be friendly and supportive towards your learners. You must be helpful, positive and motivational and quickly gain their respect and attention.

#### **6.5. USE SUITABLE LEARNING STRATEGIES**

Learning strategies with adult learners are essentially about *learner involvement*. If adult learners want to take an active part in the learning processes then the trainer must use learning strategies that create opportunities for this to occur.

Some effective learning and training strategies for the use of trainers of adults follow:

### 6.6. Strategies for Getting the Attention of Your Adult Learners

- \* *Questioning*  
The interest of your adult learners can be aroused and maintained during the training through the use of a range of varied questioning techniques by the trainer.
  
- \* *Show a completed job or product.*  
Displaying the end product of the lesson that learners are to complete provides adults with motivation. Learners will often forget how quickly you demonstrated the task, but will always remember how well you demonstrated the task.
  
- \* *Discussion group.*  
Form learners into small groups to discuss the job, or task, and how they can best perform the job.
  
- \* *Trainer experiences.*  
Describe a time – in industry or similar – when you were required to develop a similar skill and how you went about doing the job. Remember that you are the subject matter expert and if you can establish your credentials learners will respect and learn more from you.

### 6.7. TRAINING METHODS

Here are some training methods that you might want to consider to use for you to deliver your training program. With technical and vocational training and teaching, however, concentrate wherever possible on practical tasks and activities for your learners.

Training Method	Description
Brainstorming	Learners think up lots of ideas about the subject without making any judgements about them. Ideas are then organised into groups.

Buzz Groups	The learner group is formed into small teams or buzz groups - each buzz group has a specific task to perform in a set time.
Game	A short fun event that usually involves words and actions to achieve the learning outcomes.
Case Study or Problem Solving Exercise	Description of an actual or imaginary situation is presented - perhaps an unsafe workplace practice – and learners analyse the case and work out how they would deal with the situation.
Quiz	Questions are pre-set by the teacher - or the learners - for an oral question and answer session.
Role Play	Learners, and the trainer, act out situations related to the subject.
Assignment	An activity for learners to undertake between sessions. Can be set for individuals, or groups.
Written Report	Trainees investigate and develop a report for presentation on a set topic.
Survey	Learners ask a group of people questions and examine the answers.
Demonstration	An expert – can be the teacher or the trainer – show and tell trainees how to undertake the skill- operate a machine, make a work-piece and so on.
Excursion	Group or individual activity where learners visit an object or place for on-site observation.
Guest Speaker	Industry or job expert talks to trainees about a particular job or expertise.
Lecture	Organised mostly one-way presentation by a speaker to a group of listening learners. Can become boring.

These are some useful techniques that you can use during the presentation of your training program. Importantly, however, with technical and vocational training and education, the best training technique is in the practical area with activities for learners.

## **7. ASSESSMENT**

### **7.1. Overview of assessment**

Assessment is the process of collecting evidence and making judgments on the nature and extent of progress toward the performance requirements set out in a standard of a learning outcome.

Assessment is also about making a judgment, at the appropriate point, as to whether the competency has been achieved.

Key features of CBT assessment are that it is generally:

- Criterion based – assessed against standard criteria or benchmarks (Depending on circumstances, benchmarks may be competency standards, learning outcomes or other performance outcomes)
- Evidence-based – decisions are based on the evidence provided by the trainee
- Formative (progressive) rather than summative (conducted merely at the end of the course)
- Participatory - trainees are involved in all aspects of the assessment process
- Sufficient - There must be enough evidence to demonstrate consistency of competency
- Current - The evidence must demonstrate current performance of competency.

The role of an assessor is to compare a participant's evidence against the criteria for assessment and make a judgment about whether competency has been achieved. To undertake this role an assessor must be able to:

- Interpret the criteria for assessment
- Demonstrate high skills in the area being assessed
- Demonstrate interpersonal skills
- Apply the relevant assessment techniques
- Ensure that evidence provided is sufficient
- Make impartial judgments

### **7.2. Role of the Training Organization in Assessing**

Registered Training organizations are required to identify, negotiate, plan and implement appropriate learning and assessment strategies to meet the needs of clients including:

- Assessment strategies for each Training Package qualification and accredited course on its scope of registration
- Validation of assessment strategies

### **7.3. Basic Principles of CBT Assessment**

#### Validity

- The evidence will prove that the individual has the required skills and knowledge as specified in the relevant unit of competency
- Will meet each element of the benchmark
- Competencies (benchmarks) are assessed holistically

#### Reliability

- The evidence will prove that the individual has the required skills and knowledge as specified in the relevant unit of competency
- Will meet each element of the benchmark
- Competencies (benchmarks) are assessed holistically

#### Fairness

- The assessor objectively considers all evidence, is open and transparent about all assessment decisions, and takes into account relevant characteristics and needs of the candidate

#### Flexibility

- Assessments can be either on- or off- the job, and a mutually convenient times and situations

### **7.4. Forms of evidence**

- Demonstration of real work
- Demonstration in a simulated environment
- Contents of a portfolio
- Role-play
- Video recordings of a performance
- Project-based
- Products made
- Case studies
- Processes used and documented
- Answers to questions
- Procedures completed
- Reports from third parties (references)

Assessment tools and methods must collect enough evidence in order for the assessor to be enabled to make the assessment judgment

Usually this means collecting evidence that demonstrates competency over a time period and in different situations

A good way of ensuring sufficient evidence is through using a combination of different methods and tools

### Direct Evidence

Direct evidence is obtained when an assessor observes the candidate's performance and makes a judgment about whether the candidate has competently performed the required task or series of tasks. This observation could be conducted in a variety of ways. For example the assessor could observe the candidate performing a range of tasks in the workplace, and question the candidate; view a video of the candidate's performance; or observe the candidate's performance in a simulated workplace.

### Indirect Evidence

Indirect evidence is used when it is not possible or desirable for a candidate to be observed during their actual performance of tasks in the workplace; it may be too costly, involve risks or potentially breach confidentiality or privacy. Assessment methods used to collect indirect evidence could include examination of a finished product with evidence to authenticate that it is the candidate's work.

### Supplementary Evidence

Supplementary evidence is additional evidence supporting direct and indirect evidence. It is often obtained through third party sources, for example, from members of the candidate's work team or managers, work journals or evidence of completed training.

### Combination of Evidence

Usually, a combination of types of evidence is used to assess competence. For example, in the automotive sector, you could observe someone on the job performing a task such as inspecting brakes, ask them about possible solutions in a simulated situation or both.

## **7.5. Assessment methods**

The following are examples of a few methods that can be used to assess competency:

<b>METHOD</b>	<b>EXAMPLE</b>
Direct observation	<ul style="list-style-type: none"><li>• Real work and/or real time activities</li><li>• Work activities in simulated workplace environment</li></ul>
Questioning	<ul style="list-style-type: none"><li>• Self-assessment</li><li>• Verbal questioning</li><li>• Written questioning (including computer-based)</li><li>• Interview</li><li>• Questionnaire</li><li>• Verbal or written examinations</li></ul>

Review of products	<ul style="list-style-type: none"> <li>• Work samples or products</li> <li>• Products as a result of a project</li> </ul>
Structured activities	<ul style="list-style-type: none"> <li>• Projects</li> <li>• Presentation</li> <li>• Role-play</li> <li>• Case study</li> <li>• Fault finding</li> </ul>
Portfolio	<ul style="list-style-type: none"> <li>• Documents such as work samples</li> <li>• Product with supporting documentation</li> <li>• Historical evidence</li> <li>• Journal/log book</li> <li>• Information about life experience</li> <li>• Collecting of work samples compiled by candidate</li> </ul>
Third party feedback	<ul style="list-style-type: none"> <li>• Testimonials or reports from employers or supervisors</li> <li>• Evidence of training</li> <li>• Interview employer, supervisor, peer</li> <li>• Authenticated prior achievements</li> </ul>

## 7.6. Assessment Tools

Assessment tools are for gathering evidence based on the selected assessment methods. They can also be procedures to be followed when conducting assessment.

Assessment tools need to be designed carefully to ensure that:

- Assessments are conducted according to the principles of assessment
- The collected evidence meets the rules of evidence
- All evidence requirements are addressed
- The needs of the trainees are taken into account

### *The Purpose of Assessment Tools*

<b>Purpose of Assessment Tool</b>	<b>Example of Assessment Tool</b>
To provide guidance and structure for the candidate/assessor in collecting evidence	A checklist to be used in the demonstration of a series of tasks
To guide and support the candidate in understanding and participating in the assessment process	Instructions to the candidate about how to be involved in a role-play activity
To give clarity and confidence to the assessor and/or candidate in working through the process	Clear criteria for a product to be assessed against
To define the key performance indicators to be met by the candidate	List of criteria for a candidate when being involved in a simulation, so they

	know what particular areas will be assessed
To ensure the rules of evidence and principles of assessment are addressed in the assessment process	Matrix of assessment methods against the evidence requirements
To be used as a recording and reporting mechanism	List of questions with space to record responses and feedback given, as well as whether candidate is competent or whether future evidence is required
To provide objectivity and consistency in evidence collection	Set of predetermined questions to be asked
To enable recognition	Self-assessment checklist, with suggestions of types of evidence
To provide a tool to document the need for further action	Any checklists that provide room for feedback and advice given for further action

### 7.7. Assessment Validation

The most common process for assessment validation is through moderation. It is a process of comparing standards of assessment across different courses, institutions and/or organizations to ensure assessments are valid, reliable and fair.

Assessment moderation can be conducted before, during and after assessment.

Assessment validation involves comparing, evaluating and reviewing assessment processes, methods and tools and the subsequent assessment decisions. It can include assessment moderation activities in which assessors discuss and reach agreement about assessment processes and outcomes in a particular industry or industry sector, developing a shared understanding of specific Training Packages.

The benchmarks for assessment validation is the competency standard.



## **8. EVALUATING TRAINING**

### **8.1. Record Training Information**

There are certain aspects of the training program that need to be recorded. Records provide the details that people might have to refer back to in the future. For example:

- Participants want to check on their results
- A new trainer wants to find out how many participants have completed training in a certain skill
- The finance department needs to quote some figures about the cost of training
- The training manager needs to include in a report the number of people enrolling in a program
- A supervisor needs to know which participants have attended training sessions
- Each organization is a bit different so it is important to find out what record keeping systems already exist in your organization. You will need to find out where the records are kept and the requirements for recording such as what information you need to record, where it is kept and security requirements.

### **8.2. Who has access to training records?**

When keeping records of training it is important that they are kept secure and confidential. Your organization will have guidelines on who has access and when they can be accessed. These should be consulted before access is given to ensure they are authorized. Some of the people who may need access are:

- Participants
- Other trainers
- Assessors
- Managers / supervisors
- Government regulatory bodies

### **8.3. What is Evaluation?**

Evaluation is about gathering information or feedback from everyone involved about the effectiveness of the training program. Evaluation gives you the information that allows you to 'fine tune' or 'carry out major repairs' on your program.

Evaluation should be conducted as an ongoing and integral part of a training program rather than just one final evaluation at the end.

When you first start use evaluation techniques, participants may feel uncomfortable about being involved. This may occur if they are worried about being critical of both the trainer and the program. However, without input from participants you will not get an effective evaluation. As a trainer you need to develop an atmosphere of trust in which

participants feel comfortable about giving feedback, both positive and negative.

#### **8.4. Why do you need to Evaluate Training?**

There are four main reasons why we may be required to evaluate our or someone else's training.

##### Organizational requirement

Management may require training to be evaluated as part of organizational procedures or reviews. Do you have a viable product / service?

##### Justification

To justify why the training is taking place. Can you justify the continuation of the training?

##### Assurance

To assess the ongoing quality of the training. Is the program up to date as far as content, materials and presentations?

##### Improvement / review

To improve the training and assess whether it is meeting current needs. Have the identified needs for the program changed over time, and does the program now meet these changed needs?

To make sure that you can respond to all of these areas, it is important to carry out systematic and ongoing review and reflection. This involves:

- Looking back to identify exactly what did happen
- Analyzing this to identify changes and improvements that need to be made
- Communicating any recommendations coming from the analysis
- Implementing the changes recommended

#### **8.5. What do you evaluate?**

To ensure that evaluation is effective there are a number of key areas that need to be covered.

##### The training program

The training program relates to content. You will be looking at the structure of the program, the resources, methods and activities used.

##### The trainer

Feedback of the trainer can help identify any training skills and methods that do and / or do not work. When evaluating the trainer you are evaluating their effectiveness in being able to facilitate learning.

### The participants

Evaluation of the participants has to do with the effect of the training on their behavior, attitudes and knowledge. How successful was the training on developing competence in their workplace?

### The results

If training has been effective then there should be observable changes in the workplace or organization.

## **8.6. When do you evaluate?**

Evaluation should be taking place all through training. However, depending on what you are evaluating will often influence when you can evaluate. If evaluating the effectiveness of training on workplace performance then the best time to evaluate would be some time after participants have had time to go back and apply the training. Evaluation the same afternoon as training would not be very effective.

When you carry out evaluation you will need to consider things such as:

- How long will participants need to practice and apply the new skills and information?
- How long will it take before changes in productivity can be witnessed?
- What can be observed and evaluated during training?

## **8.7. Who do you get the information from?**

The information you need in order to evaluate a training program can be gathered from a variety of people.

### Participants

Participants can provide valuable information in order to evaluate the effectiveness of the training. As they are the ones involved in the training they are the ones who can provide feedback regarding the trainer, the content and structure of the program and any improvements in their performance.

### Trainer

The trainer also can offer valuable information regarding many aspects of the training program. As the trainer is the one who is presenting the information, their own reflections on how well they presented the training program and its content is important. They can also offer information on how well they thought

participants learned new information and how well they are progressing. The trainer can also provide information regarding on the job results if they are in the workplace. However, it is generally supervisors and managers who see on the job results more than the trainer.

### Other people

Other people who might evaluate the effectiveness of a training program include supervisors, managers and assessors. It is difficult for these people to evaluate the trainer or the content of the training program unless they are involved and can observe these areas. However, these people are valuable for gathering information on participant progress and on the job results.

## **8.8. Collecting feedback**

To evaluate training you need to collect feedback and information about different aspects of your training. The information that you collect will be of two different kinds.

### Qualitative

Qualitative data is difficult to measure and quantify but allows for feelings and attitudes to be included. Examples include:

- Participant attitude to program structure.
- How participants feel about the information provided.

### Quantitative

Quantitative data are easy to measure and quantify and relate to outputs, costs and time. Examples include:

- Number of participants completing the program.
- Costs of providing the training.

Qualitative data is usually collected from open ended questions and should be quoted as it is, or grouped together into similar responses. Care must be taken not to interpret the response. The people reading the report will then have the opportunity to draw their own conclusions.

When collecting information to use for evaluation purposes, it is important to consider the question of ethical practices. Whenever we ask people for their opinions and judgments about aspects of their work or training we are entering a very private domain. Many people feel very threatened and even fearful when they are asked for this kind of information because they may not be sure exactly how it is going to be used. Confidentiality and privacy must always be uppermost in your mind when you gather information. If you are able to offer anonymity to your participants when they answer

questions or give feedback you may receive a wider range of open responses.

### **8.9. Evaluation criteria**

There are several requirements that all evaluation methods must meet. No matter which method you select it should satisfy the following five criteria:

#### Valid

Does the evaluation method measure what it is designed to measure? For example, if you want to gather information on whether participants have learnt to drive a forklift would you give them a questionnaire or observe them driving a forklift?

#### Reliable

Is the information that the evaluation method has gathered consistent? If the same questionnaire was administered to the same participant two days later, the results should be the same, providing there has not been any new training.

#### Clear

All instructions and information given to the person providing feedback should be clear and simple to understand. Make sure that there are no ambiguities in any part of the process.

#### Brief

Keep the extent of the evaluation – the number of questions, for example – to a manageable level. If there is too much for participants to wade through, they may lose concentration or become frustrated. This could result in results not being consistent, not accurate and not completed.

#### Economical

The method that you use should not be too time consuming or costly to administer and analyze. If, for example, you have a large group of participants, a survey would be easier to administer than, say, a one-to-one interview.

You will also need to keep in mind the ease of scoring or analyzing the information that has been gathered and the usefulness of the information.

### **8.10. Evaluation methods**

There are many methods that you can use to evaluate your training program. Which ones you choose will depend on the area that you are evaluating and the kind of information you need.

<b>Method</b>	<b>Advantages</b>	<b>Disadvantages</b>
Observation	<ul style="list-style-type: none"> <li>• Easy to see a skill being performed competently</li> <li>• Non-verbal language can provide valuable information</li> </ul>	<ul style="list-style-type: none"> <li>• Intrusive</li> <li>• Is open to misinterpretation</li> </ul>
Interviews	<ul style="list-style-type: none"> <li>• Opportunity to provide opinions</li> <li>• Can monitor verbal and non-verbal responses</li> </ul>	<ul style="list-style-type: none"> <li>• Time consuming</li> <li>• Interviewer may influence responses</li> </ul>
Performance appraisals	<ul style="list-style-type: none"> <li>• Can discuss performance</li> <li>• Identify areas for improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Participants information is usually confidential</li> </ul>
Self evaluation	<ul style="list-style-type: none"> <li>• Identifies own strengths and weaknesses</li> <li>• Helps reflect on own performance</li> </ul>	<ul style="list-style-type: none"> <li>• Can be time consuming</li> <li>• Participants may find it difficult to do</li> </ul>
Cos-Benefit analysis	<ul style="list-style-type: none"> <li>• Identify how much the program costs</li> <li>• Can cover many areas</li> </ul>	<ul style="list-style-type: none"> <li>• Time consuming</li> <li>• Cannot always attribute dollar value to all areas</li> </ul>
Questionnaires	<ul style="list-style-type: none"> <li>• Save time, economical to administer</li> <li>• Can cover a large number of participants</li> </ul>	<ul style="list-style-type: none"> <li>• Time consuming and difficult to prepare</li> <li>• May lose concentration if to lengthy</li> </ul>

By using a range of methods you will be able to gather more reliable information. If you use an interview and a questionnaire, for example, you can crosscheck the responses for accuracy.

Another important point to remember is that you should only collect information that you will know will be of use to you in your evaluation.

For cost-benefit analysis to be an effective way of evaluating training all four areas must be analysed and attributed a cost/benefit.

If you only evaluate one or two of these areas, cost effectiveness should not be used as the sole method of evaluation.

### **8.10.1. Effective questioning**

When collecting feedback on your training you can use questions in a variety of ways. You may use them in a written questionnaire, in an interview or when observing some performance of a task in order to check their understanding.

### **8.10.2. Interviews**

An interview is a set of questions, asked by the interviewer, where participant's answers are either summarized or recorded by the interviewer. Interviews provide the opportunity for participants to give their opinions and these can then be probed in detail by the interviewer.

If you pick up on some not-verbal responses that do not agree with the verbal message, you are able to follow up with another question during the interview to determine why this is occurring.

Some examples of interview questions are:

- What aspects of your safety training have you put into action? Please explain.
- What aspects of the training program have you found most useful? Please explain.

Before you start the actual interview make sure that you have clearly identified the purpose of the interview, and structured the questions appropriately. There are a number of things to keep in mind to ensure that the questions will be listened to and understood by all participants.

- Ask questions clearly and at normal pace
- Use simple sentences
- Repeat the question if necessary
- Rephrase the question if necessary

### **8.10.3. Questionnaires**

A Questionnaire is a set of written questions that are answered in writing by participants. The main advantage of using questionnaires is that they save time and are economical to administer.

When questionnaires are used to gather evaluative information, it is important that you:

- Prepare the questionnaire carefully, giving consideration to the type of information required.
- Ensure that questions are written clearly and unambiguously.
- Provide all the information that participants need in order to respond validly to the questionnaire and to return it promptly.
- Avoid lengthy questionnaires.

### **8.10.4. Designing your questions**

When designing your evaluation you will need to think about the questions that you will need to ask of each area. Some examples of the questions you could ask are:

### Questions about the trainer

- Did the trainer present information in a clear manner?
- Was the purpose of the training clearly explained?
- Did the trainer provide opportunities to ask questions?

### Questions about the training program

- Was the program well structured?
- Was the program relevant to your work?
- Were the training resources useful?

### Questions about participants

- Did participants achieve the training outcomes?
- Were participants able to apply the information in their workplace?
- Did participants feel that their needs were met?

### Questions about the training results

- Did the training increase productivity?
- Did the training decrease workplace accidents?
- Did the training result in better workplace performance?

## **8.10.5. Analysing feedback**

Because you are gathering information during the training program you should not wait until the end to analyze the responses from participants. You will be able to make ongoing decisions about modifications based on the analysis of participant's feedback as soon as it is collected.

The process of analyzing data can be personally challenging. You know that reflecting on some sorts of feedback can be hard. Some trainers shy away from doing any analysis because of their fear of finding something negative. Most trainers, however, realize their professional standing is firmly linked with being accountable and responsible. They want to help improve their enterprise in areas such as productivity, quality, morale, safety and self-esteem, and they want to know if they are achieving results in any of these areas.

Information you have gathered for evaluation needs to be organized so that it can be easily interpreted. You may want to group information together in the form of a separate document or report or you may want to enter the information into a spreadsheet computer program so that you can display the information as a graph or chart.

If you are using a computer to display the information for you, make sure that you have a thorough understanding of the data before you draw any conclusions and present your information.

You should also consider the impact that different presentations could have on interested



people. Take into account what they like and expect so that you can present your information.

#### **8.10.6. What do you do with the results?**

Once you have gathered your information and analyzed it, you are in a position to draw some conclusions and make some recommendations. These might relate to:

- Skills of the trainer
- Availability of resources
- Training methods used
- Clarity of program aims and purpose

Changes recommended by the evaluation might occur throughout your training program. Participants may make observations in the early stages of the program which you will have the opportunity to respond to. Feedback should be accepted as constructive advice, acknowledged and incorporated wherever possible.

As you gather the information about your training program, the people involved in the evaluation may be very interested in what will be done with the findings. You will be able to keep faith with these people by demonstrating that you have listened to their input, have valued their contribution and incorporated their feedback where it is appropriate.

While every Endeavour needs to be made to be made to meet individual needs, you may have difficulty modifying the entire program if only one person thinks it should change.

If the analysis of the information leads you to draw a positive conclusion, then everything is fine. However, it is always a good idea to keep reviewing your approach even when there don't appear to be any negative results.

#### **8.11. Reporting**

After you have analyzed your findings for the overall program, you will need to develop a report. This report will provide valuable information on the background, methodology and outcomes of your evaluation to such people as:

- Supervisors / managers
- Human resources department
- Government regulatory bodies
- Funding departments

A few points should be kept in mind when preparing to communicate your evaluation findings:

- Pick the right time – this should be as soon as possible after the conclusion of the program.

- Target specific people and make the message meet their individual needs.
- Select the media carefully; should you write a memo or make an oral presentation to a group?
- Remove the emotion and bias from the communication.
- Detach yourself from the findings.

The information you gathered may have to be presented to other people in your organization. Two types of reports are:

- Review and update reports – which reflect on progress, and how the program is being fine tuned to take into account the feedback received.
- Final reports – which present the full range of findings, draw final conclusions and make recommendations for future programs.

## 9. MANAGING AND PROMOTING TRAINING PROGRAMS

The following are administrative details that you need to take into consideration as you run your training program:

- Keeping records of the trainees' progress through the program
- Keeping records of the evaluation of your programs
- Keeping records of internal and external resource people
- Following costing procedures to keep your program within budget
- Following smooth administrative procedures to ensure that your program runs smoothly
- Maintaining a current list of relevant external training programs
- Briefing all people involved in the training program

### 9.1. Keeping Records

Records are one of the most important aspects of managing your training program. Some of the activities and resources that will need to be recorded are given in the following table:

<b>Record</b>	<b>Purpose</b>
People enrolling in the program	<ul style="list-style-type: none"><li>• Keep accurate records for upcoming classes to ensure cancellations are filled</li></ul>
People invited to attend	<ul style="list-style-type: none"><li>• For statistics, follow-up letters and follow-up evaluation</li></ul>
People who have actually attended sessions	
Trainers you can call upon to conduct sessions – external and internal	<ul style="list-style-type: none"><li>• Keeping an up-to-date file can save considerable time when you are trying to locate people to run sessions</li></ul>
External training programs which can enhance what you currently offer	<ul style="list-style-type: none"><li>• An organized list can save you valuable time in looking up this information</li></ul>
Results of evaluation of your programs	<ul style="list-style-type: none"><li>• Vital information for improving current training programs and important supporting information when seeking a new budget or additional resources</li></ul>
Rooms available	<ul style="list-style-type: none"><li>• Keeping a list of available premises for specific purpose programs enables you to schedule programs more easily</li><li>• A booking system will avoid embarrassing clashes and over-booking</li></ul>
Costing the training programs	<ul style="list-style-type: none"><li>• For keeping track of expenditures and income. Your accounting department may help you set up a suitable record keeping system</li></ul>

## 9.2. Setting up the Records and Systems

When you are ready to set up a new record keeping system, it is important to consider:

- What information (reports, specific details, general trends) will you want to retrieve from your records?
- How will you keep the records – e.g. On paper or on computerized databases
- How will you maintain the records – keep them up to date, delete old information and assure accuracy. ((For instance, how will you track trainers who add to their area of specialty, keep track of good trainers etc.)
- Who will perform the necessary roles in maintaining your record system – set up databases, enter new data and modify data.

## 9.3. Costing your Training Program

It is very important to establish a budget for the conduct of a training program. The budget should take all components into consideration. Most managers focus on the bottom line (the dollars and cents!!) as part of their evaluation of your programs. If you have recorded accurate costs and can prove that you have kept within the program budget, your program has a much greater chance of receiving on-going support.

Each organization is different and handles things in different ways. Many organisations have formulas (see handout) for calculating how much it costs to use a room, to employ a certain staff member at a certain level and other costs that are often “hidden”.

As a general guide there are three types of costs that are hidden:

<b>Type of Costs</b>	<b>Examples</b>
Preparation	Typing, phone calls, faxes, photocopying, course design, resource materials etc.
Direct costs	Trainers’ wages, trainees’ wages, guest speaker/visiting expert fees, venue costs, meals, accommodation, travel, and any other costs related to running the program
Administrative costs	Trainers’ wages for evaluation of the course, transport, hire costs and consumables

## 9.4. Promoting Training Programs

People are more likely to support training programs when they understand how they can be of benefit to them. There are two primary groups of people whose support is important to your program, the people who make the decisions about running the program and the people who attend the program.

## 9.5. What do managers need to know?

Managers are particularly interested in the following key areas:

- How will the training program improve productivity
- Why time and money should be invested in the training program
- How the program will help the organization meet its goal
- How much work the learners will miss

## 9.6. What do potential learners need to know?

- A promotion or pay rise
- Increased self esteem
- Increased efficiency in the job
- Increased competency or gaining of new skills
- Familiarity with a new system or machine

### How do you promote training?

When you are promoting the training program, it is important to consider the following:

- Who are you trying to reach? Who is the target group?
- What are the benefits to the target group attending the training?
- How can you communicate this?
- How can you promote the training to the group?

The methods that you use to present to the managers or key decision makers will differ from those you use to promote the program to learners. Gathering support from the managers or those in control of training funds is an on-going process which requires research and planning.

Information that you present to management about prospective training needs to be clear and concise. In a presentation of promotional material you could include:

- The facts: the training you have identified, evidence that it is needed and how the program will meet these needs
- The link to organizational goals
- The costs and time frame involved
- The evaluation of the program afterwards to show that it met its stated objectives

Having worked out the information you are going to provide, there are a number of ways you can present this information. You could have a meeting with one or more key people, present the information to a group, distribute a written presentation, or a

combination of all of these.

Information that you present to potential learners can be put together in a variety of ways. You could distribute a newsletter, brochures, posters or send e-mail. When you are promoting the program to learners, you must make sure that you include enough details so that they can make an informed decision. You could include, for example:

- A summary of the content of a program
- A brief description of the expected goals
- The specific benefits to the learner
- The venue, times, dates and any extra resources they need
- The cost if there is any
- How to enroll
- Who to contact for more details

### **9.7. How do you evaluate the Promotion?**

You need to monitor the effectiveness of your promotional activities to make sure that the information is being communicated to the right people in the right way. There are many methods you can use to monitor the effectiveness of your promotions. For example:

- Monitor enrolment numbers and where learners have found out about the program
- Conduct surveys to find out how aware they are of your program and its benefits
- Talk to people and get informal feedback on how much they know about the programs you are involved in
- Try different forms of promotion and use any of these methods to monitor their success, so you will know what works for particular groups

**添付M：**

**第二回パイロット訓練コースアセスメントツール**

Appendix L-1: WORKPLACE TASK DISTRIBUTION for INDUSTRY  
ATTACHMENT

TASKS	WORKPLACE
<b>Apply Safe Work Practices</b>	
Identify workshop hazards	Mega Motor
Identify fire extinguishers and applications	
Demonstrate fire extinguisher use	
Demonstrate safe use of car lift	
Demonstrate safe use of alligator jack and stands	Saipa Yadak
<b>Workplace Tools and Equipment</b>	
Dismantle and assemble engine components	Mega motor
Measure engine components	
Demonstrate use of specialised tools	
<b>Inspect and Service Engines</b>	
Check engine oil and coolant levels	Mega Motor
Inspect cooling system for leaks/damage	
Check for engine oil leaks	
Inspect drive belts for wear/damage	
Check timing mark alignment	
Remove and replace rocker cover gasket	
Change engine oil and filter	
Check and adjust valve clearances	
Check for abnormal noises	Sapa Yadak
Carry out compression test	
Carry out manifold vacuum test	
<b>Service Petrol Fuel Systems</b>	
Inspect fuel system for leaks/damage	Saipa Yadak
Remove and replace mechanical/electric fuel pumps	
Dismantle and assemble mechanical/electric fuel pumps	
Check EFI fuel system pressure	
Remove and replace fuel injectors	Mega Motor
Dismantle and assemble carburettor and adjust float level	
Adjust and tune carburettor	
<b>Inspect and Service Brakes</b>	
Check brake pedal travel	Saipa Yadak
Check brake pedal free play	
Measure disc run out, thickness and wear	
Adjust drum brakes	
Test brake fluid	
Bleed and flush brake fluid	
Remove and replace brake pads	
Remove and replace brake callipers	
Complete workplace documentation	
Complete work within industry timelines	
<b>Test , Service and Charge Batteries</b>	
Test battery using voltmeter and hydrometer	Saipa Yadak
Load test battery	
Recharge battery	



TASKS	WORKPLACE
Jump start car	
Repair Single Electrical Circuits	
Measure voltage, current and resistance in a circuit	Saipa Yadak
Test starter circuit for voltage and voltage drop	
Test circuit for earths, shorts and grounding	
Interpret wiring diagram	
Read in the Workplace	
Research workshop manual for specific procedures	Saipa Yadak
Interpret written instructions	
Locate technical specifications in workshop manuals	
Access specific internet web sites	
Navigate web sites	
Service Automatic Transmissions	
Inspect fluid level and condition	Saipa Yadak
Change fluid and filter	
Check safety switch operation	
Inspect and Service Steering System	
Inspect condition of manual steering rack assembly	Saipa Yadak
Inspect condition of manual steering box assembly	
Inspect condition of power steering rack assembly	
Inspect condition of steering assembly and associated components	
Complete workplace report	

## Appendix L-2: ASSESSMENT MATRIX FOR UNIT OF COMPETENCE

<b>National ID</b>	AUR30405
<b>Qualification</b>	Certificate III in Automotive Mechanical Technology
<b>Competency</b>	Inspect and service brake systems
<b>National Code</b>	AURT210170A
<b>Description</b>	This unit covers the competence required to inspect and service of braking systems and/or associated components, including pneumatic over hydraulic, air, hand and parking brake systems in an automotive retail, service and/or repair context. The unit includes identification and confirmation of work requirement, preparation for work, conduct of brake system wear analysis, servicing of braking systems and completion of work finalisation processes, including clean-up and documentation.

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
<b>1. Prepare to undertake braking system inspection</b>			
1.1 Nature and scope of work requirements are identified and confirmed			
1.2 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work			
1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced			
1.4 Methods appropriate to the circumstances are selected and prepared in accordance with standard operating procedures			
1.5 Resources required for inspection of braking systems are sourced and support equipment is identified and prepared			
1.6 Warnings in relation to working with braking systems are observed			
<b>2. Conduct braking system wear analysis</b>			

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
2.1 Braking system analysis is implemented in accordance with road safety legislation, workplace procedures and manufacturer/component supplier specifications			
2.2 Brake wear measurement results are compared with manufacturer/component supplier specifications to indicate compliance or non-compliance			
2.3 Results are documented with evidence and supporting information and recommendation(s) made			
2.4 Report is processed in accordance with workplace procedures			
<b>3. Prepare to service braking system and/or associated components</b>			
3.1 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work			
3.2 Procedures and information required are identified and sourced			
3.3 Resources required for servicing braking systems are identified and support equipment is identified and prepared			
<b>4. Carry out servicing of braking systems and/or associated components</b>			
4.1 Servicing is implemented in accordance with workplace procedures and manufacturer/component supplier specifications			
4.2 Adjustments made during the servicing are in accordance with manufacturer/component supplier specifications			
<b>5. Prepare equipment for use or storage</b>			
5.1 Servicing schedule documentation is completed			
5.2 Final inspection is made to ensure protective features are in place			

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
5.3 Final inspection is made to ensure work is to workplace expectations			
5.4 Equipment is cleaned for use or storage to workplace expectations			
5.5 Job card is processed in accordance with workplace procedures			
<b>UNDERPINNING KNOWLEDGE</b>			
<ul style="list-style-type: none"> <li>• OH&amp;S and environmental regulations/requirements, equipment, material and personal safety requirements</li> </ul>			
<ul style="list-style-type: none"> <li>• dangers of working with braking systems</li> </ul>			
<ul style="list-style-type: none"> <li>• operating principles of braking systems, components and their relationship to each other</li> </ul>			
<ul style="list-style-type: none"> <li>• types and layout of service/repair manuals (hard copy and electronic)</li> </ul>			
<ul style="list-style-type: none"> <li>• analysis procedures</li> </ul>			
<ul style="list-style-type: none"> <li>• servicing procedures</li> </ul>			
<ul style="list-style-type: none"> <li>• enterprise quality procedures</li> </ul>			
<ul style="list-style-type: none"> <li>• work organisation and planning processes</li> </ul>			
<b>Task skills (which assessment(s) or class activity will test that the candidate can demonstrate a single task?)</b>			
<b>Task management skills (which assessment(s) or class activity will test that the candidate can meet the performance criteria whilst completing other tasks)</b>			

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
<b>Job/role environment (which assessment(s) or class activity will test that the candidate can meet the performance criteria within their job)</b>			
<b>Contingency management skills (which assessment(s) or class activity will test that the candidate considers what might go wrong and takes action to prevent or correct)</b>			
<b>SPECIFIC EVIDENCE REQUIREMENTS / CRITICAL ASPECTS OF EVIDENCE</b>			
<b>It is essential that competence in this unit signifies ability to transfer competence to changing circumstances and to respond to unusual circumstances in the critical aspects of:</b>			
<ul style="list-style-type: none"> <li>observing safety procedures and requirements</li> </ul>			
<ul style="list-style-type: none"> <li>communicating effectively with others involved in or affected by the work</li> </ul>			
<ul style="list-style-type: none"> <li>selecting methods and techniques appropriate to the circumstances</li> </ul>			
<ul style="list-style-type: none"> <li>completing preparatory activity in a systematic manner</li> </ul>			
<ul style="list-style-type: none"> <li>conducting the inspection in accordance with workplace and manufacturer/component supplier requirements</li> </ul>			
<ul style="list-style-type: none"> <li>accurately interpreting wear analysis results</li> </ul>			
<ul style="list-style-type: none"> <li>completing service of braking systems in accordance with workplace and manufacturer/component supplier requirements</li> </ul>			
<ul style="list-style-type: none"> <li>completing service of braking systems and associated components within workplace timeframes</li> </ul>			

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
<ul style="list-style-type: none"> <li>equipment is presented to customer in compliance with workplace requirements</li> </ul>			



Appendix L-4: ASSESSMENT SUMMARY

**UNIT:**

Course: \_\_\_\_\_  
\_\_\_\_\_

Student:

	Mark/Grade	Date	Instructor signature
<b>Knowledge Test</b>			
<b>Practical Tasks</b>			
<b>Workplace Component</b>			
<b>Final Result Recorded For Unit</b>			



添付N：

CBTマニュアル

# **Manual on CBT IMPLEMENTATION IN IRAN**

**Developed by the JICA Project Team**

## **Preface**

This Manual has been produced as part of the JICA Project for Strengthening Technical and Vocational Training Management Skills in Technical and Vocational Training Organization (TVTO).

It comprises 3 major processes and is intended to assist Iranian TVT personnel to set up and conduct Competency Based Training (CBT) courses.

All processes have been tested in the Iranian TVT context through the planning, delivery and evaluation of pilot courses involving the JICA Project Team (JPT) and Iranian counterpart staff from TVTO.

There would need to be significant structural changes in the Iranian TVT system for the implementation of all components of a CBT approach. Structural change is particularly important to enable much greater participation by industry both in the design and delivery of training, which is the crux of CBT.

JPT would like to thank all TVTO personnel who have contributed to the delivery of the pilot courses and the development of this Manual. In particular we would like to thank our TVT counterparts for their sincere and sustained efforts.

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# INTRODUCTION TO THE MANUAL

It has been necessary for all industrialized countries to reform their technical and vocational training (TVT) systems.

The key objective of this reform has been to provide training that is more specifically relevant to current and future jobs.

These reformed systems are required to enable entry-level employees to gain as much of the knowledge and skills (also called "competencies") to undertake required job functions when they first enter the workforce.

The reformed systems are also expected to provide ongoing upgrading for employees already in the workforce. Ongoing training is necessary because technology is changing so rapidly in all industry sectors.

In response to this need for TVT reform, a specific training approach called Competency Based Training (CBT) has evolved over a period of many decades.

Variations of the CBT approach are being used by a substantial number of countries to enable their technical & vocational education and training systems to be more relevant to industry needs.

In order to implement an effective CBT system, especially on a national level, the following processes need to be provided:

- ✓ Development of an appropriate framework through which industry competency standards can be prescribed for jobs across all industry sectors;
- ✓ Development of curriculum to support training delivery;
- ✓ Development of an effective framework for the monitoring and evaluation of all accredited training to ensure that all training achieves industry competency standards;
- ✓ Development of a national TVT qualifications system in which certification precisely signifies the job functions the certificate holder can perform;
- ✓ Provision of suitable training staff who have themselves achieved the prescribed industry competency standards and can deliver the training to industry standards;
- ✓ Conduct of trainer-training to induct TVT trainers into the process of delivering courses using a CBT approach and methodology; and,

- ✓ Provision of adequate facilities and equipment for providers or through developing cooperative partnerships with industry partners that have up-to-date facilities and equipment.

This Manual focuses on the following 3 major processes required to be undertaken in order to introduce a national CBT system in Iran:

- 1) Process for Defining Job-relevant Competency Standards;
- 2) Process for Developing Curriculum to Support CBT Delivery; and,
- 3) Process of Developing an Appropriate Monitoring & Evaluation Framework.

### **Process for Defining Job-relevant Competency Standards**

In relation to defining competency standards for all industry sectors in Iran, the recommendation of this manual is that a national framework be set up to customize the standards already developed in other countries such as Australia. (Two courses conducted by JPT in 2009 and 2010 have piloted the use of customized Australian competency standards in the Automotive sector for delivery of the courses.)

Commencing the process of defining job-specific standards from the beginning is likely to be a logistically complex, very time consuming and expensive task. It is recommended therefore to find a simpler and less expensive way to achieve this.

Job functions across all industrialized countries, especially in today's global market, are similar. A mechanic working in the Automotive service and repair sector in Australia, for example, would be required to undertake a very similar range of job functions as a mechanic in Iran or any other industrialized country. The situation would be very similar in most other industry sectors as well.

It makes good sense for the Iranian TVT system to use these standards as the basis for designing Iran-specific ones. The standards would need to be looked at by appropriate representatives from the relevant Iranian industry sectors and customized for use in this country. It is important to note that this process cannot be undertaken exclusively either by the organization responsible for training provision (currently TVTO) or by individual training providers (public and private TVTCs).

It is necessary for a centrally established, national organization or agency to coordinate the activity. Under the direction and coordination of this central organization, it is for bodies comprising industry and appropriate training personnel to be set up to study the Australian competency standards and undertake the customizing activity.



The Manual provides a step by step guide for this process.

### **Process for Developing Curriculum to Support CBT Delivery**

The provision of curriculum to support delivery of training to industry standards is central to the efficient delivery of CBT.

In countries like Australia, responsibility for the process of developing curriculum and suitable training resources varies. (It is important to note that all TVT providers across the country have equal access to nationally defined industry competency standards at all formal TVT certification levels).

In some states such as Victoria, the TVT system is decentralized, with each TVT provider accorded responsibility for management of all aspects of training provision. Responsibility for curriculum development in this system, therefore, is allocated to the individual training providers. For this to be feasible, publicly funded training-provider institutions have been amalgamated to form very large organizations with increased infrastructure and more substantial budgets for this kind of activity.

Private TVT providers are also expected to produce their own curriculum or purchase it from any one of a number of independent organizations that produce curriculum on a fee-for-service basis. (This kind of curriculum material is also available to public-funded TVT providers).

In other states in Australia, such as New South Wales, TVT is still centrally managed. The State Government has set up a framework for the production and dissemination of curriculum to the training providers under their management and supervision. Private providers are expected to produce their own training resources or purchase them from the public system or from independent organizations.

This Manual provides a step by step guide for the process of curriculum development. In the context of Iran TVT, it is important to note that the individual TVT providers (public and private TVTCs) are not likely, for the most part, to have the capability to develop curriculum to any significant extent. The process would therefore need to be initiated by an existing center such as the Curriculum Development Center (CDC) within TVTO, ITC or by setting up a new center with curriculum development as its specific role.

This manual will be useful as a guide to curriculum development for the staff working in the CDC with the responsibility for producing the new CBT curriculum. It will be also useful for staff in TVTCs who may be allocated a curriculum development role in

some of the larger TVTCs.

As in the case of the foreign industry competency standards, it would be very useful for the delegated curriculum development staff to access curriculum that has been produced by countries such as Australia and adapt and customize them for use in TVT in Iran. (This was the approach adopted in the development and delivery of the 2 Pilot Courses conducted as part of the JICA Project).

### **Process of Developing an Appropriate Monitoring & Evaluation Framework**

A key feature of a CBT system is the capability to provide continuous improvement. CBT systems are outcome oriented, thus the key outcome that is intended to be achieved in the design and delivery of every course is that trainees will achieve competence to industry standards on completion of the course.

Provision of continuous improvement can only be ensured by monitoring all stages of the training delivery process in order to ensure that trainees have been able to achieve the competence prescribed in the industry competency standards.

TVT course evaluation should be concerned about making judgments on its quality and suitability, and should focus on a whole course or particular aspects such as course design, teaching and learning, skills assessment, delivery and outcomes.

Each course must outline the processes in place for its ongoing monitoring and evaluation, throughout the period for which it is conducted. It is also necessary to show ongoing monitoring and review when reaccrediting a course. There should be an expectation that this process is followed for the accreditation of every course.

The following should be the broad scope for course evaluation:

- ✓ The purpose of the evaluation;
- ✓ Timing of the evaluation;
- ✓ Type and scope of the data to be gathered;
- ✓ Description of the main stakeholders; and,
- ✓ Reporting requirements and format.

This Manual outlines the basic steps required to provide a CBT course monitoring and evaluation framework together with a collection of forms and templates that can be used for this process.

In countries like Australia, responsibility for the process of monitoring & evaluation of courses is mainly with the training providers. In addition, there is overall auditing of all training provision by governing bodies. In Victoria, for example, the governing body is Skills Victoria. This body is responsible for overall auditing of all training functions of both private and public TVT providers. Auditing is carried out in accordance with the Australian Quality Training Framework which incorporates national guidelines for TVT provision.

In view of TVTO's current situation, the overall monitoring & evaluation process can perhaps be organized by an existing department such as the Provincial Office or with designates departments within TVTCs.

It is important to note, however, that all staff that is delegated M&E functions needs to be inducted into the concepts, approach and methodology of CBT provision. Moreover, all M&E data would need to be incorporated into a database by an appropriate center within TVTO such as the Training Department or CDC so that information can be regularly checked and used for continuous improvement.

**NOTE:**

To provide a comprehensive understanding of CBT and its implementation, it will also be necessary to conduct CBT induction workshops for all key stakeholders involved in developing and implementing a CBT system. The course schedule, objectives, together with a course manual for a course delivered to TVTO staff in 2009 and 2010 are provided with this Manual.



# **PART 1: PROCESS FOR DEFINING JOB-RELEVANT COMPETENCY STANDARDS**



# EXPLANATORY NOTE

## DEFINITION OF COMPETENCY STANDARDS

A key process in the CBT approach is developing job-relevant Competency Standards.

Competency Standards provide the basis for all TVT courses and qualifications. They are also the means for common recognition and acceptance of knowledge and skills and qualifications across a country.

The central notion is that the competency standards are defined by industry through the creation of appropriate industry bodies. These bodies work in close collaboration with training management agencies and providers, but are the primary source of the competency standards.

Training organizations, which need to be formally registered to be able to deliver nationally accredited qualifications, are responsible for the **delivery** of training in conformance with the requirements of the prescribed industry competency standards.

A competency standard is a nationally agreed statement of skills and knowledge required for effective performance in a particular job or job function. Someone who is competent can demonstrate that they have the required skills and knowledge and be able to apply to the standards of performance required in the workplace.

It is generally accepted that when training standards are defined by industry, the training is far more likely to prepare people both for entry into the workforce, and for continuing training (including re-training) to meet changing needs. These needs vary, but are often caused by constant changes in technology.

There are 3 main classifications of standards:

<b>Industry standards</b>	Industry standards that are national competency standards endorsed for a specific Industry.
<b>Cross-Industry standards</b>	Cross-industry standards are based on competencies that are common to a range of industries.

**Enterprise standards**

Enterprise standards consist of the competency standards developed and/or used specifically at enterprise level. (For example, large food chains, department stores, supermarkets and manufacturing plants have developed competency standards for their particular needs).

In Australia, Competency Standards are organized into what are called Units of Competence (UOCs) in each industry sector. They are categorized into courses which are in turn classified into hierarchically arranged certification/qualification levels.

Figure 1-1 below shows the relationship between job roles and certification in the Automotive service and repair sector. Each Certificate level is comprised of Units of Competence.

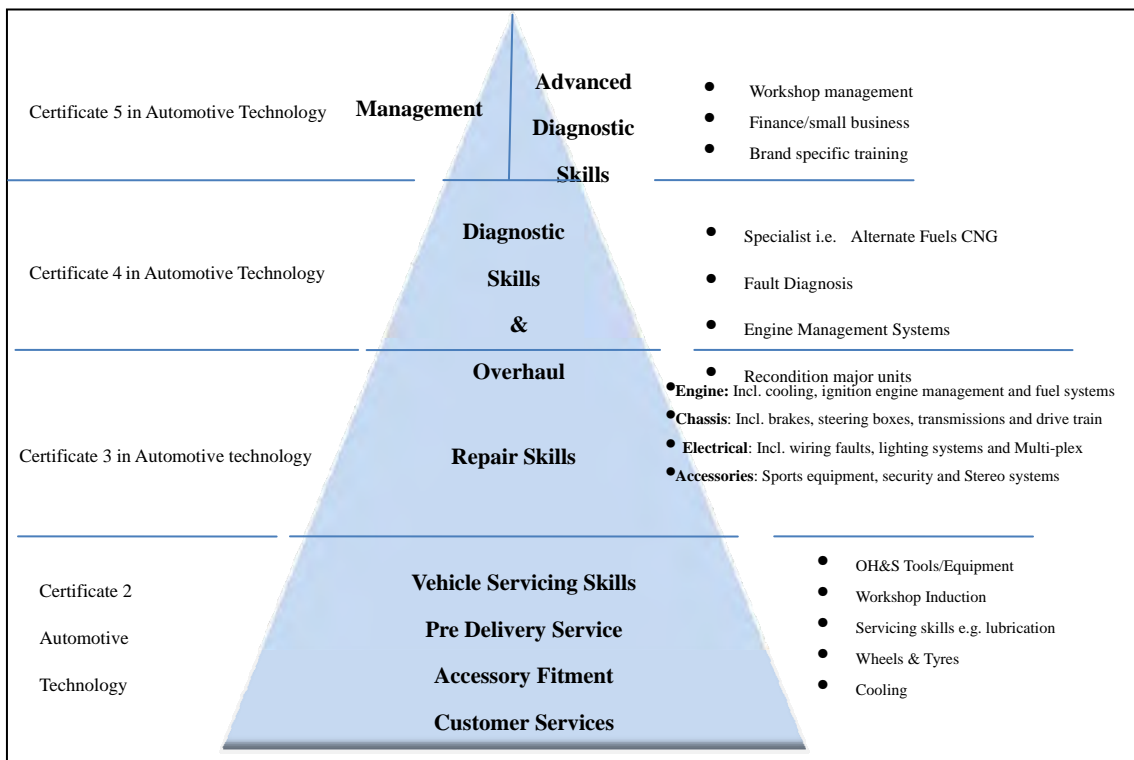


Figure 1-1: Training Model for Auto-Mechanic Industry



# **FAST TRACK STRATEGY TO DEFINE COMPETENCY STANDARDS FOR TVT in IRAN**

The general process of developing competency standards comprises 5 steps as follows.

- Step 1: Research
- Step 2: Analysis
- Step 3: Development
- Step 4: Validation
- Step 5: Evaluation

Conducting all five steps to determine competency standards across all industry sectors from the beginning is likely to be very expensive and costly. Conversely, adopting a fast track strategy by adopting existing competency standards from another country and adapting and customizing them to more specifically suit the Iranian context, can be logistically simpler and far more cost effective.

One of the advantages of adapting industry competency standards from another country is that in Australia, for example, other components relating to TVT delivery such as training resources and assessment tools can be accessed from current training institutes. This will significantly help in saving budgets and time for organizations such as TVT). Iranian TVT delivery organizations can use exiting curriculum material from these organizations and customize then to meet Iranian industrial needs. Importantly, a substantial amount of relevant information can be readily accessed through the internet.

Admittedly there could be some difficulties encountered in adopting this fast track strategy. One issue is that there may be some industries and jobs in Iran for which there are no competency standards developed. Some cottage industries in Iran, for example, may require competency standards that have not yet been developed. For these training areas, TVT in Iran could use the approach and format of the Australian standards to write standards that are specific to Iranian jobs.

## **Examples of the Use of a Fast Track Approach in Other Countries**

Many countries have introduced a CBT system by using models and strategies used in other countries.

Generally countries that have adopted a CBT approach to TVT have done so utilizing the intellectual assets and approaches being implemented in other countries. The following is a brief outline of some of the developments in this regard:

- ✓ Ireland has a 5-level national framework for vocational qualifications – designed to keep in step with the European 5-level framework, thereby enabling greater transferability of skills in the EU. National Council for Vocational Awards is responsible for developing certification and accreditation. Ireland adopts a modular format – each module being a unit of training which can be assessed independently and makes up the qualification together with other relevant units;
- ✓ In the 1980s South Korea translated the performance-based teacher education modules from U.S Ohio State University into Korean and explored their usefulness within their education system;
- ✓ The Department of Vocational Education (DOVE) in Thailand began investigating the usefulness of CBT in the 1980s. They sent senior DOVE staff to South Australia for professional development. They began development of CBT modules to be used in their Technical College system. A Vocational Education Act was passed in 2001 establishing CBT as the preferred approach to VET training in the Thai Technical Colleges;
- ✓ Since the early 1990s, the Philippines have introduced CBT using the Australian CBT system as their model. All their technical colleges have adopted a CBT approach to curriculum development and training implementation under the auspices of a specially constituted central Government body called the Philippines Education & Skills development Authority (TESDA). The Philippines have also set up a national qualifications framework;
- ✓ Indonesia began to move toward the CBT approach in the mid 1990s and have chosen to use models already established in Australia. Major AusAID VET projects have assisted with the development of a national qualifications framework and adoption of a CBT approach to TVT; and,
- ✓ In New Zealand the NZ Education Amendment Act of 1990 established a comprehensive framework for national TVT qualifications covering school and post-school education and training. The CBT system used there is very similar to the Australian one.

# USING THE AUSTRALIAN CBT SYSTEM AS A MODEL FOR TVT REFORM IN IRAN

As mentioned above, a number of countries have adopted a CBT approach to conducting TVT. This Manual has selected the Australian approach as a model.

The Australian CBT system has been developed over a period of over twenty years and has proved very successful in producing trainees that are well trained for entry into all sectors of the workforce. It has also enabled many employees to undertake further training in specific skills areas as required by their occupations.

The Australian system is considered as one of the most successful CBT systems. However, it is recommended that Iranian TVT authorities study the CBT systems of a number of other countries in order to select the features that are of particular relevance and convenience for the Iranian context.

## **Development of Australian Competency Standards**

In Australia the competency standards for all industry sectors are incorporated in a comprehensive set of documents called *Training Packages*.

A Training Package is a set of endorsed competency standards, assessment guidelines and Australian Qualifications Framework qualifications for recognizing and assessing people's skills in a specific industry, industry sector or enterprise. Training Packages describe the skills and knowledge that individuals need to perform effectively in the workplace. A Training Package does not describe how an individual should be trained. Trainers and assessors develop appropriate learning strategies, resources and materials—the 'how'—depending on the learners' needs, abilities and circumstances to meet the needs of the Training Package.

The Training Packages in the Australian TVT system were developed by specially constituted Industry Training Advisory Bodies (ITABs) under the auspices of a central (Federal) Government Authority called the Australian National Training Association. The Training Packages are maintained and amended by newly established bodies called National Skills Councils (NSCs) under the auspices of the National Quality Training Council. (The ITABs and NSCs have substantial representation by personnel from

each relevant industry sector)

Australian Training Packages cover occupational training needs in all industries in the country. Each industry has their own Training Package to suit all occupational training needs in that industry. 31 Training Packages were developed to cover an extensive range of industry sectors.

Importantly, each Training Package is also divided into several certificates that are classified by occupational skill levels and areas, and varying levels of complexity.

Each certificate level comprises several units of competency which are divided into core (compulsory) and elective units. Training providers that choose to implement a course at a particular certificate level have to deliver all core units and have to carefully select elective units of competency from a range of units of competency called inventories according to prescribed selection criteria and local industrial training needs.

A Training Package is comprised of many Units of Competence (UOCs) which cover all skills and knowledge required to effectively perform all occupations in those industries. These Units of Competence are also referred to as Competency Standards and are written using especially prescribed heading and sub-headings which contain all information that is necessary for training providers to develop appropriate curriculum and training methods.

The units of competency are classified into *inventories*, *clusters* and *groups*.

### **Sample Training Package (Automotive Training Package)**

In this Manual a sample training package in the Automotive Service and Repair sector will be used as a sample.

The overall structure of the Automotive Industrial Training Package for Retail, Service and Repair is illustrated in Figure 1.2.

This Training Package has 32 certificates from Certificate 1 to Certificate 5 (Diploma) classified by training areas and levels, as shown in Table 1-1.

There are 10 inventories in the Automotive Industrial Training Package for Retail, Service and Repair, as shown in Table 1-2. Each inventory consists of several clusters. For example, the Technical Inventory has 14 clusters, as shown in Table 1-3. Each of these clusters consists of several groups, for example, Electrical Ancillary Systems and Accessories Cluster has 4 groups and 21 units of competency, as shown in Table 1-4.

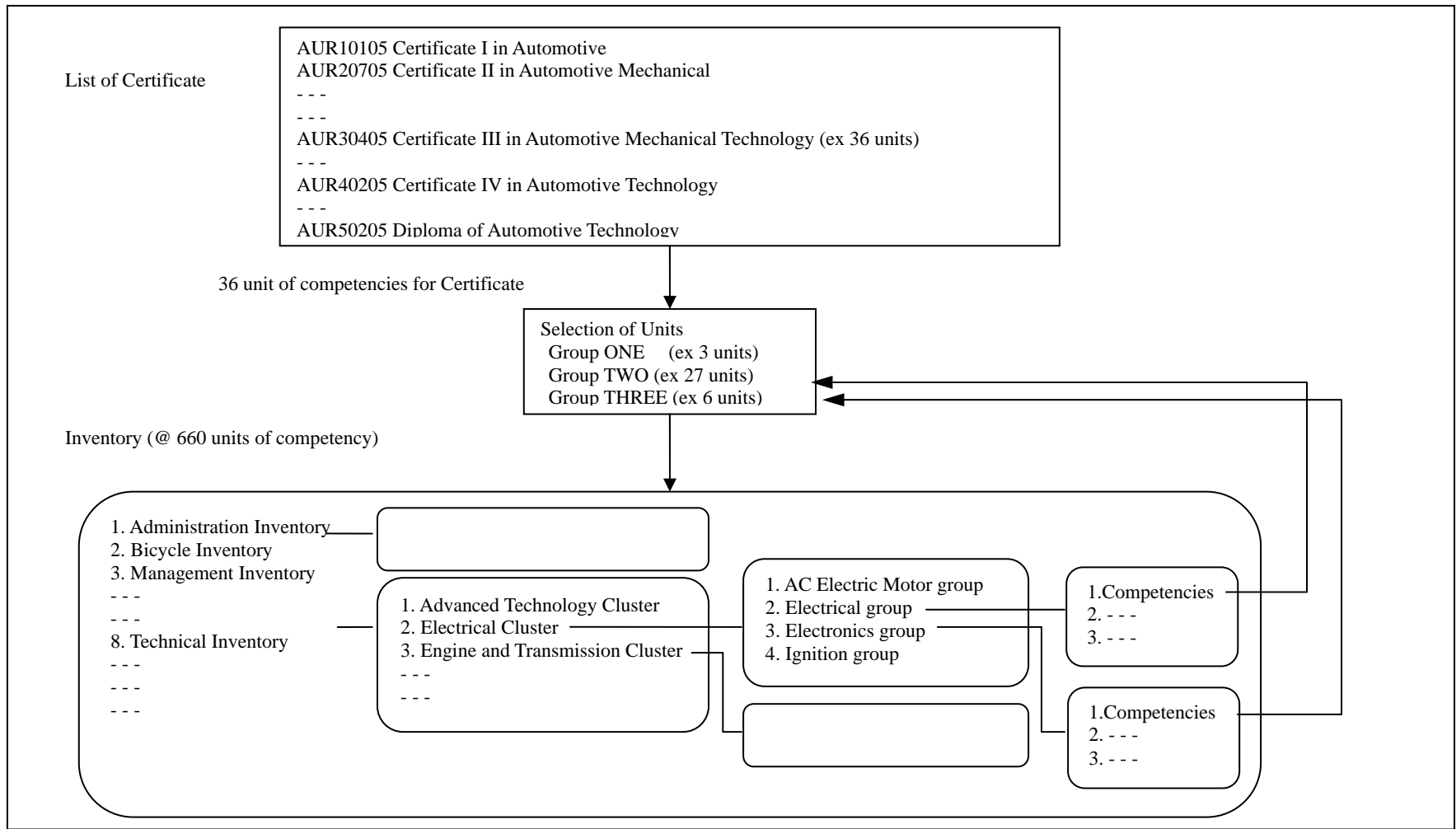


Figure 1-2: Overall Structure of Automotive Industrial Training Package for Retail, Service and Repair

Table 1-1: List of 32 Certificates in Automotive Industrial Training Package for Retail, Service and Repair<sup>1</sup>

Code	Title
AUR10105	Certificate I in Automotive
AUR20105	Certificate II in Automotive Administration
AUR20205	Certificate II in Automotive Aftermarket Manufacturing
AUR20305	Certificate II in Bicycles
AUR20405	Certificate II in Automotive Electrical Technology
AUR20505	Certificate II in Automotive Vehicle Servicing
AUR20605	Certificate II in Marine
AUR20705	Certificate II in Automotive Mechanical
AUR20805	Certificate II in Outdoor Power Equipment
AUR20905	Certificate II in Automotive Vehicle Body
AUR21005	Certificate II in Motor sport
AUR21105	Certificate II in Automotive Sales
AUR21205	Certificate II in Automotive Warehousing/Distribution Operations
AUR30105	Certificate III in Automotive Administration
AUR30205	Certificate III in Bicycles
AUR30305	Certificate III in Automotive Electrical Technology
AUR30405	Certificate III in Automotive Mechanical Technology
AUR30505	Certificate III in Marine
AUR30605	Certificate III in Automotive Specialist
AUR30705	Certificate III in Outdoor Power Equipment
AUR30805	Certificate III in Automotive Vehicle Body
AUR30905	Certificate III in Motor sport
AUR31005	Certificate III in Automotive Sales
AUR31105	Certificate III in Automotive Warehousing/Distribution Operations
AUR31205	Certificate III in Automotive Retail, Service and Repair
AUR40105	Certificate IV in Automotive Management
AUR40205	Certificate IV in Automotive Technology
AUR40305	Certificate IV in Motor sport
AUR40405	Certificate IV in Automotive Performance Enhancement
AUR50105	Diploma of Automotive Management
AUR50205	Diploma of Automotive Technology
AUR50305	Diploma of Motor sport

<sup>1</sup> Refer to Page 4 in the PDF file of AUR05\_1

Table 1-2: List of 10 Inventories in Automotive Industrial Training Package for Retail, Service and Repair<sup>2</sup>

1	Certificate I Inventory
2	Administration Inventory
3	Aftermarket Manufacturing Inventory
4	Bicycle Inventory
5	Management Inventory
6	Motorsport Inventory
7	Sales Inventory
8	Technical Inventory
9	Vehicle Body Inventory
10	Warehousing/Distribution Inventory

Table 1-3: List of 14 Clusters in Technical Inventory<sup>3</sup>

1	Advanced Technology Cluster
2	Brakes Cluster
3	Electrical Ancillary Systems and Accessories Cluster
4	Engines / Systems and Transmissions Cluster
5	Environmental Cluster
6	General Mechanical Cluster
7	Management and Administration ADMINISTRATION Cluster
8	Marine Cluster
9	Outdoor Power Equipment Cluster
10	Sales, Warehousing, Purchasing and Storage Cluster
11	Steering and Suspension Cluster
12	Trailers Cluster
13	Tyres and Wheels Cluster
14	Vehicle Body Cluster

<sup>2</sup> Refer to Page 86 in the PDF file of AUR05\_1

<sup>3</sup> Refer to Page 180 in the PDF file of AUR05\_1

Table 1-4: List of 4 Groups and 21 Units of Competence in Electrical Ancillary Systems and Accessories Cluster<sup>4</sup>

<b>AC Electric Motor Drive Systems group</b>		
1	AURE319271A	Inspect, service and repair AC electric motor drive systems
<b>Electrical group</b>		
2	AURE218664A	Remove and replace electrical/electronic units/assemblies
3	AURE218670A	Service, maintain or replace batteries
4	AURE218676A	Test, service and charge batteries
5	AURE218708A	Carry out repairs to single electrical circuits
6	AURE218764A	Remove, refit and test electrical componentry for normal operation following body repair activities
7	AURE219331A	Install, test and repair low voltage wiring/lighting systems
8	AURE219431A	Install, test and repair electrical security systems/components
9	AURE219531A	Install ancillary electrical components
10	AURE220140A	Manufacture and repair wiring harness/looms
11	AURE224008A	Carry out soldering of electrical wiring/circuits
12	AURE318866A	Repair electrical systems
13	AURE318966A	Repair instruments and warning systems
14	AURE319145A	Overhaul charging system alternators
15	AURE319166A	Repair charging systems
16	AURE319245A	Overhaul starting motors
17	AURE319266A	Repair starting systems
18	AURE320031A	Install marine electrical systems/components
19	AURE320066A	Diagnose and repair marine electrical systems/components
<b>Ignition group</b>		
20	AURE320666A	Repair ignition systems
<b>Electronics group</b>		
21	AURE321171A	Service and repair electronic spark ignition engine management systems

### **Further Note on the Codes in Training Packages**

As indicated in the above table, many codes in the Training Package contains several codes. The following indicates the significance of the codes:

#### **Training Package Codes**

Each Training Package has a unique five-character national code assigned when the Training Package is endorsed. The Automotive Retail, Service and Repair sector Training package, for example, is denoted by the code AUR05. The first three characters are letters identifying the Training Package industry coverage, and the last two characters are numbers identifying the year of endorsement.

<sup>4</sup> Refer to Page 182 in the PDF file of AUR05\_1



### Qualification Codes

Within each Training Package, each qualification has a unique eight-character code, for example AUR20505. The first three letters identify the Training Package; the first number identifies the qualification level (noting that Arabic numbers are not used in qualification titles themselves); the next two numbers identify the position in the sequence of the qualification at that level; and the last two numbers identify the year in which the qualification was endorsed. (Where qualifications are added after the initial Training Package endorsement, the last two numbers may differ from other Training Package qualifications as they identify the year in which those particular qualifications were endorsed.)

### Unit of Competence Codes

Within each Training Package, each unit of competence has a unique code. The units of competence codes are assigned when the Training Package is endorsed, or when new units of competence are added to an existing endorsed Training Package.

A typical code is made up of 12 characters, normally a mixture of uppercase letters and numbers, as in AURT217108A. The first three characters signify the Training Package (AUR05 Automotive Training Package – Retail, Service and Repair Sector in the above example) and up to eight characters, relating to an industry sector, function or skill area, follow. The last character is always a letter and identifies the unit of competence version. The 'A' in the example above indicates that this is the original unit of competence.

An incremented version identifier usually means that minor changes have been made. Typically this would mean that wording has changed in the range statement or evidence guide, providing clearer intent. Where changes are made that alter the outcome, a new code is assigned and the title is changed.

### Unit of Competence Titles

Each unit of competence title is unique. A Unit of Competence titles describe the competency outcome concisely, and are written in sentence case.

For example:

AURT217108A Carry out wheel alignment operations

AURT301357A Rebuild engine components.

### Qualification Titles

The title of each endorsed Training Package qualification is unique. Qualification titles use the following sequence:

The qualification is identified as either Certificate I, Certificate II, Certificate III, Certificate IV, Diploma or Advanced Diploma.

This is followed by the words 'in' for Certificates I to IV and 'of' for Diploma and Advanced Diploma;

The industry descriptor follows.

For example:

AUR20505 - Certificate II in Automotive Vehicle Servicing

AUR30405 - Certificate III in Automotive Mechanical Technology

AUR40205 - Certificate IV in Automotive Technology

AUR50205 - Diploma of Automotive Technology.

# BREAKDOWN OF TRAINING PACKAGES

The Unit of Competence is a key component of each Training Package. The Unit of Competence can also be defined as the "competency standard", and describes WHAT trainees have to achieve to become job-ready. The Units of Competence are in turn divided into elements of competence, together with performance criteria, providing a substantial amount of further information relevant to achieving the prescribed standards. This information is supplied to enable training providers to develop curriculum that can be used to effectively train people to achieve competence.

Figure 1-3 below illustrates the breakdown of Training Packages.

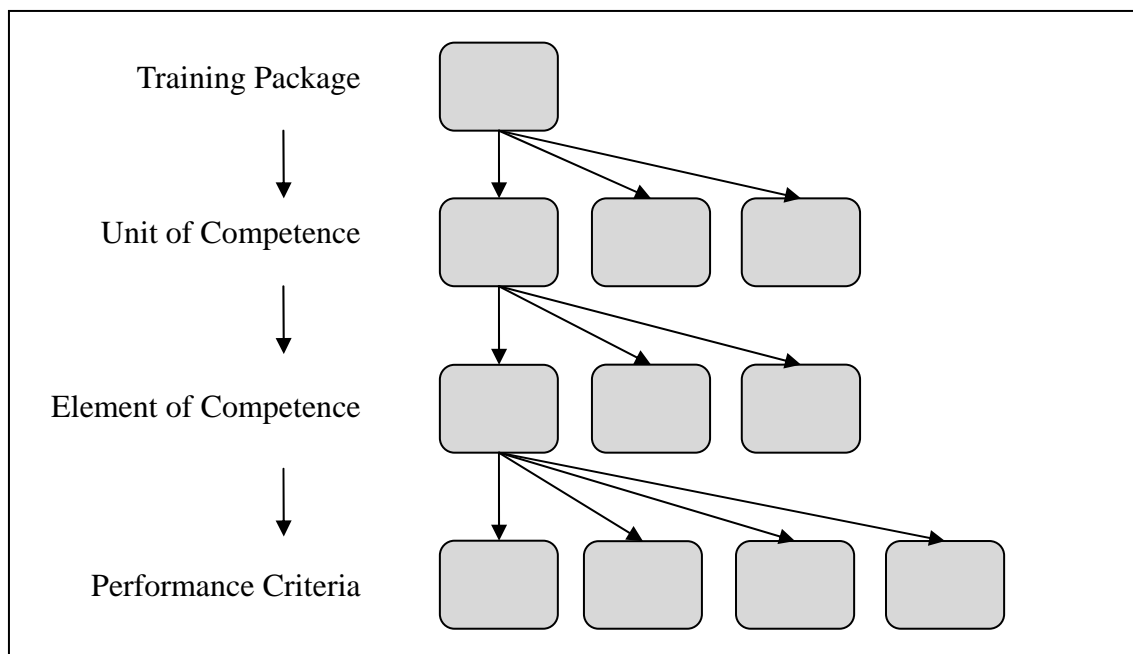


Figure 1-3: Breakdown of Training Packages

## [Case Study]

The Unit of Competence for Repair Ignition Systems: AURE320666A is shown in Table 1-5, as a sample.

Table 1-5: A Sample of Unit of Competence for "Repair Ignition System"

<b>UNIT DESCRIPTOR</b>
<b>ELEMENT AND PERFORMANCE CRITERIA</b>
1. Prepare for work
2. Test ignition systems/components and identify faults
3. Repair ignition systems/components
4. Clean up work area and maintain equipment
<b>RANGE STATEMENT</b>
Unit scope
Unit context
Safety (OH&S)
Environmental requirements
Quality requirements
Statutory/regulatory authorities
Tooling and equipment
Materials
Communications
Information
<b>EVIDENCE GUIDE</b>
Critical aspects of evidence
Relationship to other units
Underpinning knowledge
Specific key competencies, underpinning and employability skills required to achieve the performance criteria
Collect, analyze and organize information
Communicate ideas and information
Plan and organize activities
Work with others and in a team
Use mathematical ideas and techniques
Solve problems
Use technology
Context of assessment
Method of assessment
Specific resource requirements for this unit

# PROCESS STEPS

## OVERVIEW

Competency standards provide the basis for all TVT courses and qualifications. They are also the means for common recognition and acceptance of knowledge and skills and qualifications across the country.

In a CBT approach, competency standards are defined by industry through the creation of industry representative bodies for each industry sector. These bodies generally consist of representatives from each industry sector and professional training personnel.

A competency standard is a nationally agreed statement of skills and knowledge required for effective performance in a particular job or job function. Someone who is competent can demonstrate that they have the required skills and knowledge and be able to apply to the standards of performance required in the workplace.

It takes a substantial effort and budget to set up industry representative bodies to define current occupational standards across all industry sectors. The recommendation in this manual, therefore, is to use the Australian competency standards as the basis for developing current competency standards for Iran TVT.

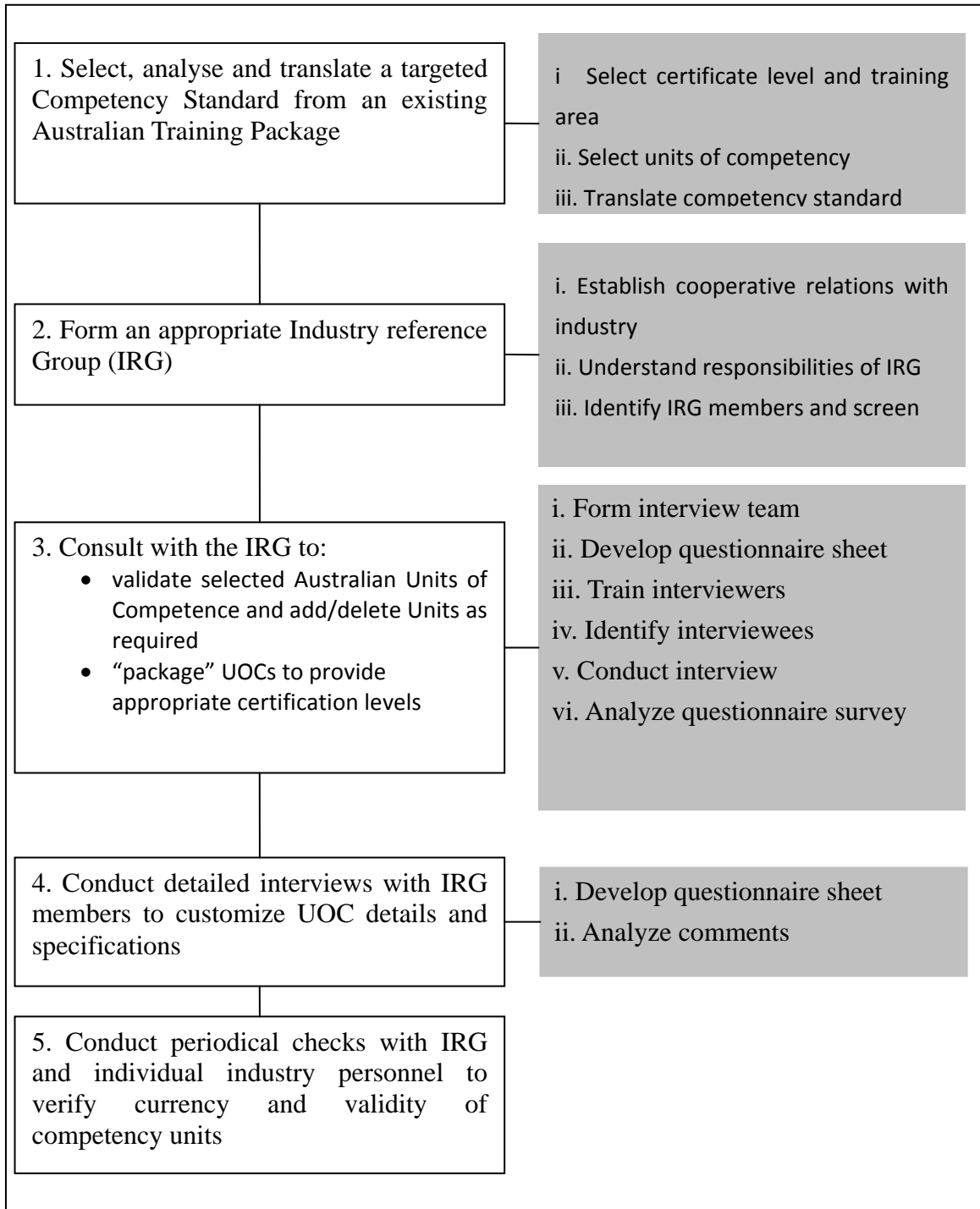
The Australian standards have been developed over many years through the systematic creation of industry representative groups called Industry Skills Councils. Most technical and vocational training sectors in Australia closely resemble related sectors in Iran. For example, a mechanic working in an automotive workshop in Tehran would undertake similar job functions at all levels to a mechanic working in a workshop in Australia. Thus competency standards framed in Australia would be generally applicable in Iran. Where there may be differences, the Australian standards can be modified and customized to specifically suit the Iranian context.

In this Manual, therefore, the primary recommendation is to use Australian competency standards (systematically defined in what are called "Training Packages") as a basis for developing relevant competency standards for Iran.

This section of the manual provides a logical flowchart of the process required to

customize Australian Competency Standards using the Automotive Repair and Service industry sector as the model.

## LOGICAL FLOW CHART OF PROCESS STEPS



## EXPLANATION OF PROCESS STEPS

**STEP1** Select, analyze and translate a targeted Competency Standard from an existing Australian Training Package

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**Sub STEP1.i** Select Certificate Level and Training Area

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Before the interview process can commence, it is important to precisely define the level of training that is needed to be confirmed by the industry representatives who are being consulted and, just as importantly, the capacity of the training organization to provide this level of training.

Referring to the Australian Training Package, the certificate levels and training area have to be decided first, for example, the Electrical area of auto mechanics at Certificate 3 level.

See

*Appendix 1-1 Background of Certificate in Australian Training Package*

**Sub STEP1.ii** Select Units of Competence from Inventories

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After choosing appropriate Certificates levels from the Australian Training Packages, it is necessary to select the required units of competency that are prescribed for these levels. The selection is made by identifying all related units of competency from

See

*Appendix 1-2 A Sample of Selection of Units of Competence*

relevant inventories. The selected units of competence will be the ones used for the planned training course.

<b>Sub STEP1.iii</b>	<b>Translate the competency standard imported from Australian Training Package</b>
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Since many of the key personnel in industry are not likely to be able to understand a foreign language, it is imperative that the foreign industry competency standards are translated before they can be customized to suit the local context. Note the importance of translation, as mistranslation provides a lot of trouble in Step 3 and 4.

<b>STEP2</b>	<b>Form an appropriate Industry reference Group (IRG)</b>
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<b>Sub STEP2.i</b>	<b>Establishment of Cooperative Relations with Industry</b>
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Because it is imperative that competency standards are defined with substantial input from industry, it is essential for TVTO to establish a cooperative relation with industry.

In this regard, TVTO has to convince industry that a CBT system needs to be introduced. The consequence of introducing such a system would be that industry would benefit substantially by trainees being trained to standards that they themselves have defined.

The following steps will assist TVTO establish cooperative relations with industry:

1. Invite representatives of leading companies to a workshop, explain TVTO's policy to reform training courses by using the CBT system and make industry understand their benefit;
2. Visit leading companies, explain to management what was discussed at the workshop and obtain cooperation agreement;
3. Visit leading companies to explain managers and staff in charge of human resource development on how to conduct interviews and make arrangement for interviews to appropriate personnel;
4. Ask leading companies to use their networks to arrange interviews with representatives from medium to small-range companies;
5. Report results of interviews to all participating companies;
6. Produce a database of personnel that have been useful in interviews so that they can be contacted again for further cooperation. The database should include information such as the interviewee's name, company, department, position,



contact number, level of experience and knowledge evaluated by interviewer and so on;

7. Form industrial reference group to confirm the full range of competency; and, standards required for job training and periodically review competency standards. The industrial reference group members should be selected from the database.

In order to maintain a good relationship with industry, practical lessons learnt through the project can be summarized as follows:

- ✓ In order to arrange a meeting, send a request letter to the company at least 4 days before the proposed meeting date. The letter should include objectives, agenda, suggestions about appropriate personnel from the industry to participate in the meeting/interview and the names and positions of the visitors from TVTO;
- ✓ Be punctual for meeting;
- ✓ Wear appropriate clothes when visiting the company;
- ✓ Do not underestimate the time required for the meeting; and,
- ✓ Avoid lunch time. The best times to commence meetings are 9:00 am and 2:00 pm.

<b>Sub STEP2.ii</b>	<b>Understand Responsibilities of IRG</b>
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In the CBT system, designated Industry Reference Group (IRG) in each industry sector develops the competency standards into Training Packages. The IRG are also responsible for developing appropriate assessment guidelines and qualifications (hierarchical course structures) that correspond with the competency standards. The IRG in each industry sector are made up of experienced industry personnel and are responsible, together with TVTO, for the maintenance of the Training packages in their sector. The IRG is mainly responsible to define 1) Units of Competence (Competency standards), 2) Assessment Guidelines and 3) Qualifications as follows.

**Units of Competence** Each unit of competence identifies a discrete workplace requirement and includes the knowledge and skills that underpin competency as well as language, literacy and numeracy; and occupational health and safety requirements. The units of competence must be adhered to in training and assessment to ensure consistency of outcomes.

**Assessment Guidelines** The Assessment Guidelines provide an industry framework to ensure all assessments meet industry needs and nationally agreed standards as expressed in the Training Package and the Standards for Registered Training Organizations. The Assessment Guidelines must be followed to ensure the integrity of assessment leading to nationally recognized qualifications.

**Qualifications** Each Training Package provides details of those units of competence that must be achieved to award AQF qualifications. The rules around which units of competence can be combined to make up a valid AQF qualification in the Training Package are referred to as the 'packaging rules'. The packaging rules must be followed to ensure the integrity of nationally recognized qualifications issued.

<b>Sub STEP2.iii</b>	<b>Identify IRG members and Screening</b>
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In order to make the process for defining the competency standards for the target training courses intensive and systematic, Industry Reference Group (IRG) has to be formed with a role of prioritization and customization of units of competency chosen from Australian training package. IRG should have a good mix in terms of company groups and company sizes. All of them have technical background and a sufficient level of work experiences in the respective industrial sector.

In order to have common understandings among TVTO and IRG members, TVTO should organize meetings with IRG members in the early stage of the process. The meetings should focus on 1) understandings of the CBT concept and the Australian CBT structure, 2) appropriate target level for the target training courses, 3) selection of appropriate competency units from Australian Training Package for the target training courses.

**STEP3 Consult with IRG to:1) validate selected Australian Units of Competence and add/delete Units as required, and 2)"package" UOCs to provide appropriate certification levels**

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**Sub STEP3.i Form Interview Team**

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It is recommended that an interview team be formed in the following way:

- ✓ The team needs to be a mix of representatives of TVTO, provincial offices and TVTCs;
- ✓ The majority of the team should be instructors with at least 3 years experiences as an instructor in the target training area;
- ✓ These instructors should have a sufficient level of English proficiency, since all original documents of Australian Training Package are written in English;
- ✓ All members should have a full understanding of Australian CBT system; and,
- ✓ Since very technical matters are discussed during the interview, the team members need to participate in the full range of interviews. It is necessary, therefore, for team members be released from their normal duties so that they can complete the series of meetings and interviews with the designated industry personnel.

**Sub STEP3.ii Develop Questionnaire Sheet**

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After selecting candidates of Units of Competence, the questionnaire sheet and brief description of each Unit of Competence have to be prepared. The Questionnaire sheet should include unit code, unit title, estimated training hours, evaluation marks from 5 to 0. The brief description can be Unit Descriptor in Australian Training Package. The results of the questionnaire survey are analyzed in a qualitative way to prioritize selected units of competency.

See

*Appendix 1-3 A Sample of Questionnaire Sheet*

### **Sub STEP3.iii Train Interviewers**

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Since it is meaningless to fill out questionnaires without adequate explanation of all material relating to the selection and prioritization of Units of Competence (competency standards), mailing of questionnaire sheets is not an appropriate way to effectively elicit information. To be productive, interviews must be conducted face-to-face.

To enable all interviewers to participate effectively, a one-day workshop should be held before conducting the series of interviews. The workshop should have the following agenda:

- ✓ Explanation of the objective, approach, Australian Training Package, industrial structure of the organization participating in the interviews, the range and implications of the question and the rating and interview method;
- ✓ Explanation of the target training course such as the area of specialization, the target trainees and the intended training period;
- ✓ Conduct of a role play to confirm the interviewers' understanding, of the questions related to each unit of competency; and,
- ✓ Confirmation of the implementation schedule and grouping of interview visits.

Before commencement of the interview, it is recommended that a trial interview be conducted involving all team members to confirm and validate the questionnaire sheets and interview methods so that all interviewers share a common understanding and are equally prepared for the task.

### **Sub STEP3.iv Identify Appropriate Interviewees**

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One of the most important factors is to identify appropriate interviewees. Interviewees have to be experienced personnel with technical backgrounds. These backgrounds could include roles as technical expert and supervision. IRG members are the appropriate candidates of interviewees and they may introduce other appropriate

interviewees.

Personnel with these backgrounds are usually sourced in large and medium scale companies. However, it is not easy to find appropriate experts in small companies. In order to collect reliable information and opinions, it might be wise that interviews should focus on large and medium scale companies. Personnel database will help the interview team find appropriate and reliable personnel.

In order to maintain the quality of interviews, it is practical to set the target number of interviewees at around 15, rather than selecting and contacting large numbers of interviewers. Trying to interview large numbers will inevitably lead to low quality interviews and subsequent inadequate and unusable results.

<b>Sub STEP3.v</b>	<b>Conduct Interviews</b>
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The following are suggestions for conducting effective interviews:

- ✓ Interview face-to-face;
- ✓ Include at least one person with a sufficient level of experience in interviewing in each team;
- ✓ Try to keep the time for each to around hours;
- ✓ Carefully brief the interviewee about the objective and evaluation method before starting interview;
- ✓ Explain the meaning of employability skills, since this is not a commonly used term;
- ✓ Advise the interviewees to make a fair distribution of rating among the given units of competency;
- ✓ Ask the interview to write reasons for their rating of Units;
- ✓ Ask the interviewee to write reasons especially if they accord a score of "6" for a Unit;
- ✓ Review all questionnaire sheets after the interview, check missing data and ask for more information if the rating has been very different from predictions;
- ✓ Ask the interviewee to write clearly and legibly; and,
- ✓ Always act in a professional manner.

### **Sub STEP3.vi    Make Quantitative Analysis to Select Units of Competence**

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All data has to be carefully entered in fixed format. Data should include interviewee, company name, company size and rating. Distribution of rating on each Unit of Competence has to be counted for analysis.

There are a number of analysis methods. The followings are the typical steps to analyze priority of units of competency:

Step1: Comparison of overall average rating on units of competency

Step2: Ranking of overall average rating on units of competency in descending order with rating distribution

Step3: Rader chart to compare difference of priority on units of competency by company groups

Step4: Rader chart to compare difference of priority on units of competency by company sizes

Step5: Identification of reasons for discrepancy of priority on units of competency among company groups, company sizes and individuals through individual follow-up interviews

See

*Appendix 1-4    A Sample of Analysis to Select Units of Competence*

## **STEP4**

**Conduct detailed interview with IRG members to customize UOC details and specifications**

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**Sub STEP4.i****Develop Interview Sheet to customize UOCs**

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After analyzing results of questionnaire to select UOCs, the interview team should visit IRG members for further discussions to customize each Unit of Competence by asking specific comments for training contents. The questionnaire sheets consist of the briefing of units of competency and the comment sheet. The briefing of UOCs should include elements and unit descriptor.

See

*Appendix 1-5 A Sample of Briefing of Units of Competence and Questionnaire Sheet*

**Sub STEP4.ii****Analyze Comments**

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The interview team has to summarize all comments given by IRG members. These comments will be referred to the development of training materials and course program in the next process, although all comments will be not necessarily included in the training materials.

See

*Appendix 1-6 A Sample of Qualitative Analysis*

**STEP5****Conduct periodical checks with IRG and individual industry personnel to verify currency and validity of competency units**

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Within a 3–5 year timeframe, TVTO should organize IRG meetings to collect feedback and information about the competencies. IRG members are the most updated and reliable information sources for the latest training needs in industry. Quality indicators obtained from the TVTCs is one of the formal sources of feedback. Reviewing those

various information and opinions, TVTO should consider the timing of updating the competencies. But, it is advisable to review UOCs within 5 years to ensure that they still represent the needs of the industry and that they offer the flexibility to ensure that they can be applied to the range of enterprises within the industry.



# APPENDICES

## **Appendix 1-1: Background of Certificate in Australian Training Package**

In the Australian Automotive Industry Training Package for Retail, Service and Repair, mostly Certificates 1 and 2 can be preferable level for high school students or equivalent. The courses provided at these levels are not considered as professional training courses, but for the entry level into the workforce. They are designed to provide knowledge and skills for people to carry out entry level tasks in the inspection, service and maintenance of vehicles.

On the other hand, most graduates of Certificate 3 are trained to be a professional workforce as automotive mechanics. There are no specific automotive prerequisite knowledge and skill requirements for this course, but students entering the course are expected to have successfully completed their secondary education.

## Appendix 1-2: A Sample of Selection of Units of Competence

For example, if the target training course is Certificate 3 level in the Electrical area of auto mechanics for light vehicles, there is a similar course entitled Certificate 3 in Automotive Mechanical Technology: AUR30405 in Page 115 in the PDF file of AUR05\_1. The qualification requirements are stated as follows:

### QUALIFICATION REQUIREMENTS

36 units of competence at levels 2, 3 or 4 are required to complete this qualification within the specific requirements as set out in the three areas below:

*NOTE: a maximum of 20 units of competence may be at level 2, and a maximum of 2 units of competence may be at level 4*

#### ONE

The following units of competence are compulsory:

AURC270103A	Apply safe working practices
AURT366108A	Carry out diagnostic procedures
AURT271781A	Implement and monitor environmental regulations in the automotive mechanical industry

#### TWO

27 units of competence from the Technical Inventory

#### THREE

6 units of competence from the Retail, Service and Repair or any endorsed Training Package that meet the needs of the enterprise

Area ONE is compulsory and Area THREE comprises electives from all inventories. Area TWO is individually defined according to the types of vehicle that are designated. In relation to light vehicles, the following 15 units of competency are compulsory and the other 12 (27-15) units of competency are electives from the Technical Inventory:

- AURE218676A Test, service and charge batteries
- AURE320666A Repair ignition systems
- AURE321171A Service and repair electronic spark ignition engine management systems
- AURE218708A Carry out repairs to single electrical circuits
- AURT202166A Repair cooling systems
- AURT301166A Repair engines and associated engine components

- AURT303166A Repair petrol fuel systems
- AURT304666A Repair and replace emission control systems
- AURT306170A Inspect, service and/or repair clutch assemblies and associated operating system components
- AURT306666A Repair transmissions (manual)
- AURT310166A Repair hydraulic braking systems
- AURT312666A Repair final drive assemblies
- AURT313166A Repair final drive (driveline)
- AURT315166A Repair steering systems
- AURT316166A Repair suspension systems

When the target training course is Electrical, all Electrical units of competency in the list should be selected as the highest priority units, namely, the first 4 units in the list. In addition, all other units of competency of Certificate 1 to 3 levels in the electrical area have to be selected for the target training course. These units are listed in Electrical Group of Electrical Ancillary Systems and Accessories Cluster in Technical Inventory in Page 182 in the PDF file of AUR05\_1.

As a result, the following 21 units of competency have been selected to define competency standard for the target training course. Note that three units of competency of No. 19, 20 and 21 are included as typical employability competency standards.

Table 1-6: List of Units of Competence for Electrical Area in Auto Mechanic

1	AURE218664A	Remove and replace electrical/electronic units/assemblies
2	AURE218670A	Service, maintain or replace batteries
3	AURE218676A	Test, service and charge batteries
4	AURE218708A	Carry out repairs to single electrical circuits
5	AURE218764A	Remove, refit and test electrical component for normal operation following body repair activities
6	AURE219331A	Install, test and repair low voltage wiring/lighting systems
7	AURE219431A	Install, test and repair electrical security systems/components
8	AURE219531A	Install ancillary electrical components
9	AURE220140A	Manufacture and repair wiring harness/looms
10	AURE224008A	Carry out soldering of electrical wiring/circuits
11	AURE318866A	Repair electrical systems
12	AURE318966A	Repair instruments and warning systems
13	AURE319145A	Overhaul charging system alternators
14	AURE319166A	Repair charging systems
15	AURE319245A	Overhaul starting motors
16	AURE319266A	Repair starting systems
17	AURE320666A	Repair ignition systems
18	AURE321171A	Service and repair electronic spark ignition engine management systems
19	AURC270103A	Apply safe working practices

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20	AURC270688A	Work effectively with others
21	AURC270421A	Establish relations with customer

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## Appendix 1-3: A Sample of Questionnaire Sheet

In case of the second pilot course in the JICA Project, the questionnaire sheets was prepared, consisting of a list of units of competency and brief description of Unit of Competence, as shown below:

Table 1-7: Questionnaire Sheet

Occupation	Service Mechanic		
Qualification Title	Certificate II in Automotive Vehicle Servicing		
Qualification Code	AUR20505		
Description	Suitable for persons working in an automotive dealership or independent workshop as a service mechanic on light vehicles		
Unit Code	Unit Title	Hours	Very important → Not needed 5 → 0
AURC251356A	Read in the workplace	20	
AURC270103A	Apply safe working practices	20	
AURT270278A	Use and maintain workplace tooling and equipment	20	
AURT125667A	Use and maintain basic measuring equipment	15	
AURC272003A	Apply environmental regulations and best practice in a workplace or business	20	
AURT217665A	Remove, fit and inspect wheel assemblies	20	
AURE218708A	Carry out repairs to single electrical circuits	40	
AURE218676A	Test, service and charge batteries	15	
AURT202170A	Inspect and service cooling systems	10	
AURT215170A	Inspect and service steering systems	10	
AURT216170A	Inspect and service suspension systems	10	
AURT210170A	Inspect and service braking systems	20	
AURT306170A	Inspect, service and/or repair clutch assemblies and associated operating system components	30	
AURT206670A	Inspect and service transmissions (manual)	10	
AURT207170A	Inspect and service transmissions (automatic)	10	
AURT201170A	Inspect and service engines	20	
AURT203170A	Service petrol fuel systems	15	
AURT204670A	Inspect and service emission control systems	10	
AURT213170A	Service final drive (driveline)	5	
AURT212670A	Service final drive assemblies	5	
AURT200108A	Carry out servicing operations	20	
	<b>Total Hour</b>	<b>345</b>	

### **Sample of Brief Explanation of Unit of Competence**

#### *AURC251356A Read in the workplace*

Unit descriptor: This unit covers the competence required to read business texts/manuals, so decisions can be made on similar terms/conditions, or interpret manuals to enable assistance to others for problem solving.

#### *AURT270278A Use and maintain workplace tooling and equipment*

This unit covers the competence required to select, safely use and maintain workplace tooling and equipment.

The unit includes identification and confirmation of work requirement, preparation for work, selection, use, servicing, maintenance and storage of tooling and equipment and completion of work finalization processes, including clean-up and documentation.

#### *AURTI25667A Use and maintain basic measuring equipment*

This unit covers the competence required to use and maintain measuring equipment used in general repair and of a basic nature.

The unit includes identification and confirmation of work requirement, preparation for work, conduct of measurements, analysis and documenting of outcomes, maintenance of equipment and the completion of work finalization processes, including clean-up and documentation.

## Appendix 1-4: A Sample of Analysis to Select Units of Competence

The following analysis shows analysis on overall rating and analysis by company groups and company sizes in case of the JICA Project. However you can add analysis in various ways, depending on your needs.

### (1) Analysis on Overall Rating

The average marks of overall rating of 21 units of competency are shown in Figure 1-4 and Table 1-8.

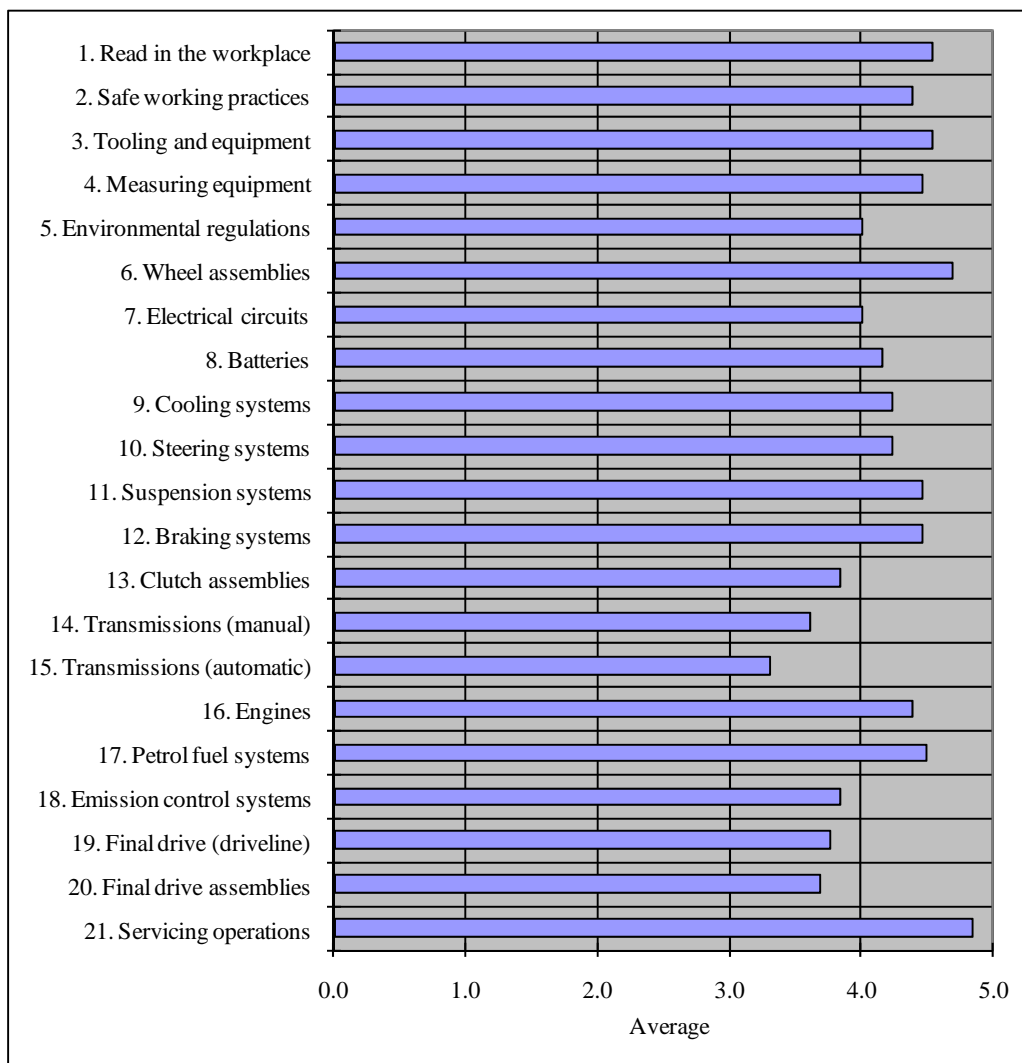


Figure 1-4: Average Overall Rating of Units of Competence



Table 1-8: Average Overall Rating in Descending Order

	Average	Rating Distribution							
		5	4	3	2	1	0	5+4	1+0
21. Servicing operations	4.8	11	2	0	0	0	0	13	0
6. Wheel assemblies	4.7	10	2	1	0	0	0	12	0
3. Tooling and equipment	4.5	11	0	0	2	0	0	11	0
1. Read in the workplace	4.5	8	4	1	0	0	0	12	0
17. Petrol fuel systems	4.5	9	0	3	0	0	0	9	0
12. Braking systems	4.5	10	1	0	2	0	0	11	0
11. Suspension systems	4.5	8	3	2	0	0	0	11	0
4. Measuring equipment	4.5	8	3	2	0	0	0	11	0
16. Engines	4.4	8	2	3	0	0	0	10	0
2. Safe working practices	4.4	9	2	1	0	1	0	11	1
10. Steering systems	4.2	8	2	1	2	0	0	10	0
9. Cooling systems	4.2	5	7	0	1	0	0	12	0
8. Batteries	4.2	6	4	2	1	0	0	10	0
7. Electrical circuits	4.0	6	4	1	1	1	0	10	1
5. Environmental regulations	4.0	7	2	2	1	1	0	9	1
18. Emission control systems	3.8	6	3	2	0	2	0	9	2
13. Clutch assemblies	3.8	6	5	0	0	0	2	11	2
19. Final drive (driveline)	3.8	6	2	3	1	0	1	8	1
20. Final drive assemblies	3.7	4	4	4	0	0	1	8	1
14. Transmissions (manual)	3.6	5	4	2	0	0	2	9	2
15. Transmissions (automatic)	3.3	4	3	3	1	0	2	7	2

## (2) Analysis by Company Groups

In order to examine the difference of prioritizing units of competency by company groups, overall rating of units of competency can be analyzed, as shown in Table 1-9 and Figure 1-5.

Table 1-9: Overall Rating by Company Groups

No	Unit Code	Unit Title	Saipa Group	Iran Khodro Group	Others
1	AURC251356A	Read in the workplace	4.7	4.0	4.7
2	AURC270103A	Apply safe working practices	4.3	4.3	4.7
3	AURT270278A	Use and maintain workplace tooling and equipment	4.1	5.0	5.0
4	AURT125667A	Use and maintain basic measuring equipment	4.0	5.0	5.0
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	3.7	4.0	4.7
6	AURT217665A	Remove, fit and inspect wheel assemblies	4.9	4.0	5.0
7	AURE218708A	Carry out repairs to single electrical circuits	3.6	4.3	4.7
8	AURE218676A	Test, service and charge batteries	4.4	3.7	4.0
9	AURT202170A	Inspect and service cooling systems	4.4	3.7	4.3
10	AURT215170A	Inspect and service steering systems	4.0	4.3	4.7
11	AURT216170A	Inspect and service suspension systems	4.3	4.3	5.0
12	AURT210170A	Inspect and service braking systems	4.1	4.7	5.0
13	AURT306170A	Inspect, service and/or repair clutch assemblies and associated operating system components	3.3	4.7	4.3
14	AURT206670A	Inspect and service transmissions (manual)	3.0	4.3	4.3
15	AURT207170A	Inspect and service transmissions (automatic)	2.6	4.0	4.3
16	AURT201170A	Inspect and service engines	4.3	4.3	4.7
17	AURT203170A	Service petrol fuel systems	4.4	4.3	5.0
18	AURT204670A	Inspect and service emission control systems	3.1	4.7	4.7
19	AURT213170A	Service final drive (driveline)	3.4	4.0	4.3
20	AURT212670A	Service final drive assemblies	3.6	4.0	3.7
21	AURT200108A	Carry out servicing operations	5.0	4.7	4.7
Average			4.0	4.3	4.6

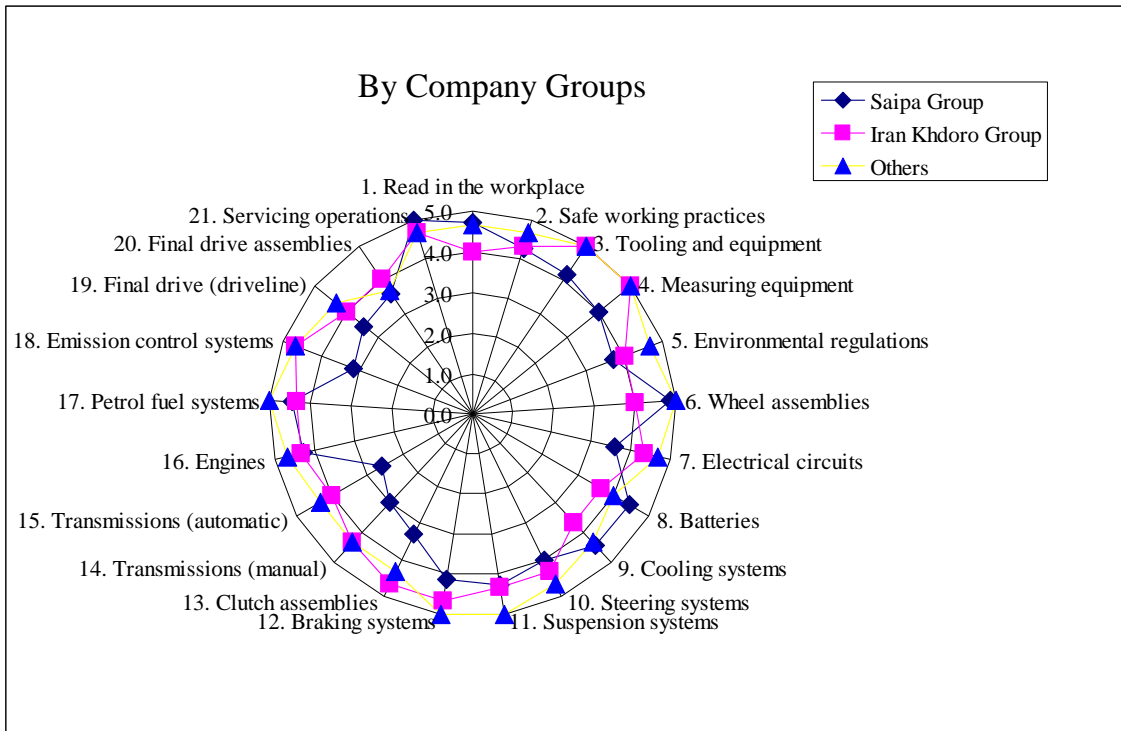


Figure 1-5: Overall Rating by Company Groups

### (3) Analysis by Company Sizes

In order to examine the difference of prioritizing units of competency by company sizes, overall rating of units of competency was analyzed, as shown in Table 1-10 and Figure 1-6.

Table 1-10 Analysis of Overall Rating by Company Sizes

No	Unit Code	Unit Title	Large	Small/medium
1	AURC251356A	Read in the workplace	4.6	4.5
2	AURC270103A	Apply safe working practices	4.3	4.5
3	AURT270278A	Use and maintain workplace tooling and equipment	4.3	5.0
4	AURT125667A	Use and maintain basic measuring equipment	4.3	4.8
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	3.9	4.3
6	AURT217665A	Remove, fit and inspect wheel assemblies	4.6	5.0
7	AURE218708A	Carry out repairs to single electrical circuits	3.9	4.3
8	AURE218676A	Test, service and charge batteries	4.0	4.5
9	AURT202170A	Inspect and service cooling systems	4.0	4.8
10	AURT215170A	Inspect and service steering systems	4.0	4.8
11	AURT216170A	Inspect and service suspension systems	4.3	4.8
12	AURT210170A	Inspect and service braking systems	4.2	5.0
13	AURT306170A	Inspect, service and/or repair clutch assemblies and associated operating system components	3.4	4.8
14	AURT206670A	Inspect and service transmissions (manual)	3.2	4.5
15	AURT207170A	Inspect and service transmissions (automatic)	3.0	4.0
16	AURT201170A	Inspect and service engines	4.2	4.8
17	AURT203170A	Service petrol fuel systems	4.3	5.0
18	AURT204670A	Inspect and service emission control systems	3.3	5.0
19	AURT213170A	Service final drive (driveline)	3.3	4.8
20	AURT212670A	Service final drive assemblies	3.4	4.3
21	AURT200108A	Carry out servicing operations	4.9	4.8
Average			4.0	4.7

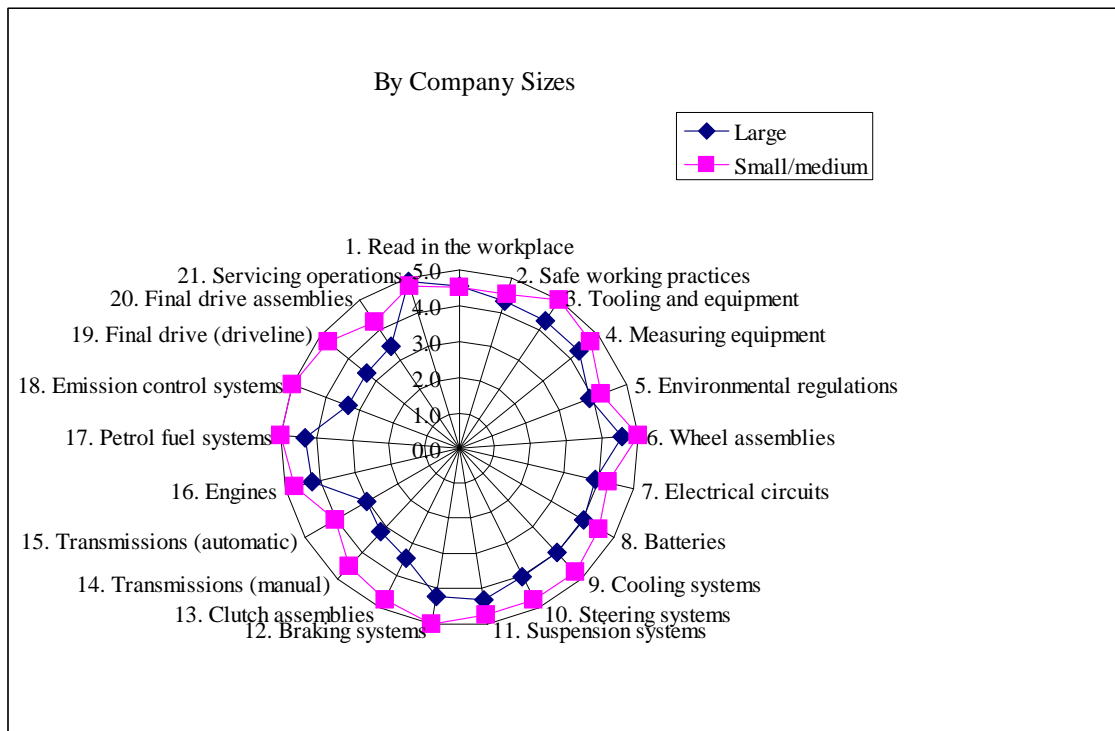


Figure 1-6: Analysis of Overall Rating by Company Sizes

(4) Identification of reasons for discrepancy of priority

Sample analysis is shown below.

**Overall analysis**

- ✓ There are some difference of priority among units of competency, ranging from 4.8 to 3.3 on average marks, from 11 to 4 for number of reply of 5 point and from 13 to 7 for the total number of reply of 4 and 5 points;
- ✓ Ratings of interviewees vary widely in units of competency particularly with lower average marks such as unit numbers of 18, 13, 14 and 15. (See Table 1-10) These areas are emission control, clutch and transmission. This implies that technical experts have their individual ideas in evaluating importance of competency standard for their new employees. Some IRG members might evaluate UOCs based on service areas in their own workshops; and,
- ✓ Many UOCs were highly prioritized because these skills were needed for any types of workshops as fundamental and common competencies.

### *Analysis by company groups*

In particular, the following 4 units of competency have some difference, in all of which Saipa group rated lowest. This might be caused that technical experts in dealerships of Saipa group think these skills are not covered by their own workshops.

- 13. Inspect, service and/or repair clutch assemblies and associated operating system components
- 14. Inspect and service transmissions (manual)
- 15. Inspect and service transmissions (automatic)
- 18. Inspect and service emission control systems

### *Analysis by company groups*

The following 5 units of competency have relatively large difference, in all of which small and medium size companies rated higher. This is because those repair services are their main works. This implies that priority is different among company sizes or nature of repair services.

- 13. Inspect, service and/or repair clutch assemblies and associated operating system components
- 14. Inspect and service transmissions (manual)
- 15. Inspect and service transmissions (automatic)
- 18. Inspect and service emission control systems
- 19. Service final drive (driveline)

Small and medium scale companies put higher priority in almost all units of competency. This might be because all units of competencies are for basic training course mainly for service and inspection.

## Appendix 1-5: A Sample of Briefing of Units of Competence and Questionnaire Sheet

Table 1-11: Briefing of Units of Competence

4	AURT125667A	Use and maintain basic measuring equipment	a	To use and maintain measuring equipment used in general repair and of a basic nature	<ul style="list-style-type: none"> <li>➤ Measuring equipment, including split levels, depth gauges, steel rulers, tape measures, T-squares and straight edges</li> <li>➤ Work involved includes measurement of length, width, squareness, flatness and depth, using imperial and metric measurement</li> </ul>
			b	To identify and confirm work requirement, preparation for work, conduct of measurements, analysis and documenting of outcomes, maintenance of equipment and the completion of work finalization processes, including clean-up and documentation	
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	a	To identify and apply environmental regulations and avoid potential hazards in a workplace or business.	<ul style="list-style-type: none"> <li>➤ Work involves normal activities of an automotive business, including the occupations of glazing, accessory fitting, window tinting, trimming and bicycles</li> <li>➤ This unit is applicable to Certificate II qualifications. Other specific environmental units of competence apply to marine, paint and panel preparation and some mechanical stream qualifications involving the removal of components containing oils or other fluids</li> </ul>
6	AURT217665A	Remove, fit and inspect wheel assemblies	a	To remove, fit and inspect wheel assemblies	<ul style="list-style-type: none"> <li>➤ Wheel assemblies may include those for light vehicles only</li> <li>➤ Wheel assemblies may be spoked, split, well, safety and disc and be of steel or alloy construction</li> </ul>
			b	To identify and confirm work requirement, preparation for work, removal, fitting and adjustment of wheel assemblies and completion of work finalization processes, including clean-up and documentation.	

Table 1-12: Comment Sheet for Unit of Competence (Selected units of competency only)

No	Unit Code	Unit Title	Comments
1	AURC251356A	Read in the workplace	
2	AURC270103A	Apply safe working practices	
3	AURT270278A	Use and maintain workplace tooling and equipment	
4	AURT125667A	Use and maintain basic measuring equipment	
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	



## Appendix 1-6: A Sample of Qualitative Analysis

No	Unit Code	Unit Title	Comment Summary from IRG Members
1	AURC251356A	Read in the workplace	➤ Add ability to make technical reports by using timetable, flowchart, charts and graphs
2	AURC270103A	Apply safe working practices	➤ Prepare some material safety sheets, which is mentioned how to handle the material regarding its chemical reaction and teach them in the class room
3	AURT270278A	Use and maintain workplace tooling and equipment	➤ Omit auto picker, bag palletize, belt conveyors, strapping machine, carton crushers, disposal bins, seals and ties, shrink wrap, welding equipment including OXY, ARC, MIG and TIG ➤ Develop training materials like pamphlet and film to identify tools and equipment
4	AURT125667A	Use and maintain basic measuring equipment	➤ Add measurement of run-out and free-play ➤ Add micrometers, specialized measurement devices, identification of bolts
5	AURC272003A	Apply environmental regulations and best practice in a workplace or business	➤ Add displacement of damaged parts which can be hazardous for environment ➤ Merge this unit with OH &SAS Unit of Competence (the integrity of unit 2 &5)



# **PART 2: PROCESS FOR DEVELOPING CURRICULUM TO SUPPORT CBT DELIVERY**



# EXPLANATORY NOTE

## DEFINITION OF CBT CURRICULUM

Curriculum, in a CBT approach to TVT, has been defined as "a set of planned learning experiences offered within a training environment/program, which is represented by appropriate documentation and includes experiences that result from that document".

The key inference in this definition is that, although all activity is planned and incorporated in various kinds of documentation, CBT curriculum is an active, ongoing process. The written documentation, although admittedly very important, is only one component.

In other words, development of curriculum needs to continue as trainers and trainees interact in the training process.

Changes in the training contexts, and emerging needs during interaction with trainees, require training personnel to maintain a dynamic approach to curriculum.

It is important therefore to ensure that the trainers, and other designated personnel involved in the training process, are provided with the required time and technical and instructional capability to enable them to actively engage in an ongoing process of re-developing and adapting the curriculum for a course.

It is not productive for a set of curriculum documentation to be produced, disseminated to providers and then used without specific customization to respective training contexts and applications. It needs ongoing adaptation, customization and revision in response to a range of factors including the interaction between trainers and trainees.

### Key features of CBT Curriculum:

- ✓ It involves a process of logical and systematic breakdown of information and tasks from the UOCs;
- ✓ The curriculum only becomes meaningful when the trainers/trainees become involved in the process;
- ✓ It is an ongoing, ever-changing process; and,
- ✓ It is dynamic – its development depends on the interaction between trainers and

trainees.

## HOW CBT CURRICULUM IS DIFFERENT FROM MORE TRADITIONAL CONCEPTS

Central to the development of curriculum in the CBT approach is the reliance on Units of Competence (industry job competency standards) and the information these units provide.

As explained in Chapter 1, the Units of Competence (UOCs) provide a great deal more information than simply describing the job standard.

The UOC:

- ✓ Breakdown the job requirements into Competency Elements;
- ✓ Break down the Elements further into Performance Criteria;
- ✓ Provide a Range Statement describing the scope and context of the work required; and,
- ✓ Provide an Evidence Guide which is a description of the guidelines and context necessary to assess trainees for competence.

Trainers/curriculum developers need to analyse the Units of Competence, incorporating all the job requirements and assessment information provided, and plan appropriate experiences and support materials which can assist trainees to acquire the prescribed knowledge and skills. The planning documentation, together with support materials (learning resources) comprises CBT curriculum.

As illustrated by the Figure below, whereas the definition of competency standards is the responsibility of industry reference groups, the development of the curriculum and associated components is the primary responsibility of training providers and trainers.

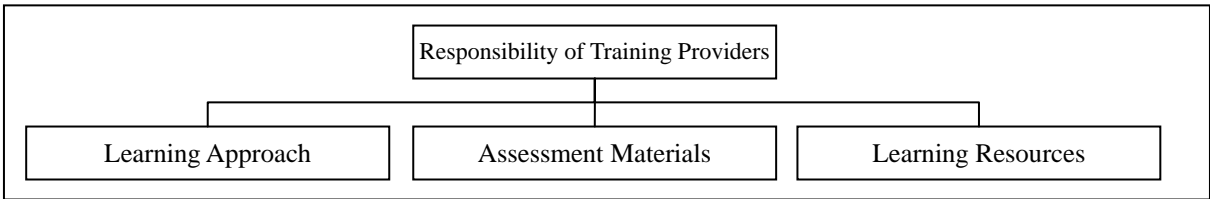


Figure 2-1 Responsibility of Training Providers

# DEVELOPMENT OF CURRICULUM FROM INDUSTRY COMPETENCY STANDARDS

The competency standards defined by IRG, and classified in the Training Packages, are the basis for the design and development of all curriculum materials necessary to deliver the courses effectively.

In the first instance curriculum developers need to analyze each UOC which provides specific training and assessment requirements.

The Figure below illustrates the logical and sequential flow from Training Courses (collections of Units of Competence) to training sessions (the most basic component of the training process).

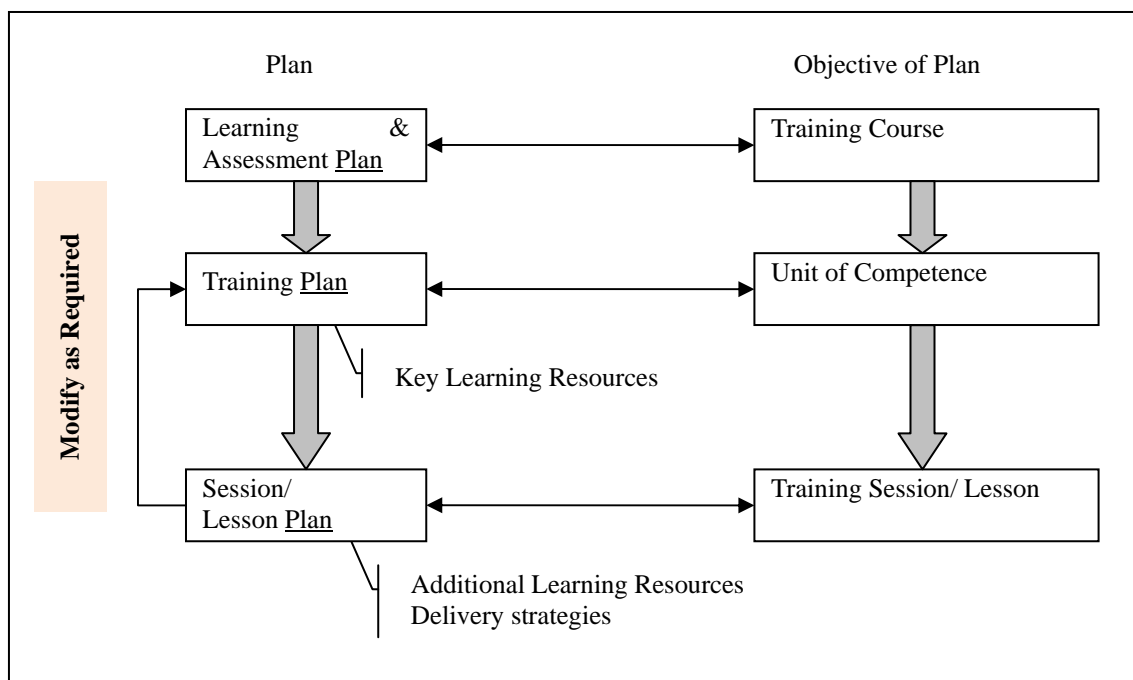


Figure 2-2 Flow from Training Courses to training sessions and their Plans

Each course is comprised of Units of Competence, each of which (as illustrated in the Figure 2.2) corresponding Elements.



Training Session/Lesson consists of one or several performance criteria. It sometimes has less than one performance criteria, depending on the volume of performance criteria and length of lesson. Course consists of several units of competency to be delivered

### **CBT Curriculum Key Issues to be Considered**

The following is a list of the information and steps necessary for training providers, or designated personnel within provider institutions and individual trainers to follow, in developing curriculum to support the delivery of Units of Competence:

- ✓ Training packages contain industry competency standards for all jobs in industry sectors;
- ✓ The basic components of Training Packages are Units of Competencies (UOCs);
- ✓ UOCs are selected, according to given "packaging rules", to be delivered as accredited courses;
- ✓ A Learning and Assessment Plan should be written for each course (ie. for the group of selected UOCs);
- ✓ There should be a Training Plan written for each individual UOC. The Training plan should address important issues such as key Learning Strategies and choice of Learning Resources (Trainee Workbooks are only 1 kind of resource);
- ✓ UOCs are broken down into Elements. For planning purposes, the Elements can be regarded as "training modules". Elements are further broken down into "performance criteria";
- ✓ For planning purposes, each performance criteria can be planned as individual training sessions/lessons;
- ✓ Lesson plans need to be developed for each session/lesson. These plans need to consider all appropriate requirements for achieving competencies in relation to the stated performance criteria – including learning resources such as handouts, videos, models, CDROMS etc.); and,
- ✓ The curriculum development process should be developed on an ongoing basis as a result of the interaction between the trainer and trainees.

Developing curriculum is a complex process and each process has various kind of interaction between each process. The following steps explain how this process can be developed to ensure that the training is logically and systematically delivered.



# CBT ASSESSMENT

## Definition of CBT Assessment

Assessment is the process of collecting evidence and making judgements on the nature and extent of progress toward the performance requirements set out in a standard of a learning outcome.

Assessment is also about making a judgment, at the appropriate point, as to whether the competency has been achieved.

## Overview of assessment

CBT assessment is:

- ✓ Criterion based – assessed against standard criteria or benchmarks (Depending on circumstances, benchmarks may be competency standards, learning outcomes or other performance outcomes);
- ✓ Evidence-based – decisions are based on the evidence provided by the trainee;
- ✓ Formative (progressive) rather than summative (conducted merely at the end of the course);
- ✓ Participatory - trainees are involved in all aspects of the assessment process;
- ✓ Sufficient - There must be enough evidence to demonstrate consistency of competency; and,
- ✓ Current - The evidence must demonstrate current performance of competency.

## The role of an assessor

The role of an assessor is to compare a participant's evidence against the criteria for assessment and make a judgment about whether competency has been achieved. To undertake this role an assessor must be able to:

- ✓ Interpret the criteria for assessment;
- ✓ Demonstrate high skills in the area being assessed;
- ✓ Demonstrate interpersonal skills;
- ✓ Apply the relevant assessment techniques;
- ✓ Ensure that evidence provided is sufficient; and,

- ✓ Make impartial judgments.

### **Role of the Training Organization in Assessing**

Registered Training organizations are required to identify, negotiate, plan and implement appropriate learning and assessment strategies to meet the needs of clients including:

- ✓ Assessment strategies for each Training Package qualification and accredited course on its scope of registration; and,
- ✓ Validation of assessment strategies.

### **Basic Principles of CBT Assessment**

- |                    |   |
|--------------------|---|
| <b>Validity</b>    | <ul style="list-style-type: none"> <li>✓ The evidence will prove that the individual has the required skills and knowledge as specified in the relevant Unit of Competence</li> <li>✓ Will meet each element of the benchmark</li> <li>✓ Competencies (benchmarks) are assessed holistically</li> </ul> |
| <b>Reliability</b> | <ul style="list-style-type: none"> <li>✓ The evidence will prove that the individual has the required skills and knowledge as specified in the relevant Unit of Competence</li> <li>✓ Will meet each element of the benchmark</li> <li>✓ Competencies (benchmarks) are assessed holistically</li> </ul> |
| <b>Fairness</b>    | <ul style="list-style-type: none"> <li>✓ The assessor objectively considers all evidence, is open and transparent about all assessment decisions, and takes into account relevant characteristics and needs of the candidate</li> </ul>   |
| <b>Flexibility</b> | <ul style="list-style-type: none"> <li>✓ Assessments can be either on- or off- the job, and a mutually convenient times and situations</li> </ul>   |

### **Forms of evidence**

- ✓ Demonstration of real work;
- ✓ Demonstration in a simulated environment;
- ✓ Contents of a portfolio;
- ✓ Role-play;
- ✓ Video recordings of a performance;
- ✓ Project-based;
- ✓ Products made;
- ✓ Case studies;

- ✓ Processes used and documented;
- ✓ Answers to questions;
- ✓ Procedures completed; and,
- ✓ Reports from third parties (references).

Assessment tools and methods must collect enough evidence in order for the assessor to be enabled to make the assessment judgment. Usually this means collecting evidence that demonstrates competency over a time period and in different situations.

A good way of ensuring sufficient evidence is through using a combination of different methods and tools

**Direct Evidence** Direct evidence is obtained when an assessor observes the candidate's performance and makes a judgment about whether the candidate has competently performed the required task or series of tasks. This observation could be conducted in a variety of ways. For example the assessor could observe the candidate performing a range of tasks in the workplace, and question the candidate; view a video of the candidate's performance; or observe the candidate's performance in a simulated workplace.

**Indirect Evidence** Indirect evidence is used when it is not possible or desirable for a candidate to be observed during their actual performance of tasks in the workplace; it may be too costly, involve risks or potentially breach confidentiality or privacy. Assessment methods used to collect indirect evidence could include examination of a finished product with evidence to authenticate that it is the candidate's work.

**Supplementary Evidence** Supplementary evidence is additional evidence supporting direct and indirect evidence. It is often obtained through third party sources, for example, from members of the candidate's work team or managers, work journals or evidence of completed training.

**Combination of Evidence** Usually, a combination of types of evidence is used to assess competence. For example, in the automotive sector, you could observe someone on the job performing a task such as inspecting

brakes, ask them about possible solutions in a simulated situation or both.

### **Assessment methods**

The following are examples of a few methods that can be used to assess competency:

<b>METHOD</b>	<b>EXAMPLE</b>
Direct observation	<ul style="list-style-type: none"> <li>➤ Real work and/or real time activities</li> <li>➤ Work activities in simulated workplace environment</li> </ul>
Questioning	<ul style="list-style-type: none"> <li>➤ Self-assessment</li> <li>➤ Verbal questioning</li> <li>➤ Written questioning (including computer-based)</li> <li>➤ Interview</li> <li>➤ Questionnaire</li> <li>➤ Verbal or written examinations</li> </ul>
Review of products	<ul style="list-style-type: none"> <li>➤ Work samples or products</li> <li>➤ Products as a result of a project</li> </ul>
Structured activities	<ul style="list-style-type: none"> <li>➤ Projects</li> <li>➤ Presentation</li> <li>➤ Role-play</li> <li>➤ Case study</li> <li>➤ Fault finding</li> </ul>
Portfolio	<ul style="list-style-type: none"> <li>➤ Documents such as work samples</li> <li>➤ Product with supporting documentation</li> <li>➤ Historical evidence</li> <li>➤ Journal/log book</li> <li>➤ Information about life experience</li> <li>➤ Collecting of work samples compiled by candidate</li> </ul>
Third party feedback	<ul style="list-style-type: none"> <li>➤ Testimonials or reports from employers or supervisors</li> <li>➤ Evidence of training</li> <li>➤ Interview employer, supervisor, peer</li> <li>➤ Authenticated prior achievements</li> </ul>

### **Assessment Tools**

Assessment tools are for gathering evidence based on the selected assessment methods. They can also be procedures to be followed when conducting assessment.

Assessment tools need to be designed carefully to ensure that:

- ✓ Assessments are conducted according to the principles of assessment; and,

- ✓ The collected evidence meets the rules of evidence.

## The Purpose of Assessment Tools

<b>Purpose of Assessment Tool</b>	<b>Example of Assessment Tool</b>
To provide guidance and structure for the candidate/assessor in collecting evidence	A checklist to be used in the demonstration of a series of tasks
To guide and support the candidate in understanding and participating in the assessment process	Instructions to the candidate about how to be involved in a role-play activity
To give clarity and confidence to the assessor and/or candidate in working through the process	Clear criteria for a product to be assessed against
To define the key performance indicators to be met by the candidate	List of criteria for a candidate when being involved in a simulation, so they know what particular areas will be assessed
To ensure the rules of evidence and principles of assessment are addressed in the assessment process	Matrix of assessment methods against the evidence requirements
To be used as a recording and reporting mechanism	List of questions with space to record responses and feedback given, as well as whether candidate is competent or whether future evidence is required
To provide objectivity and consistency in evidence collection	Set of predetermined questions to be asked
To enable recognition	Self-assessment checklist, with suggestions of types of evidence
To provide a tool to document the need for further action	Any checklists that provide room for feedback and advice given for further action

<b>Assessment tool</b>	<b>Example</b>
Observation checklist	➤ Real work, role-play, simulation, third-party observation checklist
Verbal Questions	➤ Interview, case study, real work performance, simulation
Prepared responses	➤ For each set of verbal and written questions used in interviews, case study, real work, simulation, self assessment
Scenario, script	➤ Case study, role-play
Instructions	➤ For each assessment tool for the: ➤ Candidate ➤ Assessor ➤ Third-party
Debriefing guidelines	➤ Role-play, simulations
Recording tool	➤ For each method of assessment ➤ For each method for third party
Written questions	➤ Tests, exams, case studies, true/false questions, multiple-choice, essay, self-assessment items, completion question, short answer questions
Project brief	➤ Project, assignment, product, process design
Review checklist for product	➤ Project, practical demonstration, portfolio
Portfolio guidelines	➤ RPL/RCC portfolio, project portfolio



### **Assessment Validation**

The most common process for assessment validation is through moderation. It is a process of comparing standards of assessment across different courses, institutions and/or organizations to ensure assessments are valid, reliable and fair.

Assessment moderation can be conducted before, during and after assessment.

Assessment validation involves comparing, evaluating and reviewing assessment processes, methods and tools and the subsequent assessment decisions. It can include assessment moderation activities in which assessors discuss and reach agreement about assessment processes and outcomes in a particular industry or industry sector, developing a shared understanding of specific Training Packages.

The benchmarks for assessment validation is the competency standard.

# CBT TRAINING DELIVERY

As defined earlier in this chapter, CBT curriculum development is an ongoing, dynamic process. It involves drafting appropriate plans, organizing and breaking down information and tasks and documenting these.

However the process also involves interaction between trainers and trainees. The manner in which written information is communicated (delivered) to trainees is just as important. The following describes the delivery strategies that need to be considered to enable curriculum to be effectively implemented

## Communication Skills

A skilled trainer needs to develop effective communication skills. Such a trainer is aware of factors that can cause communication to break down:

- ✓ using an inappropriate medium;
- ✓ being distracted or interrupted;
- ✓ physical factors such as a hearing impediment;
- ✓ prejudging the information;
- ✓ making judgments about the speaker; and,
- ✓ feeling uncomfortable.

A person using effective listening skills:

- ✓ concentrates when someone is speaking to them;
- ✓ does not interrupt;
- ✓ faces the speaker;
- ✓ avoids distractions;
- ✓ asks questions to check that they heard correctly;
- ✓ nods head etc to show the speaker that they are listening;
- ✓ tries to understand the information being conveyed; and,

- ✓ keeps an open mind.

A person using effective speaking skills:

- ✓ speaks clearly and audibly;
- ✓ speaks at an appropriate pace – not too fast or too slow;
- ✓ changes the pitch of their voice; and,
- ✓ faces the audience as they speak.

### **The Importance of Non Verbal Communication**

Only a small percentage of the information that we convey to others is communicated through the actual words spoken. Much information is conveyed through:

- ✓ Hand gestures;
- ✓ Facial expressions;
- ✓ Posture;
- ✓ Personal space; and,
- ✓ Tone of voice.

Trainers need to be aware of non verbal communication so that:

- ✓ Their nonverbal messages support what they are saying; and,
- ✓ They are perceptive to the messages that the trainees send to them.

### **Questioning Skills**

Questioning helps a trainer to discover:

- ✓ What a trainee already knows;
- ✓ What a trainee has learnt; and,
- ✓ Areas that the trainee may be unsure of.

### Open Questions

These questions are far more specific, they can be answered with 'yes', 'no' or one word. Such questions can be useful to follow after an open question. A trainee may have given a detailed response but may have missed out one vital point. A trainer may use a closed question to check on that point.

### Tips When Asking Questions

- ✓ Only ask questions that you feel that the trainees are able to answer;
- ✓ Trainees may require a few seconds to think of a response. Allow them to have a few seconds to think;
- ✓ Be prepared to reword the question;
- ✓ Trainees may understand the question more clearly if it is worded differently. Try to ask open questions. This may require some practice or you may like to prepare some questions prior to each training session;
- ✓ Praise trainees for their responses;
- ✓ Use questions to maintain the attention of participants;
- ✓ Avoid being predictable in your questioning; and,
- ✓ Use 'safe' questions to involve quiet participants.

### Answering Questions

Trainees will ask many questions of their trainer. If trainees ask a question a trainer can give a clear response straight away. However, the trainer might choose to ask the question to the class. This can often prompt discussion and after the discussion the trainer can clarify relevant details or points. Or another trainee may be able to answer the question. This would allow the trainees to be more involved in their learning.

If a trainer is unable to answer a question they should tell the trainees how to find out the answer or tell them that they will find out and let them know.

### Giving Feedback

Trainees appreciate feedback. It enables trainees to:

- ✓ Gauge how well they are learning; and,
- ✓ Identify areas they are not sure of and develop strategies to improve in these areas.

### **Tips for Giving Feedback**

- ✓ Ask the trainees how they feel they have performed. They may be able to make many of the comments that you intended to make;
- ✓ Be aware of the trainee's self esteem. Word feedback so as to help the trainee to improve and learn rather than to point out faults;
- ✓ Begin by offering praise then discuss areas that could be improved. Avoid just telling the trainee what they did wrong. Highlight the good;
- ✓ Focus on the skill or knowledge rather than the person;
- ✓ Show respect for trainees by giving feedback in private. Select an appropriate time and place to give feedback;
- ✓ Do not give too much feedback. Give the amount of feedback that you feel the trainee will be able to absorb at the time. If you feel the need to give a great deal of feedback, consider which points will be the most beneficial to the trainee at the time. They may not be able to absorb all that you would like to say, so tell them the points that you feel will benefit them the most;
- ✓ You may need to give negative feedback. Be honest when you give such feedback, but give it in a manner which respects the trainee; and,
- ✓ Remember the importance of confidentiality.

### **Learning styles**

Each trainee has his/her own individual style of learning. Individuals differ in the way they organize their experiences into meanings, values and skills. This means that the trainer must take into account the varying styles of learning when preparing and delivering training.

Learners can be divided into three main groups with different styles of learning. Many individuals will keep to one preferred style but in some situations they may like a combination of styles.

The main styles are:

- ✓ Visual – preference for seeing what is going on. Learners with this preference enjoy reading, watching TV and like to look at photos, cartoons, plans and pictures. Useful resources to use are posters, charts, graphs, visual displays, booklets, handouts and varieties of colors and shapes;
- ✓ Auditory – learning mainly by listening. Auditory learners like to talk and prefer to hear things rather than read them. With these learners it would be good to use question and answer, lectures and stories, audio tapes, discussion pairs or groups, music or slogans; and,
- ✓ Kinesthetic – Learners enjoy learning by doing and remember best through practice. These learners would enjoy learning by team activities, hands-on experience, role-plays and note taking.

## Barriers to Learning

Trainers are aware that differences exist amongst their trainees but it is not enough just to be aware of such differences. The important point is that the trainer recognizes these differences and adopts appropriate strategies to maximize learning. Some differences are:

<b>Possible Barrier</b>	<b>Suggested Solution</b>
<u>Language and literacy</u> Language difficulties caused by not being familiar with the language and language style being used by the trainer	<ul style="list-style-type: none"> <li>• Modify language use</li> <li>• Use simple texts</li> <li>• Use pictorial learning materials</li> <li>• Use paired "buddy system"</li> </ul>
<u>Cultural background</u> Socio-economic, religious beliefs, cultural differences, level of support	<ul style="list-style-type: none"> <li>• Positive person assistance, support and advice</li> <li>• Additional training time</li> </ul>
<u>Physical impairment</u> Poor sight, poor hearing, impaired dexterity, strength level	<ul style="list-style-type: none"> <li>• Prepare seating arrangements</li> <li>• Give additional time to practice</li> <li>• Use pictorial aids</li> </ul>
<u>Previous experience/learning</u> Level of education, type and degree of previous experience	<ul style="list-style-type: none"> <li>• Check previous experiences – can they be used</li> <li>• Support transfer of skills to new situations</li> </ul>
<u>Learning styles</u> Preferred theory to practice or vice versa, likes constant revision/practice, prefers self paced materials to presentations	<ul style="list-style-type: none"> <li>• Incorporate various training methods so that most can use preferred styles</li> <li>• Encourage self-management of learning but provide advice when needed</li> </ul>
<u>Motivation</u> Not highly motivated, not interested, history of failure	<ul style="list-style-type: none"> <li>• Counsel where necessary</li> <li>• Identify and talk through motivational and attitudinal issues</li> <li>• Provide encouragement</li> <li>• Relate training to work experience</li> </ul>
<u>Personality traits</u> Poor self image, loner, insecure about abilities	<ul style="list-style-type: none"> <li>• May be related to poor motivation – counsel where necessary</li> <li>• Use the buddy system</li> <li>• Discuss preferred ways of learning</li> </ul>

## Assessing Trainees

The job of a trainer is to assist trainees to gain new skills and knowledge. When assessing, the trainer provides the trainees with opportunities to demonstrate they are now competent in these areas.

A trainer will design assessment strategies that:

- will provide a reliable result;
- are fair to all trainees; and,
- are flexible and suit the individual needs of trainees.

The trainer may consult with the trainees about how they will be assessed and other details of the assessment.

The aim is not to surprise the trainees with a test. It is to allow the trainees to have the best opportunity to demonstrate that they have gained new skills and knowledge.

## Preparing the Training Area

Importantly, your learners must be encouraged to become involved in the learning experiences. You will need to arrange the classroom or the workshop to reflect this principle.

Some items that you will need to take care of when preparing for classroom presentations are:

- ✓ Move tables to form a U-shaped learning environment where learners want to participate with you as the trainer and each other as learners;
- ✓ Have your overhead projector and screen set up so that everyone can see easily. The same with your whiteboard. Also make sure you have overhead pens and that they work;
- ✓ If you want to prepare some drawings or explanations on the reverse side of the whiteboard, or on butcher's paper, have this ready. Charts, models and so on, which relate to the lesson can also be placed in position before the lesson starts. You can turn them around to face the wall and use them as a "surprise" element in the lesson if you want to; and,
- ✓ Check the lighting. Make sure the lights work and that all learners can see you –

the trainer – and what you are doing.

Some items you will need to give attention to when preparing for training presentations in the workshop are:

- ✓ Clean the area up – make the workshop neat and tidy. Put away any tools or other materials that are not needed for the lesson. Make your training venue a place where your learners want to be;
- ✓ Turn off any machinery that is not going to be used. Try to create an area without too much noise so that learners can hear you and you are not distracted by other noise;
- ✓ Arrange the area so that trainees can easily see what you are doing if you are providing practical demonstrations. This could also mean checking and adjusting the lighting in the area;
- ✓ Samples of work – good and bad – are useful in practical workshop sessions to show learners the quality of work expected;
- ✓ Have all your tools, materials and any other equipment prepared and ready. Make sure the tools work and that the materials are in appropriate condition;
- ✓ Have any training aids – charts, samples, whiteboards, and so on, ready. Place these in position before the lesson and check that they will be able to be seen by your learners;
- ✓ Learners will become restless if they cannot see, or become uncomfortable. If it's appropriate, a few stools or chairs around the learning area can help overcome this;
- ✓ Make sure your learners can see your demonstrations and – if necessary – repeat the demonstrations for those who may not have been able to see the first time; and,
- ✓ Make sure – during and at the end of the lesson – that you inform your learners of your availability and where and when you will be able to provide any extra help and training assistance that they may require.

## **Motivate Your Learners**

Preparing your trainees also means encouraging and motivating them to learn. As a teacher and a trainer you will need to adopt a warm, approachable, friendly and confident manner. Introduce yourself and welcome your learners to the training. Use questioning to ask them about their previous experiences of the job. Make them the



most important part of the training.

Your approach must be friendly and supportive towards your learners. You must be helpful, positive and motivational and quickly gain their respect and attention.

## **Use Suitable Learning Strategies**

Learning strategies with learners are essentially about learner involvement. If adult learners want to take an active part in the learning processes then the trainer must use learning strategies that create opportunities for this to occur.

### Strategies for Getting the Attention of Your Trainees

**Questioning**      The interest of your trainees can be aroused and maintained during the training through the use of a range of varied questioning techniques by the trainer.

**Show a completed job or product**      Displaying the end product of the lesson that learners are to complete provides adults with motivation. Learners will often forget how quickly you demonstrated the task, but will always remember how well you demonstrated the task.

**Discussion group**      Form learners into small groups to discuss the job, or task, and how they can best perform the job

**Trainer experiences**      Describe a time – in industry or similar – when you were required to develop a similar skill and how you went about doing the job. Remember that you are the subject matter expert and if you can establish your credentials learners will respect and learn more from you.

# LEARNING RESOURCE DESIGN & DEVELOPMENT

In the Australian TVT context, the learning approach and assessment materials are generally developed by training delivery departments, with support from organizational service areas such as Educational Development Service departments.

The main responsibility for the production of learning resources is intended to be with the training provider delivery departments. Each department allocates time to individual trainers to enable them to plan and develop appropriate resources to supplement delivery of training at all levels. This development is also supported by organizational service areas.

In reality, because of the enormous need for training support materials, and the expectation that they are to be of high production quality, there is an increasing trend to purchase the materials from specialist training resource producers. This is especially true of materials such as trainee workbooks, technical audio productions, instructional manuals and technical demonstration equipment.

Most likely there are many textbooks, AV materials, computer-based instructional aids, workshop manuals and other supporting information available relating to the development of a selected training course. Many of these can be sourced either through local technical bookshops, technical libraries or on the internet.

A broad outline of the kinds of learning resources that a trainer/training provider can look for is described below:

- Print**
- ✓ Formally prepared handouts and written notes;
  - ✓ Commercially produced material such as text books, trainee workbooks, pamphlets and workshop manuals;
  - ✓ Study guides that are produced to accompany already published material;
  - ✓ Worksheets to use with other material;
  - ✓ Case studies;
  - ✓ Self-tests, project guides, assignment notes and reading lists;
  - ✓ Maps, charts and posters;

- ✓ Photographs and illustrations; and,
- ✓ Material from newspapers, magazines, journals and periodicals.
- Multi Media**
  - ✓ PowerPoint slides;
  - ✓ CDs, DVDs and CD ROMs;
  - ✓ Internet/intranet; and,
  - ✓ Multimedia packages.
- Human Contact**
  - ✓ Use of telephone – between trainee and trainer, trainee and trainee, conference calls etc.; and,
  - ✓ Use of computer – computer audio visual conferencing, chat groups and e-mail.
- Practical Work**
  - ✓ Use of real materials and equipment, for example workshop and manufacturers' models, official forms, specimens and kits;
  - ✓ Use of the trainees' own local environment – for example observations, interviews, collection of data; and,
  - ✓ Work-based assignments.

It is often difficult, however, to access this material quickly and there may be other problems with its use (too bulky, cannot be released from the source, too expensive etc).

Sometimes equipment may be installed into the college or institute which may not have any supporting training materials with it or, if materials do come with the new equipment, they may not be suitable for use in a training situation.

Many of these problems can be overcome if the training provider develops their own learning resources. Some of the advantages in developing purpose-specific learning resources are:

- ✓ It is possible to make the learning material simpler for trainees to understand by directing it at their language and skill level (some books and publications are very technical and may not suit the level of training being provided);
- ✓ The trainers' own materials will always "work" better for them in the training situation;
- ✓ Trainers can add their own sketches, diagrams, pictures and graphs;
- ✓ Specific activities or self-help quiz questions can be included; and,
- ✓ Providing one's own materials indicates to the learners that the trainer is trying to make your training as personally effective and professional as possible.

In this section, the 2 main kinds of resources to be discussed are handouts and trainee workbooks. These are the learning resources that are most commonly used in CBT, likely to be of greatest value and relatively easy to develop and produce.

## **Producing Session Handouts**

A handout is often a printed summary of the lesson, varying in size from one to any number of pages. A hand-out can contain a range of information including:

- ✓ Step-by-step procedures on how to perform the job or task;
- ✓ The names of books, videos, or other information on the topic and where this is located;
- ✓ Labeled sketches on the topic to provide graphic information;
- ✓ Explanations of technical terms that are used;
- ✓ Safety warnings;
- ✓ Special instructions for workshop use - what tools are available, where they are stored, what materials are required and where these materials are located;
- ✓ Assignments, activities and exercises for learners to undertake;
- ✓ Photographs (some special work required here) of the equipment, the operation, or other techniques;
- ✓ Photocopies of your overhead transparencies; and,
- ✓ Handouts are cheap, quick to produce and generally not difficult to develop.

### **What to Include on Your Handout**

Your handout should be a support to the training - something for learners to take away and remind them of the procedures and processes of the task.

A basic principle for handouts should be to apply  
the "Kiss Principle" ...

**Keep It Short and Simple**

Some, or all, of the following items are appropriate to include in your handout:

- ✓ The objectives of the training session/program - with associated performance, conditions and standard;
- ✓ Safety considerations;
- ✓ The key points of the lesson - perhaps with some additional information like knacks of the job, tools, etc.;
- ✓ Labeled diagram, graph, etc.;
- ✓ Step-by-step checklist of job or task procedures;
- ✓ Where further information or assistance, is available; and,
- ✓ Learner assignments, activities, tests.

Before you introduce any pictures or graphs into your handout, make sure that they are relevant to the words and the subject matter, and not covered by copyright. There is no point in having a picture in your handout just for the sake of including some graphics.

### **Techniques for producing a handout**

There is a wide range of techniques available to produce your handout. Some of these are:

- ✓ If possible use a desktop publishing program on a personal computer (MS Word);
- ✓ Cuttings - cartoons, graphics, from newspapers or magazines pasted into your handout;
- ✓ Clip art books or compact disc art; and,
- ✓ Handwritten. Provided your writing is clear and legible, there is no reason why your handouts cannot be handwritten - although there are more "professional looking" methods.

### **Some Ideas for Presenting Your Handout**

It is relatively easy to make an ugly-looking handout - but with just a little thought, some care and attention - the results that you achieve with the handout can be impressive. Your learners will learn more and they will appreciate your extra efforts when you provide better quality training materials.

Here are some ideas and guidelines for good looking handouts.

- ✓ Lots of white space. Never be afraid of white space. If you examine these notes, look at the white space around the pages (the margins), and the open space between the lines of text and the paragraphs. All this space helps make your handout attractive and easier to read and provides space for learners to make notes sketches if they require;
- ✓ Headings and Sub-Headings. Try to make headings and sub-headings present the major ideas. These help learners follow the information logically and quickly allow them find the information required. Material under headings should expand the information of the topic heading;
- ✓ Use stars (\*) or dots or other symbols for lists and to convey major ideas;
- ✓ Illustrations and pictures should be placed near to the text to which they refer;
- ✓ Try not to use too many typefaces or type sizes. Variation is fine, but too many may spoil the look of your handout;
- ✓ Photocopy from a prepared original;
- ✓ Printed from a computer black and white or color printer; and,
- ✓ Printed out, or projected from a computer using a software program such as Microsoft PowerPoint.

## **Producing Trainee Workbooks**

Trainee workbooks are sometimes developed, and produced, by training providers who can be either Government-funded or private technical and vocational training institutes or colleges.

Trainee workbooks (also sometimes called "instructional manuals), when designed well, are an effective integration of explanation, instruction and assessment with major focus on the technical knowledge and skill requirements of each Unit of Competence which are:

- ✓ Elements;
- ✓ Performance Criteria;
- ✓ Range Statement (scope and level); and,
- ✓ Evidence Guide (assessment requirements).

The technical information is set out logically and systematically so that the workbooks can be the primary learning resource in the training process for each Unit of Competence.

Planning for delivery of the Key Competencies in each Unit needs to be considered in tandem with planning for delivery of technical training.

There are no strict guidelines for developing trainee workbooks but it is recommended that, as evident in the trainee workbook samples provided that the approach generally incorporates:

- ✓ Careful analysis of the Units of Competence;
- ✓ Table of contents;
- ✓ Key words used in the workbook and glossary;
- ✓ Brief outline of the key objective and scope of the Unit;
- ✓ Description of the Elements;
- ✓ Assessment expectations; and,
- ✓ Logical and systematic inclusion of technical information, instruction and assessment (both formative and summative).

The larger providers sometimes have designated educational training service divisions that have the capability to provide instructional design skills. Specialist Staff from these divisions work collaboratively with technical trainers obtain appropriate technical and instructional material. In other instances, delivery departments allocate time responsibility to training staff to develop appropriate trainee workbooks.

Increasingly, however, training providers purchase relatively high quality workbooks from production agencies established for the sole purpose of producing TVT learning resources. Although copyright principles and laws have to be adhered to, it is possible to adapt and customize such resources and use them as models for the production of additional, similar resources for application in other training.

For application within TVTO, it is recommended that the sample trainee workbooks supplied for delivery of the Pilot Courses be adapted and customized to provide a suitable model for developing and producing workbooks to support CBT delivery at TVTCs.

NOTE: Trainee Workbooks are only one kind of resource, designed to be used in conjunction with a range of other learning resources. As with all learning resources they must be seen primarily as supplementary to the direct participation of trainers and trainees in the training activity.





# PROCESS STEPS

## OVERVIEW

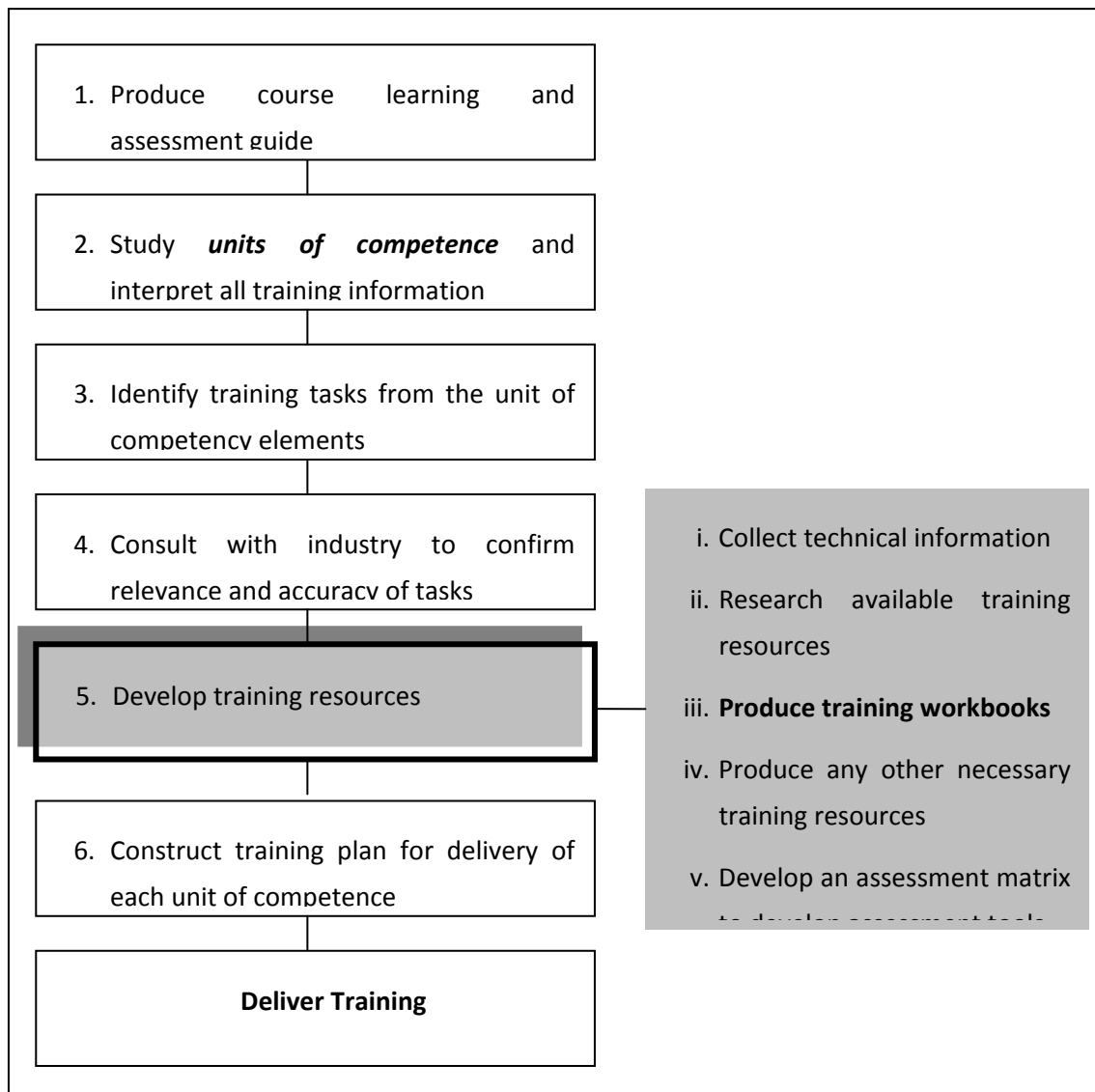
TVT curriculum is regarded as a documentation of planned learning experiences which enables trainees to gain the knowledge and skills that are prescribed in industry-driven competency standards.

A curriculum provides a "map" or "guide" for the trainer, and generally provides advice on how to interpret and break down each Unit of Competence. It also provides information about the methods and strategies, assessment tools and training resources necessary to train people to the required standards.

This part of the Manual provides a logical flowchart of the process required to develop TVT curriculum using a CBT approach, and outlines each major step in this process. It also provides examples of forms and templates that can be used in the process. These forms and templates can be selected, modified and customized for use as required.

It is important to remember that the process of developing TVT curriculum needs to be systematic and ongoing. A curriculum, however well developed, needs to be reviewed on a regular basis and amended to suit changing needs such as constant changes in technology and job contexts and requirements.

## LOGICAL FLOW CHART OF PROCESS STEPS



## EXPLANATION OF PROCESS STEPS

### STEP1

### Produce Course Learning and Assessment Guide

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The Learning and Assessment guide is a document that provides a summary of all learning and assessment strategies for the delivery of an entire course.

It is generally prepared by the nominated course coordinator/manager after a close consideration of all of the units of competency that are packaged (clustered) to form the course at the appropriate qualification level.

The coordinator/manager needs to provide as much information that is considered necessary for trainers to understand the general scope and context of the training that they are required to deliver.

The Guide is also generally provided to trainees so that they are aware of:

- ✓ Who their trainers are likely to be and how they can be contacted for assistance and guidance;
- ✓ The number of units they can be expected to complete;
- ✓ The nominal duration of the course and the intended course/unit schedule;
- ✓ Attendance and assessment requirements;
- ✓ Recommended training resources; and,
- ✓ Expectations related to industry attachments and course-relevant excursions.

See

*Appendix 2-1: Form "Learning and assessment Plan"*

### STEP2

### Study Units of Competence

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The language of Competency Units is written in the passive voice. In order to develop appropriate training for each unit it is very important to correctly interpret the 3 main components of each Unit of Competence (UOC) which are:

- a) Elements and Performance Criteria
- b) Range of Variables
- c) Evidence Guide

The following is a brief guide to interpreting information contained in these sections of the UOC:

#### **a) Elements and Performance Criteria**

The Elements that are described in each Unit are very broad by nature in order to cover a range of activities without being too restrictive. This makes the selection of tasks directly from Elements a difficult process.

For example consider the following Element from the Australian Maintenance Mechanic Certificate II level Course:

#### ***Carry out servicing of braking systems and/or associated components***

The performance criteria written for this element are:

- ✓ Servicing is implemented in accordance with workplace procedures and manufacturer/component supplier specifications; and,
- ✓ Adjustments made during the servicing are in accordance with manufacturer/component supplier specifications.

Before designing the training to suit these performance criteria, it is necessary to decide which tasks constitute "Servicing" and which tasks are involved in the "Adjustments made"? (See Step 3)

#### **b) Range of Variables**

The Range of Variables statement deals with choices that are available within the Unit of Competence. It offers strong indications as to what tasks can be selected and allows

the matching of the unit to a particular training level and industry sector e.g. Level 2 and in the Light Vehicles and 4WDs sector. It indicates not only WHAT tasks and technical information must be included but also under what circumstances they must be performed.

Mandatory requirements which must be included in curriculum design are expressed by the words "*are to include*". Requirements that are not mandatory are expressed by the words "*may include*".

### **(c) Evidence Guide**

Reading the Evidence Guide provides us with a picture of what the "finished product" should look like i.e. how the trainee will be assessed to determine competency. So, in effect we *start from the end*.

We start with the tasks a trainee is expected to perform competently in the workplace and design curriculum around these tasks, based on the various requirements of the given Unit of Competence.

See

*Appendix 2-2 Interpretation of a Unit of Competence*

*Appendix 2-3 Sample Unit of Competence (Inspect & Service Braking Systems)*

## **STEP3**

### **Identify Training Tasks from the Unit of Competence Elements**

Task analysis is the process of breaking down a particular job into observable tasks or steps.

Curriculum designers need to be able to arrive at a specific set of tasks which meet the requirements of the job as well as satisfying the Performance Criteria. Many such tasks initially stem from what is considered "accepted" practice which is based on the instructor's own industry experience.

Each task should form a small module (piece) of training which can be delivered to trainees in a convenient and manageable way. Each module should have a clear

beginning and end.

However validation through industry consultation is always necessary to ensure that tasks are relevant and current.

Since assessment is focused on the successful performance of these tasks, all other curriculum components should be considered in relation to the tasks' performance also. These include the instructional design, development and delivery of underpinning knowledge, task instructions , resources, facilities, etc.; even instructors' having current competence in task performance.

See

*Appendix 2-4 Task Analysis sample*

## **STEP4**

### **Consult with Industry to Confirm Relevance and Currency of Tasks**

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Having analysed the units of competency and identified the training tasks, it is necessary to consult with industry to confirm that the tasks are current.

This step requires having close communication with the industry that is related to the training and assessment that is to take place. Ongoing discussions with industry representatives are a vital part of CBT in order to make sure that each Competency Unit is relevant to current industry needs.

The information collected from such consultations is used in the design of delivery and assessment strategies. For example, tasks that are derived from Unit elements would be based on these discussions and then be validated on a regular basis to ensure that all assessment that is conducted is specifically relevant to the tasks.

The most common forms of industry representation are groups such as Industry Reference Groups (IRG) or training advisory boards. In industries where no such groups exist, it would be necessary to have discussions with suitable representatives from industries in the region.

In the Automotive sector, for example, these discussions can be with workshop

managers/supervisors from large, medium and small dealerships according to the tasks to be confirmed. If it is difficult to discuss the tasks with representatives from all of the 3 different types of enterprises, it would be appropriate to ask the available representative to consider the tasks from the general perspective of the industry.

Perhaps the greatest barrier to successful consultation is communication. Competency Units are written in a language with terminology that can be difficult to understand and intimidating for anybody outside the vocational training area.

Therefore it is necessary to carefully explain terms such as Units of Competence, competency standards, elements, and performance.

Thorough explanations in plain language of terms, concepts and meanings to industry representatives are vital to involving them in this very important component of CBT.

See

*Appendix 2-5 Confirming Selected Training Tasks with Industry*

## **STEP5** Develop Training Resources

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It is important to develop suitable resources in order to support the delivery of training to achieve competence.

Unlike more traditional approaches to training where training organizations relied on general text books to supplement workshop training, a CBT approach encourages training providers to develop a range of resources.

In the CBT approach, the primary focus is in being able to competently perform job tasks. It is useful therefore for theoretical knowledge and practical skills to be effectively integrated in training delivery. Effectively designed resources can assist in this integration and also assist both trainers and trainees in verifying all relevant job tasks, and providing explicit directions in the kind of assessment that needs to be conducted to confirm competence.

This section describes *five sub-steps* related to training resource development.

<b>Sub STEP5.i</b>	<b>Collect Technical Information</b>
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Once tasks which satisfy Elements have been determined, the design of training tools must focus on presenting sufficient information at the appropriate level which will enable the student to successfully achieve competency. Information must be sufficient for the student to not only know HOW to perform a task but to also understand WHY it is being performed and in what CONTEXT (task may be part of a larger job/occupation).

Information must cover:

- ✓ underpinning knowledge;
- ✓ task procedures;
- ✓ safety issues;
- ✓ training activities;
- ✓ references; and,
- ✓ resources.

<b>Sub STEP5.ii</b>	<b>Research Available Training Resources</b>
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Available resources should cover learning resources as well as whatever is necessary for the trainee to perform the tasks to demonstrate competency.

Learning resources can include a wide range of audio/visual, computerized and literature-based material such as:

- ✓ Text books;
- ✓ Journals, research articles and general publications;
- ✓ Workbooks;
- ✓ PowerPoint presentations;
- ✓ CDs and DVDs; and,
- ✓ Computer-based programs and Internet sites.

Resources can also cover any sort of hardware or software which is used in task



performance such as:

- ✓ General or specialized tools/equipment;
- ✓ Computers; and,
- ✓ Appropriate work environment.

<b>Sub STEP5.iii</b>	<b>Produce Training Workbooks</b>
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The Workbook is a guide for the trainee (and the instructor) to enable him to complete all the learning and assessment activities to achieve competence. It should contain all the necessary learning material, activities, references and assessment criteria to achieve competence in the unit. Final task and knowledge assessment tools should be provided separately.

A typical workbook may contain the following sections.

*Contents Page*

*Introduction*

The introduction should contain:

- ✓ Unit Description;
- ✓ Assessment Criteria – what the trainee must do to be competent.
- ✓ Main References; and,
- ✓ Key Words.

*Safety Considerations*

Description all safety aspects relating to the completion of this unit

*Main Section*

- ✓ containing information such as component identification, system and component operation, servicing procedures, "safety boxes", practical activities;
- ✓ Information summaries;
- ✓ Review questions/ tasks; and,

- ✓ Checkpoints where trainees report to the instructor before continuing.

This may be divided into smaller sections of related material which can be delivered as individual lessons. Separate or related tasks and their underpinning knowledge can be delivered as modules which together make up a complete unit of competency.

#### *Assessment table or Checklist*

This can be used to monitor the trainee's progress through all assessment tasks or exercises for the benefit of the trainee and the instructor. It is also an important record which can be transferred to official institute records.

See

**Appendix 2-6 Workbook Development Guide**

### **Sub STEP5.iv Produce Other Training Resources**

When Student Workbooks are effectively designed and produced, they are likely to contain much of the necessary explanations, training and assessment guides and references necessary for the training course.

However other items may need to supplement delivery of training for units of competency. These items may include:

- ✓ Handouts for distribution to trainees;
- ✓ Practical task sheets and checklists to provide additional work instructions or to document task progress;
- ✓ 3rd Party verification forms which record/endorse the repetition of tasks in the workplace. This direct connection with industry underpins the entire notion of Competency and of producing work-ready trainees. This is also a means of keeping a communication channel with employers open throughout the training cycle; and,
- ✓ Physical equipment including models, necessary to understand and perform tasks. Training institutions must provide resources which replicate/simulate workplace conditions under which tasks are performed so that competence is assessed as

realistically as possible.

- ✓ Suitable facilities to accommodate all necessary resources which are vital to fair and equitable task performance and assessment.

See

*Appendix 2-7 Examples of Handouts*

*Appendix 2-8 Sample Practical Task Templates*

*Appendix 2-9 Example of 3<sup>rd</sup> Party Verification Form*

### **Sub STEP5.v Construct Assessment Matrix**

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An assessment matrix identifies which assessment tools are used for each Performance Criteria of each Element. While this is essentially a quality management aspect, the matrix can be also be a convenient checklist to ensure all Performance Criteria have been assessed.

The matrix lists all Elements and Performance Criteria and matches them to the selected assessment methods. Methods may include written responses (theory test), assessment tasks, 3rd party verification.

It is also essential that Critical Aspects of Evidence be included in the matrix to indicate where and how these have been assessed. Some aspects may be assessed separately but most will be included in other Performance Criteria. For example, Safety activities may have a separate assessment task or quiz but may also be included in the performance of many other tasks.

See

*Appendix 2-10 Assessment Matrix for Unit of Competence*

*Appendix 2-11 Assessment Guide*

### **Sub STEP5.vi Develop Assessment Tools**

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Assessment is the key feature of a CBT approach. Unlike more traditional approaches

to technical and vocational training which focus on course content and the use of text-based exams, the CBT approach requires assessment to be directly relevant to the competencies that trainees are required to achieve.

As outlined in the previous section, an assessment matrix is designed to enable the trainer to make precise judgments about what type of assessment needs to be used for each task within a competency unit. The next step is to design the appropriate "assessment tools".

Assessment tools can be briefly described as:

- ✓ Instruments for gathering evidence based on the selected assessment methods; and,
- ✓ Procedures to be followed when conducting assessment.

They need to be designed carefully to ensure that:

- ✓ Assessments are conducted according to the principles of assessment (see Explanatory Text);
- ✓ The collected evidence meets the rules of evidence (see Explanatory Text);
- ✓ Organizational requirements are met; and,
- ✓ The needs of the trainees are taken into account.

The following are commonly used assessment tools:

- ✓ Labelling diagram/model for component identification. These can be used to assess theory and practice. Much of this type of testing can now be created for use with computers if trainees had ready access to them;
- ✓ Multiple choice written tests – these have the advantages of being quick to mark and require virtually no writing on the part of the student. They are used to mainly for theory;
- ✓ Written tests – Used to assess knowledge. Correction is time consuming for trainers but these types of tests enable trainees to comprehensively express knowledge gained. These test should be accompanied by a marking guide; and,
- ✓ Checklists are often used in assessing practical tasks and are best derived from the standards of performance objectives. This format of task objective uses very precise standards to make specific what is described in very broad terms in the Elements of the competency unit.

See

*Appendix 2-12 Assessment Tool Samples for Labelling Diagrams, Multiple Choice and Written Tests*

*Appendix 2-13 Sample Assessment Checklist 1*

*Appendix 2-14 Sample Assessment Checklist 2*

## **STEP6**

### **Construct Training Plan for each Unit of Competence (UOC)**

Whereas the Learning and Assessment Plan, explained in Step 1, is a general guide for the delivery of all UOCs that comprise a certificated course, the Training Plan focuses on the delivery of each individual unit.

The Training Plan is useful for individual trainers to prepare for the delivery of training sessions that they will deliver to trainees in the appropriate training environment. As illustrated in Form 2.6.i, each element of a UOC needs to be broken down into individual training sessions.

It is important for each individual trainer, with support from coordinators and colleagues, to then plan the delivery of each session. In planning for the sessions, the trainer needs to consider the following:

#### **Planning**

Session structure including session plan  
Choice of assessment tools  
Choice of training resources  
Monitoring attendance

#### **Delivery**

Choice of motivating strategies  
Use of questioning techniques  
Allowing for individual trainee differences  
Use of voice and presentation style

See

*Appendix 2-15: Training Plan Template 1*

*Appendix 2-16: Training Plan Template 2*

*Appendix 2-17: UOC Delivery Training Plan (Sample 1)*

*Appendix 2-18: UOC Delivery Training Plan (Sample 2)*

*Appendix 2-19: Training Session Plan Template*

# APPENDICES

## Appendix 2-1: Form "Learning and Assessment Plan"

Course       Competency

Please adapt this form to suit the planned course and clustered competency units

<b>Course Code</b>	
<b>Course Title</b>	

### 1. Contact Details

The trainer details are needed for alignment to staff qualifications to teach the clustered competencies. If the outline is given to trainees, they should know who the coordinator and administrative officers are and where people can be found.

	Name	Telephone	Email
<b>Teacher</b>			
<b>Course Coordinator</b>			
<b>Administrative Officer</b>			
<b>Department Office</b>	Room      ,      Campus		
<b>Course Information</b>			

### 2. Course Delivery Overview

The overview might also include such items as practical placement, self-paced study, etc. Adapt this section as needed by changing the headers and/or adding new rows.

Session Time	External Activities	Student Project	Total Scheduled Hours

### 3. Unit of Competence

This section should describe what units of competency have been packaged together to form this subject or cluster? Each course comprises a number of units.

<b>Title of Units</b>	
<b>Unit Scheduled Hours</b>	
<b>Unit Type</b>	
<b>Pre/Co Requisites</b>	
<b>Description</b>	
<b>Elements</b>	<b>1</b>
	2
	3
	4

### 4. Assessment Details

<b>Assessment Task</b>	<b>Unit of Competence - Elements</b>
For example:	1.3, 1.2, 1.3
Underpinning Knowledge (How will this be assessed?)	
Employability skills (indicate assessment and recording)	
<b>Flexibility</b>	
<b>Moderation</b>	

### 5. Learning Resources

This could be an endless list. If the LAP is for teachers, include where common resources are stored and their availability. If for students, indicate how the resources might be obtained. This is meant to refer to key resources, not all resources as customization to individual learners will need to take place.

<b>Workbooks</b>	
<b>Textbooks and Other Resources</b>	
<b>Specialist facilities</b>	
<b>Equipment</b>	
<b>Other</b>	





## **IMPORTANT INFORMATION FOR TRAINEES & TRAINERS**

Use the following sections with information for staff or students or both. Add and subtract as you need.

### *Attendance and participation*

Unit delivery and assessment is subject to change. Attend classes regularly to keep up to date with any alterations or changes.

Competency based training requires the student to be in attendance in order for assessment to be undertaken. If you miss a class you will need to make suitable arrangement for re-assessment. Formal examinations will not be repeated unless special circumstances apply.

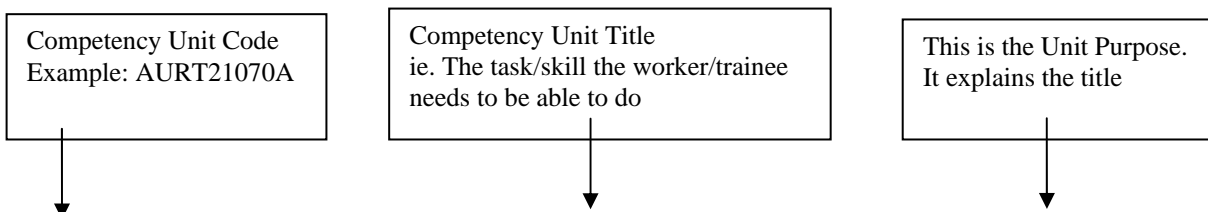
### *Assessment requirements*

### *Requirements for work submitted for assessment*

### *Industry attachment information*

### *Excursion information*

## Appendix 2-2: Interpretation of a Unit of Competence



<b><u>AURT21070A</u></b> <b><u>Unit Descriptor</u></b>	<b><u>Inspect and Service Brake Systems</u></b>  The unit includes identification and confirmation of work requirement, preparation for work, conduct of brake system wear analysis, servicing of braking systems and completion of work finalization processes, including clean-up and documentation.  The unit covers the competence required to inspect and service of braking systems and/or associated components, including pneumatic over hydraulic, air, hand and parking brake systems in an automotive retail, service and/or repair context.
<b>ELEMENT</b>	<b>PERFORMANCE CRITERIA</b>
<b>Elements define essential outcomes of a Unit of Competence</b>	Performance Criteria specify the level of performance required to demonstrate achievement of the Element
<b>1. Prepare to undertake braking system inspection</b>	1.1 Nature and scope of work requirements are identified and confirmed  1.2 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work  1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced  1.4 Methods appropriate to the circumstances are selected and prepared in accordance with standard operating procedures  1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced  1.4 Methods appropriate to the circumstances are selected and prepared in accordance with standard operating procedures

Elements of Competency are the parts of the required task/skill

These Performance Criteria describe how the task/skill is to be performed and are the basis for assessment

Each Unit of Competence provides further details on the following:

- The Range of Variables - which identify the range of contexts, sources of information and resources required, methods and any special requirements
- The Evidence Guide – which provides the context and critical aspects for assessment, and describes the underpinning knowledge and practical demonstration requirements
- Identification of Key Competencies is contained within the Unit of Competence

## Appendix 2-3: Sample Unit of Competence (Inspect & Service Braking Systems)

### Unit of Competence

#### AURT210170A: Inspect and Service Braking Systems

### Description

This unit covers the competence required to inspect and service of braking systems and/or associated components, including pneumatic over hydraulic, air, hand and parking brake systems in an automotive retail, service and/or repair context.

The unit includes identification and confirmation of work requirement, preparation for work, conduct of brake system wear analysis, servicing of braking systems and completion of work finalization processes, including clean-up and documentation.

### Elements of Competency and Performance Criteria

National Code	Element name
1. Prepare to undertake braking system inspection	<p>1.1 Nature and scope of work requirements are identified and confirmed</p> <p>1.2 OH&amp;S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work</p> <p>1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced</p> <p>1.4 Methods appropriate to the circumstances are selected and prepared in accordance with standard operating procedures</p> <p>1.5 Resources required for inspection of braking systems are sourced and support equipment is identified and prepared</p> <p>1.6 Warnings in relation to working with braking systems are observed</p>
2. Conduct braking system wear analysis	<p>2.1 Braking system analysis is implemented in accordance with road safety legislation, workplace procedures and manufacturer/component supplier specifications</p> <p>2.2 Brake wear measurement results are compared with manufacturer/component supplier specifications to indicate compliance or non-compliance</p> <p>2.3 Results are documented with evidence and supporting information and recommendation(s) made</p> <p>2.4 Report is processed in accordance with workplace procedures</p>

3. Prepare to service braking system and/or associated components	<p>3.1 OH&amp;S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work</p> <p>3.2 Procedures and information required are identified and sourced</p> <p>3.3 Resources required for servicing braking systems are identified and support equipment is identified and prepared</p>
4. Carry out servicing of braking systems and/or associated components	<p>4.1 Servicing is implemented in accordance with workplace procedures and manufacturer/component supplier specifications</p> <p>4.2 Adjustments made during the servicing are in accordance with manufacturer/component supplier specifications</p>
5. Prepare equipment for use or storage	<p>5.1 Servicing schedule documentation is completed</p> <p>5.2 Final inspection is made to ensure protective features are in place</p> <p>5.3 Final inspection is made to ensure work is to workplace expectations</p> <p>5.4 Equipment is cleaned for use or storage to workplace expectations</p> <p>5.5 Job card is processed in accordance with workplace procedures</p>

## **RANGE OF VARIABLES**

### **UNIT SCOPE**

- ✓ This unit of competence refers to braking systems associated with automotive retail, service and repair and should be contextualized to the level of qualification to which it is being applied:
- ✓ light vehicle, heavy vehicle, motorcycle or trailer or outdoor power equipment
- ✓ Types of braking systems may include:
  - hydraulic;
  - mechanical;
  - pneumatic;
- ✓ System components may include:
  - disc pads;
  - master cylinders;
  - brake shoes;
  - brake calipers;
  - brake hoses;
  - brake actuators;
  - mechanical devices; and,

- valves.
- ✓ Methods are to include:
  - visual, aural and functional assessments (including damage, corrosion, fluid leaks, wear); and,
  - measurements of pedal travel, free-play, disc runout, disc thickness, drum wear and pad/lining thickness.

### **UNIT CONTEXT**

- ✓ Work requires individuals to demonstrate judgement and problem-solving skills in managing own work activities and contributing to a productive team environment within the scope of this unit. This includes an understanding of the level of work to be performed; and,
- ✓ Work is carried out in accordance with award provisions.

### **OCCUPATIONAL HEALTH & SAFETY (OH & S)**

- ✓ OH&S requirements are to be in accordance with legislation/regulations/codes of practice and enterprise safety policies and procedures. This may include protective clothing and equipment, use of tooling and equipment, workplace environment and safety, handling of material, use of fire fighting equipment, enterprise first aid, hazard control and hazardous materials and substances;
- ✓ Personal protective equipment is to include that prescribed under legislation/regulations/codes of practice and workplace policies and practices Safe operating procedures are to include, but are not limited to the conduct of operational risk assessment and treatments associated with vehicular movement, hazardous substances, machinery movement and operation, manual lifting and shifting, working in proximity to others and site visitors;
- ✓ Emergency procedures related to this unit are to include, but are not limited to emergency shutdown and stopping of equipment, operating safely in the event of fires, enterprise; and,
- ✓ first aid requirements and site evacuation.

### **ENVIRONMENTAL REQUIREMENTS**

- ✓ Environmental requirements are to include but are not limited to waste management, noise, dust and clean-up management

### **QUALITY REQUIREMENTS**

- ✓ Quality requirements are to include, but are not limited to regulations, including Australian Standards, internal company quality policy and standards and

enterprise operations and procedures

### **TOOLING**

- ✓ Tooling and equipment may include hand tooling, gauges (including dial, verniers and micrometers), bleeding and brake testing devices, dust extraction equipment and grease guns

### **MATERIALS**

- ✓ Materials may include lubricants, fluids, minor spare parts and cleaning materials

### **COMMUNICATIONS**

- ✓ Communications are to include, but are not limited to verbal and visual instructions and fault reporting and may include site specific instructions, written instructions, plans or instructions related to job/task, telephones and pagers

### **INFORMATION**

- ✓ Information sources may include, but are not limited to verbal or written and graphical instructions, signage, work schedules/plans/specifications, work bulletins, memos;
- ✓ material safety data sheets, diagrams or sketches;
- ✓ Safe work procedures related to the inspection and servicing of braking systems;
- ✓ Regulatory/legislative requirements pertaining to the;
- ✓ automotive industry, including Australian Design Rules;
- ✓ Engineer's design specifications and instructions; and,
- ✓ Organization work specifications and requirements.

### **EVIDENCE GUIDE**

It is essential that competence in this unit signifies ability to transfer competence to changing circumstances and to respond to unusual circumstances in the critical aspects of:

- ✓ observing safety procedures and requirements;
- ✓ communicating effectively with others involved in or affected by the work;
- ✓ selecting methods and techniques appropriate to the circumstances;

- ✓ completing preparatory activity in a systematic manner conducting the inspection in accordance with workplace and manufacturer/component supplier requirements;
- ✓ accurately interpreting wear analysis results completing service of braking systems in accordance with workplace and manufacturer/component supplier requirements;
- ✓ completing service of braking systems and associated components within workplace timeframes; and,
- ✓ equipment is presented to customer in compliance with workplace requirements.

### **RELATIONSHIP TO OTHER UNITS**

Competence in this unit may be assessed in conjunction with other functional units which together form part of the holistic work role

### **UNDERPINNING KNOWLEDGE**

- ✓ A working knowledge of:
  - OH&S and environmental regulations/requirements, equipment, material and personal safety requirements;
  - dangers of working with braking systems operating principles of braking systems, components and their relationship to each other;
  - types and layout of service/repair manuals (hard copy and electronic);
  - analysis procedures;
  - servicing procedures;
  - enterprise quality procedures; and,
  - work organization and planning processes.

### **SPECIFIC KEY COMPETENCIES AND UNDEPINNING & EMPLOYABILITY SKILLS REQUIRED TO ACHIEVE THE PERFORMANCE CRITERIA**

Level 1 – relates to working effectively within set conditions and processes,

Level 2 – relates to management or facilitation of conditions or processes

Level 3 – relates to design, development and evaluation of conditions or process.

How will the candidate apply the following key competency in this unit? The candidate



will need to:

**All Key Competencies at Level 1**

Collect, analyze and organize information	<ul style="list-style-type: none"> <li>➤ Apply research and interpretive skills sufficient to locate, interpret and apply manufacturer/component supplier procedures, workplace policies and procedures</li> <li>➤ Apply analytical skills required for identification and analysis of technical information</li> </ul>
Communicate ideas and information	<ul style="list-style-type: none"> <li>➤ Apply plain English literacy and communication skills in relation to dealing with customers and team members</li> <li>➤ Apply questioning and active listening skills for example when obtaining information from customers</li> <li>➤ Apply oral communication skills sufficient to convey information and concepts to customers</li> </ul>
Plan and organize activities	<ul style="list-style-type: none"> <li>➤ Apply planning and organizing skills to own work activities, including making good use of time and resources, sorting out priorities and monitoring one's own performance</li> </ul>
Work with others and in a team	<ul style="list-style-type: none"> <li>➤ Interact effectively with other persons both on a one-to-one basis and in groups, including understanding and responding to the needs of a customer and working effectively as a member of a team to achieve a shared goal</li> </ul>
Solve problems	<ul style="list-style-type: none"> <li>➤ Establish safe and effective work processes which anticipate and/or resolve problems and downtime, to systematically develop solutions to avoid or minimize reworking and avoid wastage</li> </ul>
Use mathematical ideas and techniques	<ul style="list-style-type: none"> <li>➤ Use mathematical ideas and techniques to correctly calculate time, assess tolerances, apply accurate measurements, calculate material requirements and establish quality checks</li> </ul>
Use technology	<ul style="list-style-type: none"> <li>➤ Use workplace technology related to the inspection and servicing of braking systems, including the use of servicing tooling and equipment, measuring equipment, computerized technology and communication devices and the reporting/documenting of results</li> </ul>

**Context of Assessment**

- ✓ Application of competence is to be assessed in the workplace or simulated worksite
- ✓ Assessment is to occur using standard and authorized work practices, safety requirements and environmental constraints
- ✓ Assessment is to comply with regulatory requirements, including Australian Standards

## **METHOD OF ASSESSMENT**

- ✓ Assessment must satisfy the endorsed assessment guidelines of the automotive industry's RS&R Training Package
- ✓ Assessment methods must confirm consistency and accuracy of performance together with application of underpinning knowledge
- ✓ Assessment must be by direct observation of tasks, with questioning on underpinning knowledge and it must also reinforce the integration of key competencies
- ✓ Assessment may be applied under project related conditions and require evidence of process
- ✓ Assessment must confirm a reasonable inference that competence is able not only to be satisfied under the particular circumstance, but is able to be transferred to other circumstances
- ✓ It is preferable that assessment reflects a process rather than an event and occurs over a period of time to cover varying quality circumstances. Evidence of performance may be provided by customers, team leaders/members or other persons subject to agreed authentication arrangements

## **SPECIFIC RESOURCE REQUIREMENTS FOR THIS UNIT**

The following resources should be made available:

- ✓ workplace location or simulated workplace
- ✓ material relevant to the inspection and servicing of braking systems
- ✓ equipment, hand and power tooling appropriate to the inspection and servicing of braking systems
- ✓ activities covering mandatory task requirements
- ✓ specifications and work instructions

## Appendix 2-4: Task Analysis Sample

<b>Task: Adjust Drum Brakes</b>	
<b>Steps</b>	<b>Sub-steps</b>
Raise rear of vehicle	➤ Wheels are free to rotate
Locate adjustment opening	➤ Examine brake assembly for inspection/adjustment opening ➤ Remove Wheel/Tyre assembly
Tighten shoe contact against drum	➤ Locate adjusting wheel ➤ Determine direction to tighten shoes ➤ Check drum is tightening by rotating
Release shoe contact	➤ Release self-adjusting pawl ➤ Turn adjuster in opposite direction
Check shoe drag on drum	➤ Rotate drum ➤ Feel the amount of drag to slow drum down
Compare adjustment to other side drum	➤ Adjust drums to have equal drag
Lower vehicle to ground	➤ Refit wheel/tyre assemblies ➤ Ensure vehicle is free of lifting equipment or safety stands

## Appendix 2-5: Confirming Selected Training Tasks with Industry

Unit: Inspect and Service Braking Systems

Element	Tasks	Importance to Business Operation Rating Scale from Irrelevant – 1 to Very important – 5	How often is task performed Rating Scale from Never – 1 to Constantly - 5	Comments
1. Prepare to undertake braking system inspection	Source manufacturer's specifications and procedures			
	Raise vehicle			
	Access brake components for inspection			
2. Conduct braking system wear analysis	Inspect pad/lining wear			
	Report on condition of components			
	Check for leaks, damage and other faults			
	Complete job card			
3. Prepare to service braking system and/or associated components	Source manufacturer's specifications and procedures			
	Select appropriate tools and equipment			
	Place guard covers and other protection against fluid spillage			
4. Carry out servicing of braking systems and/or associated components	Bleed brakes and flush system			
	Adjust drum brakes			
	Adjust handbrake			
	Replace brake pads			
	Remove and replace brake shoes			
	Lubricate calliper slides			
	Clean brake system components			
5. Prepare equipment for use or storage	Clean up all fluid spillage			
	Safely clean/remove brake dust			
	Test brake pedal operation/feel			

## Appendix 2-6: Workbook Development Guide

**Contents page** –a list of all sections contained in the workbook. This is usually made up last, when all page numbers and sections have been finalized

**Table/matrix listing all** sections that need to be completed to serve as a record of completion and results for Theory activities, Theory assessment, Practical tasks, Practical assessment, Workplace assessment and Final Competency.

### INTRODUCTION

Provides a brief description of what the unit is about. The main elements of the unit (usually not Preparation to) describe this and can be listed in simple language as dot points. A few sentences outlining the importance of the unit can also be included.

#### Assessment of Competency

Tells the student what he must do to be deemed competent in this unit. For example, he must complete theory based assessment and also be assessed on practical tasks. He may also have to show competency more than once to satisfy the competency standards.

#### Assessment Criteria

To achieve competency the student must:

Perform . . . (practical tasks) without damage to other components/systems.

Inspect cooling systems and analyze results

Carry out service to cooling systems

so that all the Performance Criteria are met. Here, the Elements and their Performance Criteria can be stated.

#### References

The main references for this unit are:

- (Text Book)
- (Workshop Manual)

- (Powerpoint)

However, other references may be used throughout this workbook.

### **Key Words**

It is recommended that the student learn the correct spelling and meaning of the following key words:

## **SAFETY**

This section can include some OH&S information relating to this particular unit and can sometimes be taken directly from the unit dealing with workplace safety. It is important that this topic be dealt with at the beginning of the unit to ensure the student is fully aware of the dangers and precautions associated with the tasks within this unit.

Further reinforcement of specific safety items can also be added throughout the unit in the form of "Safety boxes" placed with each task.

## **MAIN SECTION**

The main body of the workbook will contain technical information covering theory to support and the procedures to perform practical tasks. As a Level 2 unit this information should aim to include:

- the function and purpose of components;
- system and some component operation;
- minor adjustments; and,
- safety issues.

One arrangement of this information is to firstly cover all theory topics of the underpinning knowledge required for the trainee to understand and appreciate the practical tasks he is to perform. This is then followed by a theory test which should include knowledge, safety and any necessary preparation prior to starting the practical tasks. It should be remembered that the underpinning knowledge must only cover what is necessary for the trainee to understand and successfully complete the practical tasks. The question here is what and how much information should be included in the workbook.

This decision is based on determining the amount, complexity and difficulty of knowledge the trainee MUST acquire to achieve competency in this unit. The extent of this content must also be balanced against any TIME restrictions imposed by the training system. The only way to determine the MUST-know information however, is through industry consultation. Motor mechanic trainees tend to be kinaesthetic learners who have a low preference for reading; so information should be presented:

- in small chunks which can be easily learnt;
- in a logical sequence; and,
- using Audio Visual media wherever possible e.g. pictures, diagrams, photos, videos etc.

What information is included in the unit should be based on what tasks the trainee needs to be competent in. The only way to determine this is through industry consultation. Industry, through bodies such as the IRG, must specify what tasks need to be performed in a work situation within the scope of this unit.

Another arrangement of this information may be to divide the contents into segments which can be delivered individually but all must be delivered to complete the unit. Each segment may contain some technical information with review questions followed by a practical task. Safety boxes and summaries are also included. This sort of packaging enables more convenient assessment

### **Information Summary**

Each section of information should be followed by a brief summary consisting of a set of sentences – one for each main point of that section.

### **Review Questions**

These questions are usually drawn from the preceding section of information. Their purpose is to make the trainee research the response from the information he has just read. This means the trainee interacts with the information a second time and so reinforces the learning. This is not a form of assessment. However, some of these questions can be used as part of a separate assessment quiz.

### **Workbook Headings**

– see notes on Workbook Components

## COVER

Student Details: Name, (Number), Group/Class, etc.

## CONTENTS

### INTRODUCTION

Competency Assessment

References

Key Words

### SAFETY

ACTIVITIES (Technical information)

Review Questions

Practical Tasks (instructions checklists and review questions)

ASSESSMENT TABLE or CHECKLIST

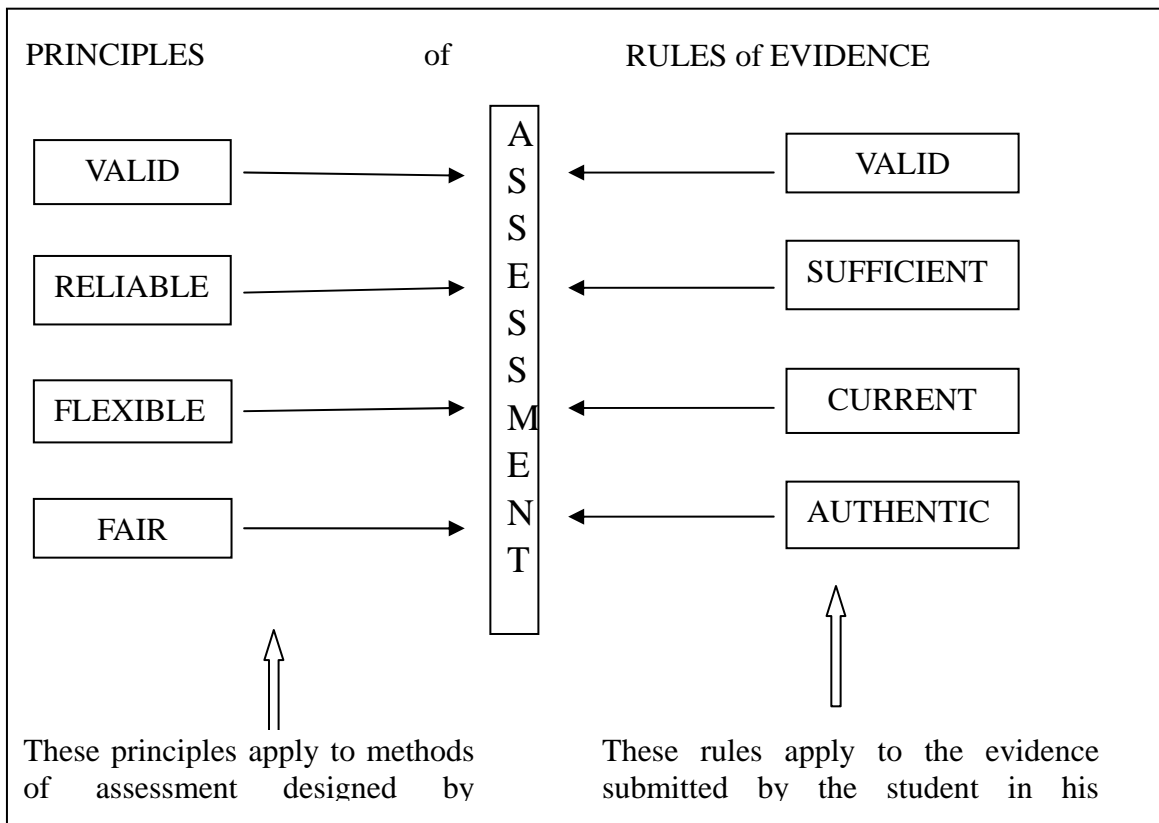
## **ASSESSMENT**

Assessment is the process of collecting evidence and making judgements on whether competency has been achieved. This process confirms that a trainee can perform to the standard expected in the workplace. Students are assessed against units of competence not compared to the results of other students.

To ensure all the competency requirements are assessed, you need to examine the elements, performance criteria, range statement and evidence guide.

Assessment set in the CBT model moves away from the traditional method of using a controlled test situation supervised administered by an examiner to minimize the chance of cheating. This leaves other forms of assessment open to claims of subjectivity. Therefore assessment in CBT must be designed and implemented to suit a clearly stated set of rules and principles.





## FEEDBACK

Feedback about assessment from an instructor to a student is a very important element in the assessment process. A student must understand why a particular response is incorrect and why another is correct. Such feedback makes the assessment tool a learning opportunity.

## ASSESSMENT TOOLS

### Written Test

Multiple choice tests have the advantages of being quick to mark and require virtually no writing on the part of the student but do little to develop writing skills.

Questions requiring open written answers promote written communication but must be accompanied by a marking guide. This enables different instructors to produce more even marking using the set criteria in the guide. Criteria usually consist of critical points which must be mentioned in the response.

Closed questions are more commonly used in determining the serviceability/usefulness of say a component. Such questions should be only in quizzes or tests for True/False or Agree/Disagree responses.

**Other Methods of assessment**

Checklists are often used in assessing practical tasks and are best derived from the standards of performance objectives. This format of task objective uses very stringent standards to make specific what is described in very broad terms in the Elements of the competency unit.

For example:           Element - Inspect Cooling system and analyse results

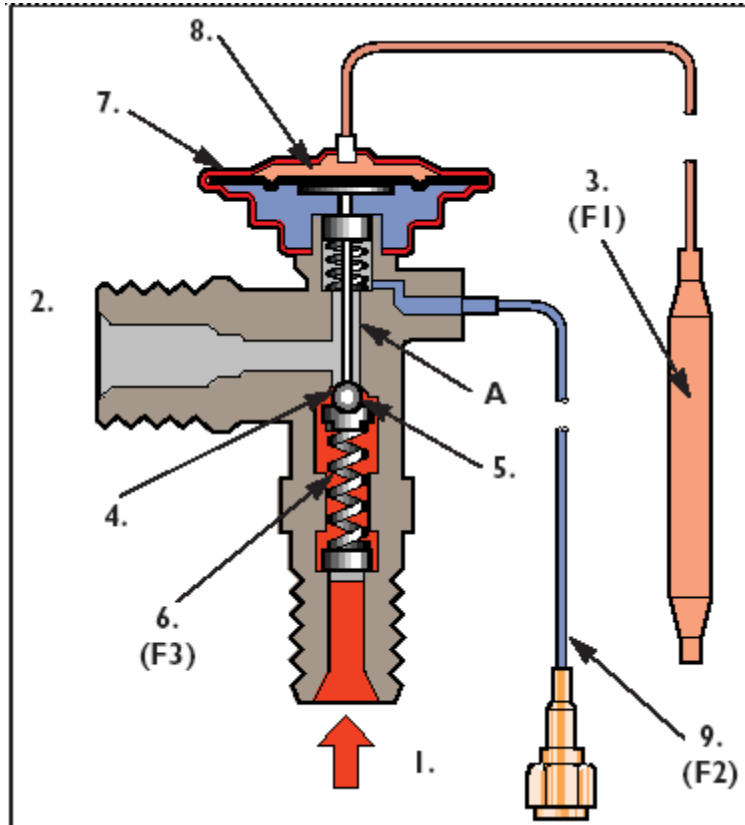
Components are inspected using visual, aural and kinesthetic (touching) means so that all leaks and faults are detected and reported according to manufacturers' procedures and specifications.

A typical checklist may look like this:

COMPONENT	SERVICEABILITY	COMMENT
Instructor's comments		

## Appendix 2-7: Example of a Handout

### Externally sensed TX Air Conditioner Valve .



1. From filter dryer
2. To evaporator inlet
3. Capillary tube
4. Metering orifice
5. Ball valve
6. Spring
7. Diaphragm
8. Refrigerant
9. Pressure compensating tube

## Appendix 2-8: Sample Practical Task Templates

UNIT \_\_\_\_\_

STUDENT \_\_\_\_\_

TASK	PERFORMANCE STANDARDS	PERFORMANCE CRITERIA	ASSESSMENT METHOD *	RESULT Pass/Fail	DATE	INSTRUCTOR
Perform task ...using... so that...	<ul style="list-style-type: none"> <li>➤ Task is completed</li> <li>➤ Components are not damaged</li> <li>➤ Safety requirements are met</li> </ul>	1.1, 1.2, 1.6,2.1, 2.2, 3.1	1, 2, 3, 4 or 5	Pass	06/07/2010	
* Assessment Methods: <b>1. Demonstration</b> <b>2. Question and Answer</b> <b>3. Observation</b> <b>4. Written Response</b>						

(UNIT NAME & NUMBER)	RESULT	DATE	INSTRUCTOR
<b>UNIT COMPLETION</b>			



R & R brake pads.					
R & R brake callipers.					
Work and documentation is completed to industry standards					
Work and documentation is completed to industry standards					
Work is completed within industry timelines					
<b>Office use only</b>					
<b>Comments</b>	Record card entered		Student Sign Off	Swinburne Sign Off	

## Appendix 2-10: Assessment Matrix for Unit of Competence

<b>National ID</b>	AUR30405
<b>Qualification</b>	Certificate III in Automotive Mechanical Technology
<b>Competency</b>	Inspect and service brake systems
<b>National Code</b>	AURT210170A
<b>Description</b>	This unit covers the competence required to inspect and service of braking systems and/or associated components, including pneumatic over hydraulic, air, hand and parking brake systems in an automotive retail, service and/or repair context. The unit includes identification and confirmation of work requirement, preparation for work, conduct of brake system wear analysis, servicing of braking systems and completion of work finalization processes, including clean-up and documentation.

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
<b>1. Prepare to undertake braking system inspection</b>			
1.1 Nature and scope of work requirements are identified and confirmed			
1.2 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work			
1.3 Procedures and information such as workshop manuals and specifications, and tooling required, are sourced			
1.4 Methods appropriate to the circumstances are selected and prepared in accordance with standard operating procedures			
1.5 Resources required for inspection of braking systems are sourced and support equipment is identified and prepared			
1.6 Warnings in relation to working with braking systems are observed			
<b>2. Conduct braking system wear analysis</b>			
2.1 Braking system analysis is implemented in accordance with road safety legislation, workplace procedures and manufacturer/component supplier specifications			
2.2 Brake wear measurement results are compared with manufacturer/component supplier specifications to indicate compliance or non-compliance			
2.3 Results are documented with evidence and supporting information and recommendation(s) made			
2.4 Report is processed in accordance with workplace procedures			
<b>3. Prepare to service braking system and/or associated components</b>			

ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
3.1 OH&S requirements, including individual State/Territory regulatory requirements and personal protection needs are observed throughout the work			
3.2 Procedures and information required are identified and sourced			
3.3 Resources required for servicing braking systems are identified and support equipment is identified and prepared			
<b>4. Carry out servicing of braking systems and/or associated components</b>			
4.1 Servicing is implemented in accordance with workplace procedures and manufacturer/component supplier specifications			
4.2 Adjustments made during the servicing are in accordance with manufacturer/component supplier specifications			
<b>5. Prepare equipment for use or storage</b>			
5.1 Servicing schedule documentation is completed			
5.2 Final inspection is made to ensure protective features are in place			
5.3 Final inspection is made to ensure work is to workplace expectations			
5.4 Equipment is cleaned for use or storage to workplace expectations			
5.5 Job card is processed in accordance with workplace procedures			
<b>UNDERPINNING KNOWLEDGE</b>			
➤ OH&S and environmental regulations/requirements, equipment, material and personal safety requirements			
➤ dangers of working with braking systems			
➤ operating principles of braking systems, components and their relationship to each other			
➤ types and layout of service/repair manuals (hard copy and electronic)			
➤ analysis procedures			
➤ servicing procedures			
➤ enterprise quality procedures			
➤ work organization and planning processes			
Task skills (which assessment(s) or class activity will test that the candidate can demonstrate a single task?)			
Task management skills (which assessment(s) or class activity will test that the candidate can meet the performance criteria whilst completing other tasks)			



ELEMENTS /PERFORMANCE CRITERIA	Assessment methods/task See Assessment Guide below for description		
	KNOWLEDGE TEST	ASSESSMENT TASK	3rd PARTY
Job/role environment (which assessment(s) or class activity will test that the candidate can meet the performance criteria within their job)			
Contingency management skills (which assessment(s) or class activity will test that the candidate considers what might go wrong and takes action to prevent or correct)			
<b>SPECIFIC EVIDENCE REQUIREMENTS / CRITICAL ASPECTS OF EVIDENCE</b>			
It is essential that competence in this unit signifies ability to transfer competence to changing circumstances and to respond to unusual circumstances in the critical aspects of:			
➤ observing safety procedures and requirements			
➤ communicating effectively with others involved in or affected by the work			
➤ selecting methods and techniques appropriate to the circumstances			
➤ completing preparatory activity in a systematic manner			
➤ conducting the inspection in accordance with workplace and manufacturer/component supplier requirements			
➤ accurately interpreting wear analysis results			
➤ completing service of braking systems in accordance with workplace and manufacturer/component supplier requirements			
➤ completing service of braking systems and associated components within workplace timeframes			
➤ equipment is presented to customer in compliance with workplace requirements			

## Appendix 2-11: Assessment Guide

Reference to assessment matrix	Methods of assessment	Description of task	Employability Skills							
			Planning & organizing	Communication	Self Management	Teamwork	Problem Solving	Initiative & enterprise	Technology	Learning
KNOWLEDGE TEST										
ASSESSMENT TASK										
3 <sup>RD</sup> PARTY										

**Appendix 2-12: Assessment Tool Samples for Labelling  
Diagrams, Multiple Choice and Written Tests**

**Question 1.**

On the sketches below name each type of brake shoe arrangement

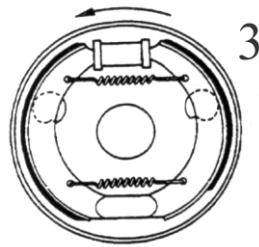


Figure 1.23

Brake shoe arrangement \_\_\_\_\_

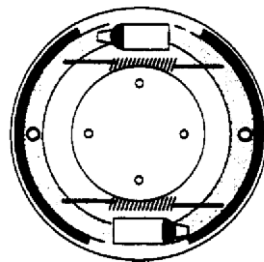


Figure 1.18

Brake shoe arrangement \_\_\_\_\_

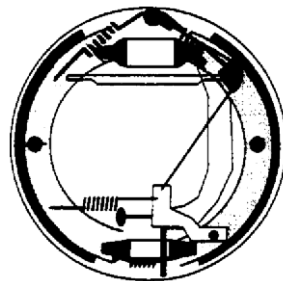
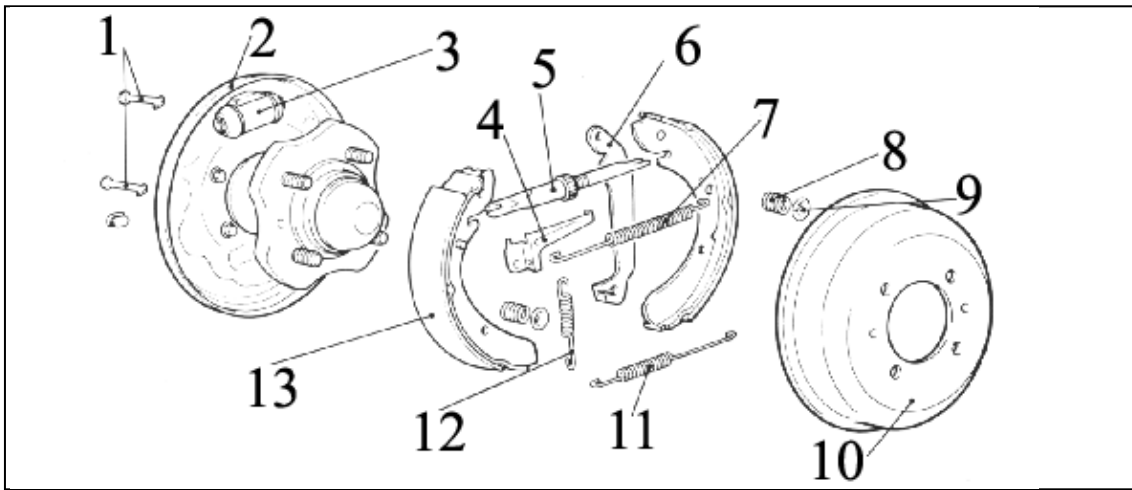


Figure 1.19

Brake shoe arrangement \_\_\_\_\_

**Question 2.**

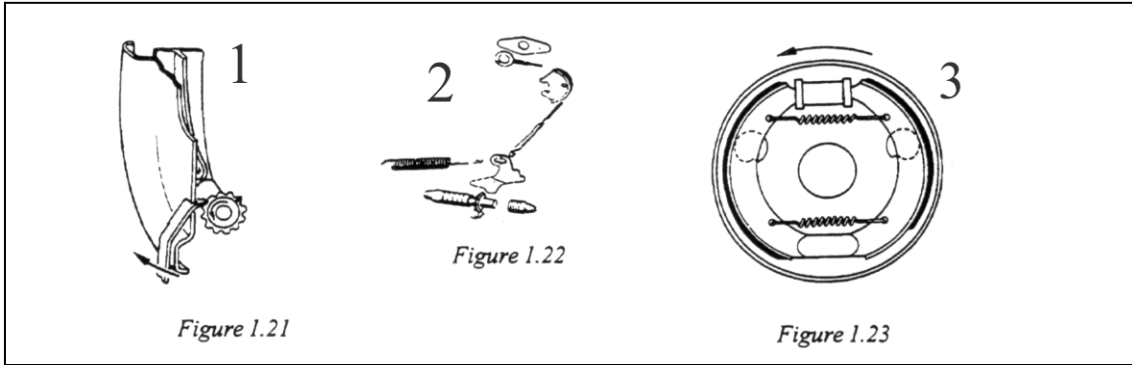


Identify the brake system components number 1 to 13 and give a purpose or function for each component.

No	Name	Purpose / Function
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		
13		

### Question 3

Identify the following adjuster types.



1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

### Question 4.

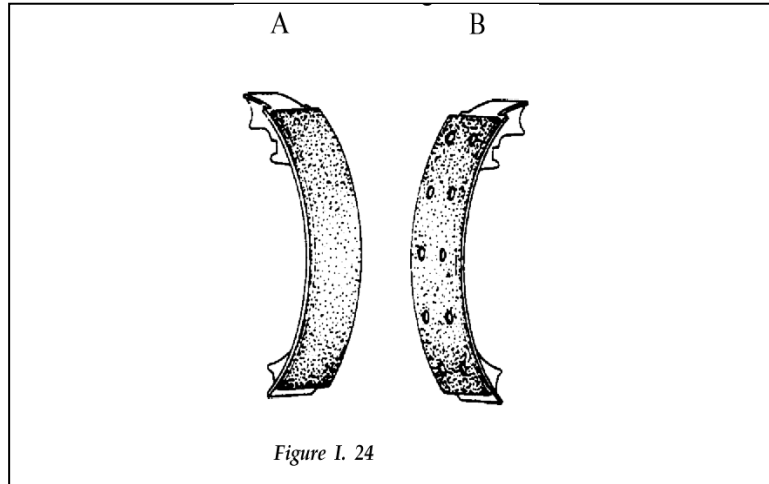
Explain the method used to manually adjust self-adjusting brakes fitted to a duo servo brake assembly.

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**Question 5.**



State the following methods of lining attachment:

A. \_\_\_\_\_ B. \_\_\_\_\_

**Question 6.**

From May Vol. 1 Ch. 23 explain the operation of a leading and trailing brake shoe assembly during the following conditions:

(a) Brake application

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(b) Brake release

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---

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(c) State if this system has equal braking forward and reverse

Yes  No

(d) State which shoe gains assistance (self energizing effect) from forward motion of the vehicle.

Leading  Trailing

(e) State which shoe gains assistance (self energizing effect) in reverse

Leading  Trailing

(f) Does each shoe gain the same force from the pressure within the wheel cylinder?

Yes  No

(g) State which shoe is likely to have increased lining wear

Leading       Trailing

**Question 7.**

Explain the operation of a two leading shoe brake assembly-during the following conditions:

(a) Brake application:

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---

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---

(b) Brake release:

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---

(c) State if this system has equal braking forward and reverse.

Yes                       No



(d) If NO explain why:

---

---

---

---

(e) State which direction both shoes obtain a self-energizing effort.

Forward  Reverse  Both directions

(f) Do both shoes always produce equal braking effort in reverse

Yes  No

### Question 8.

Explain the operation of a duo servo type brake assembly during the following conditions:

(a) Brake application:

---

---

---

---

---

---

---

---

---

---

(b) Brake Release:

---

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---

---

(c) State if this system has equal braking forward and reverse.

Yes  No

**Question 9.**

Explain the operation of a self adjusting brake fitted to a duo-servo brake arrangement.

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**Question 10.**

State the method of reclaiming worn/scored brake drums.

---

---

**Question 11.**

Identify four common wear conditions of brake drums:

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_

**Question 12.**

One location for mounting the park brake is the driver's side sill panel. Identify two other locations of mounting the park (hand) brake handle.

1. \_\_\_\_\_
2. \_\_\_\_\_

**Question 13.**

Explain how the park brake lever or handle is held in the "on" position after the park brake has been applied.

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**Question 14.**

Explain how the brake shoes are brought into contact with the brake drums when the park brake is applied.

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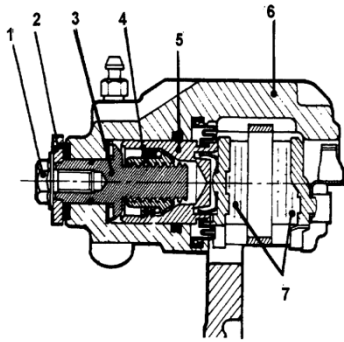


Figure 1.26

**Question 15.**

Identify and name the park brake components in the following diagram.

Components		Components	
1		5	
2		6	
3		7	
4			

### Question 16

Describe how the disc pads are brought into contact with the brake disc when the park brake is applied (type of system identified in the previous diagram).

---

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---

### Question 17

Complete the following:

Before adjusting the park brake it is necessary to check the service brake

---

## Appendix 2-13: Sample Assessment Checklist 1

<b>Trainee's Name:</b>			
<b>Trainer's Name:</b>			
<b>Training Module</b>			
<b>Date of Assessment</b>			
<b>Skills task</b>			
<b>Instructions for demonstration</b>			
<b>Materials and equipment</b>			
<b>Observation</b>			
<b>During the demonstration of skills, did the trainee:</b>	<b>Yes</b>	<b>No</b>	<b>N/A</b>
The trainee's demonstration was:			
Competent <input type="checkbox"/> Not Yet Competent <input type="checkbox"/>			
<b>Questions</b>		<b>Satisfactory response</b>	
<b>The trainee should answer the following questions:</b>		<b>Yes</b>	<b>No</b>

	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
<b>The trainee's underpinning knowledge was:</b>		
Satisfactory <input type="checkbox"/> Not satisfactory <input type="checkbox"/>		
<b>Feedback to trainee</b>		
The trainee's overall performance was:		
Competent <input type="checkbox"/> Not yet competent <input type="checkbox"/>		
Trainee's signature:		
Trainer's signature		

## Appendix 2-14: Sample Assessment Checklist 2

Checklists are often used in assessing practical tasks and are best derived from the standards of performance objectives. This format of task objective uses very stringent standards to make specific what is described in very broad terms in the Elements of the competency unit.

For example:

Element - Inspect Cooling system and analyze results

Components are inspected u visual, aural and kinesthetic (touching) means so that all leaks and faults are detected and reported according to manufacturers' procedures and specifications.

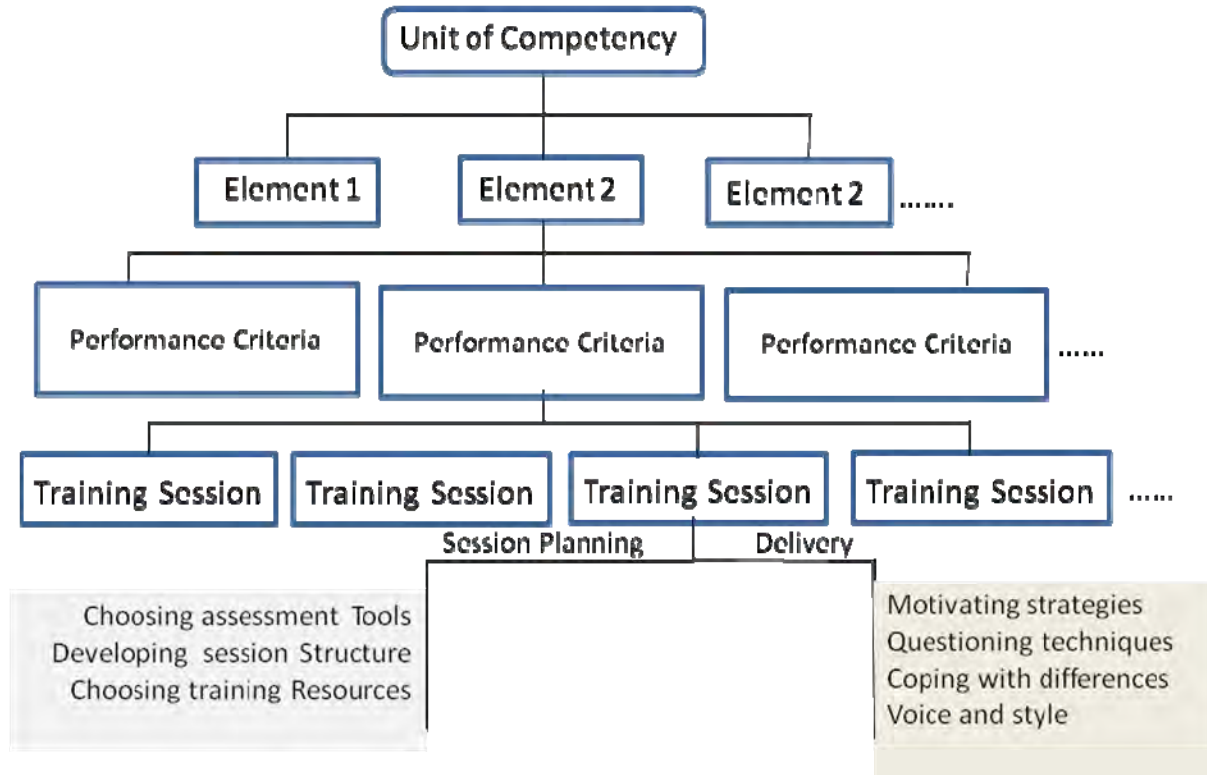
A typical checklist may look like this:

<b>COMPONENT</b>	<b>SERVICEABILITY</b>	<b>COMMENT</b>
Water Pump	No	Bearing worn
Thermostat	Yes	Opens at correct temperature
Fan Belt	No	Cracked and loose fibres
Hoses	Yes	No leaks
Instructor's comments	Hoses need to be checked for softness as well as leaks	



## Appendix 2-15: Training Plan Template 1

### Training Plan Design Template



## Appendix 2-16: Training Plan Template 2

<b>INFORMATION – <i>What to deliver</i></b>	<b>DELIVERY METHOD – <i>How to deliver</i></b>
<p>Certificate Level 2 information will generally cover:            System/Component purpose            Types of systems            System/Component operation            Basic science/technology principles.            The information presented should be sufficient to enable the student to achieve competency in the unit.</p>	<p>Teacher-centered methods can include:            Lecture            Lecture and Demonstration            PowerPoint presentation            Self-paced (supervised) using stand-alone resources            Combination of methods</p>
<p>Practical Task procedures including:            Researching technical information, specifications and procedures</p>	<p>Demonstration and explanation            Provide opportunities to use workshop manuals, internet and other references.</p>
<p>Practical Task Activities at Certificate Level 2 can include:            Routine removal and replacement of commonly serviced components            Minor adjustments</p>	<p>Lead practical sessions with demonstrations, supervised observation.            Planning of sessions needs to consider:            Availability of tools/equipment            Number of students            Workshop layout            Sequence/order of activities            Time availability</p>
<p>List of Learning Resources</p>	<p>Resources can include:            Workbooks            CDs            PowerPoint presentations            Internet</p>
<p>Workshop Equipment</p>	<p>For example:            Hand Tools            Specialized Tools            Test Equipment            Workspace, benches, hoists, jacks, stands etc.</p>
<p>Assessment Tools</p>	<p>Underpinning knowledge is commonly assessed using multiple choice tests.            Practical tasks need to be assessed in line with Performance Criteria. These can be written as Performance Objectives - in the form of checklists.</p>

## Appendix 2-17: UOC Delivery Training Plan (Sample 1)

COMPETENCY UNIT TRAINING PLAN	
AUR20666A: Ignition Systems	
COMPETENCY OBJECTIVE	
To assist the students in obtaining the knowledge in the following: Personal and equipment safety, construction, operation and diagnosis of ignition systems.	
COMPETENCY ELEMENTS;	
<ol style="list-style-type: none"> <li>1. Safety.</li> <li>2. Operating principles. (Mechanical and electronic).</li> <li>3. Measuring and Testing.</li> <li>4. Diagnosis and repair.</li> </ol>	
PRE-REQUISITES;	
<p><u>AUR70125A</u> Occupational health and safety</p> <p><u>AUR70278A</u> Tools and equipment</p> <p><u>AUR18708A</u> Electrical systems (Minor repairs).</p>	
TEXT AND RESOURCES	
Automotive Mechanics Volume-1 and 2 by Ed May (6th Edition)	
MATERIALS AND EQUIPEMENT	
<ol style="list-style-type: none"> <li>1. Candidate must provide his/her own OH&amp;S work boots, overalls etc.</li> <li>2. Candidate must provide his/her own stationary and other requisites.</li> </ol>	
METHOD OF TRAINING	
<ol style="list-style-type: none"> <li>1. Class Room Theory.</li> <li>2. Workshop practice.</li> </ol>	
ASSESSMENT	
<ol style="list-style-type: none"> <li>1. Written test for knowledge assessment.</li> <li>2. Distributor overhaul (p 17)</li> <li>3. Spark Plugs remove and replace (p 23)</li> <li>4. Ignition system report (p 25)</li> <li>5. Oscilloscope testing (p 55)</li> <li>6. Ignition sensor testing (p 67)</li> </ol>	
ISSUED BY:	DATE

## Appendix 2-18: UOC Delivery Training Plan (Sample 2)

COMPETENCY UNIT TRAINING PLAN	
AURE 321171: Service & Repair Fuel Injection Management Systems	
<b>COMPETENCY OBJECTIVE</b>	
To gain the knowledge enabling the student to test, diagnose and repair minor electrical problems in the Fuel Injection Management System.	
<b>COMPETENCY ELEMENTS;</b>	
<ol style="list-style-type: none"> <li>1. Electronic Fuel Injection identification &amp; Operation.</li> <li>2. Test Electronic Fuel injection Systems.</li> <li>3. Trace Electronic Fuel Injection Systems</li> </ol>	
<b>PRE-REQUISITES;</b>	
<u>AUR70125A</u>	Occupational health and safety
<u>AUR70278A</u>	Tools and equipment
<u>AUR1867A / AUR18708A</u>	Batteries./ Elec. Systems minor repairs.
<b>TEXT AND RESOURCES</b>	
Automotive Mechanics Volume-1 and 2 by Ed May (6th Edition) Theory Lesson; (given at instructors discretion).	
<b>MATERIALS AND EQUIPEMENT</b>	
<ol style="list-style-type: none"> <li>1. Candidate must provide his/her own OH&amp;S work boots, overalls etc.</li> <li>2. Candidate must provide his/her own stationary and other requisites.</li> </ol>	
<b>METHOD OF TRAINING</b>	
<ol style="list-style-type: none"> <li>1. Class Room Theory. / Practice</li> <li>2. Assistance from instructor where required.</li> </ol>	
<b>ASSESSMENT</b>	
<ol style="list-style-type: none"> <li>1. Identify Electronic Fuel Injection Systems</li> <li>2. Test Electronic Fuel Injection</li> <li>3. Trace Electronic Fuel Injection Wiring Diagrams</li> </ol>	
<b>ISSUED BY:</b>	<b>DATE</b>

## Appendix 2-19: Training Session Plan Template

**Title of Session** \_\_\_\_\_  
\_\_\_\_\_

**Objectives for the Session.** (What learners must be able to do - or demonstrate - at the end of the program. This must commence with an action word):

**Assessment (Strategies and Tools)**

**Resources required.** (List the things that you will need to take with you to assist you with your training - materials, handouts, samples, etc.):

**Preparation.** (What you will do to prepare for the lesson. Prepare the training area, what equipment will you need operating, what training furniture you will need - whiteboard, OHT, arrangement of trainees, etc.):

**Training Time.** (Your estimate of how long it will take you to train the trainees to be able to achieve the objectives or outcomes of the lesson):

This example shows the information that could be included in a well-planned lesson plan.

<b>Time</b>	<b>Trainer Activity</b>	<b>Trainee Activity</b>
<p>Insert the accumulated <b>Time</b> of your lesson in this column</p>	<p>Place the <b>activities</b> that you - the <b>trainer</b> - will be undertaking in this column.</p> <p>Remember - start with a motivating <b>Introduction</b> - include:</p> <ul style="list-style-type: none"> <li>* Tell trainees the Objectives, then use</li> <li>* Questioning</li> <li>* Need to Know the Content</li> <li>* Revise Previous Material</li> <li>etc.</li> </ul> <p>Now - the <b>Lesson Body</b>.</p> <p>The range of activities that you will undertake and strategies you will use to provide the training -</p> <ul style="list-style-type: none"> <li>* Demonstrations</li> <li>* Questions</li> <li>* Explanations</li> <li>* Show and tell</li> <li>* Having trainees demonstrate to you</li> <li>* Activities</li> <li>* Highlighting information in handbooks</li> <li>* Emphasizing safety points</li> <li>* etc.</li> </ul> <p>Finally the <b>Conclusion</b>.</p> <p>This summarizes the lesson you have presented and should prove to you that trainees - and you - have been able to achieve the objectives for the lesson that you started with.</p> <p>With on-job workplace training, conclusions most often result in trainees demonstrating the skills just learned back to you. This provides you with the opportunity to correct individual faults that trainees may be using as they occur. Tell trainees again how long and to what quality the job must be done - these are the standards of the job.</p> <p>Conclusions can also contain questions which test trainee knowledge and the quality of your training. Remember: "If the trainee has not learned, the trainer has not trained."</p>	<p>Put the <b>activities</b> that you want the <b>trainees</b> to undertake in this column.</p> <p>Write what you want trainees to be doing - listening, answering a question, where positioned, etc.</p> <p>Continue to indicate what you want trainees to be doing. Demonstrating, listening, marking areas in their handouts, particular activities, etc.</p> <p>In here list the activities that trainees will perform or demonstrate that will prove that the trainees - and you - as their teacher - have achieved the objectives for the training.</p>

# **PART 3: PROCESS OF DEVELOPING APPROPRIATE MONITORING & EVALUATION FRAMEWORK**





# EXPLANATORY NOTE

A fundamental factor of CBT is training provision based on the industry's need. Thus training providers need to establish a comprehensive system to keep up with the frequently changing needs of industry, and maintain and improve training quality. In relation to this requirement, a Quality Provision System should be established the TVT system to provide comprehensive monitoring for maintaining and improving training quality.

The Quality Provision System will ensure that:

1. Quality training is provided throughout the TVT system in Iran;
2. The system adheres to principles of access and equity and maximizes outcomes for its clients; and,
3. Management systems are responsive to the needs of clients, staff and stakeholders, and maintain the environment in which TVT operates.

Monitoring and evaluating training delivery, and reporting at on the progress of training courses is the primary means of achieving quality outcomes and continuous improvement.

## WHAT IS MONITORING AND EVALUATION?

Quality assurance is an activity conducted to minimize the gap between what is planned and what is implemented. Generally if a training course is carefully planned, following this plan faithfully in the delivery of the course provides appropriate outcomes.

However in some cases there can be a need to modify the plan before and during training implementation. Modification of the course can be due to a number of reasons including misjudgment of the level of trainees, the capability of the trainers, inadequacy of facilities and training equipment and shortage of time.

Monitoring and evaluating (M&E), which is the process of systematically collecting and analyzing information, is a process that can assist in resolving these inadequacies. When conducted during a course can serve to improve the course as it is being conducted. Providing continuous M&E throughout the conduct of a course, and on completion, serves to strengthen future delivery of courses.

The process of M&E should involve as many people as possible who are involved in the training, and they should be able to share the evaluation and interpretation of the results and discuss the conclusions. This process of sharing and discussing is an important function of M&E.

Evaluation of training is not a matter of simply judging or rating a training course or those involved in it. It is more a matter of ensuring that there the training achieves the desired result, which in the case of CBT is achieving competency at the prescribed industry standards. Evaluation is also conducted to provide continuous improvement.

# QUALITY INDICATORS

In order to monitor the achievement of outcomes of training courses, there need to be quality indicators. Quality indicators are the selected items to be monitored in a training activity. Quality Indicators help give an overall picture of the outcomes being achieved by the TVT system and how well it is meeting clients' needs.

The Quality Indicators are drawn from the following five dimensions of a training course:

**Training Delivery** This dimension of indicators shows quality of training course delivery from various viewpoints such as Course Content/ Trainee's Assessment / Learning Resources, etc.

**Trainer** This dimension focuses on quality of trainer in the course delivery.

**Training Support Environment** This dimension shows how TVTO indirectly supported trainees rather than delivering the course for the successful outcomes.

**Trainee's Learning Experience** This dimension focuses on the extent to which learners are engaging in training likely to promote high-quality skill outcomes and includes learner perceptions of the quality of their competency development and the support they receive or have received from TVTO.

**Training Outcome** This dimension shows outcomes or output of training such as the number of enrolments and qualifications completed and units of competency awarded by TVTO. Employment situation and performance of the graduates in their workplaces is also important indicator as the final output of training.

Table 3-1 shows list of quality indicators. Quality indicators will be further broken down to evaluation items. Data for M&E will be collected in corresponding to each identified evaluation items. M&E tools are to be developed in a way that creating questions for each evaluation items.

Table 3-1: Quality Indicators

<b>Dimension</b>	<b>Quality Indicator</b>
Training Delivery	Course Content / Trainee's Assessment / Learning Resources / Training Equipment / Safety/ Clear expectations
Trainer	Instructional Skill / Technical knowledge Interpersonal Skill / Management Skill
Training Support Environment	Training Room / Training Center Facilities / Administration and support
Trainee's Learning Experience	Achievement / Motivation / Readiness / Overall Satisfaction
Training Outcome	Enrolment rate / Attendance Rate / Completion rate / Dropout Rate / Employment rate / Performance in workplace

Information about the quality of training being provided by the TVTO is relevant to a wide range of people. The key audiences are the TVTO management and their Provincial Office and relevant departments of the TVTO. They provide valuable information that the TVTO can use to assess their performance.

In addition, quality can be monitored over time to identify both improvements and any downward trends. Learner and employer survey results provide the TVTO with a basis for taking actions for further improvement.

## WHEN DO YOU EVALUATE?

M&E should be taking place all through training. However, the timing of the evaluation depends very much on precisely what the evaluator is focusing on at any given time in the training activity.

For example, if the focus is specifically on workplace performance, then the best time to evaluate would be some time after participants have had time to enter (or re-enter) the workforce and apply the training. In the case of evaluating on-the-job performance, conducting evaluation while the training is taking place, or immediately after the training activity would not be conclusive.

In carrying out the evaluation process, the following issues need to be considered:

- ✓ How long will participants need to practice and apply the new skills and information?
- ✓ How long will it take before changes in productivity can be witnessed?
- ✓ What can be observed and evaluated during training?

# DERIVING INFORMATION IN THE EVALUATION PROCESS

The information needed in order to evaluate a training program can be gathered from a variety of people including:

**Trainees** Trainees can provide valuable information in order to evaluate the effectiveness of the training. As they are the ones involved in the training they are the ones who can provide feedback regarding the trainer, the content and structure of the program and any improvements in their performance.

**Trainer** The trainer also can offer valuable information regarding many aspects of the training program. As the trainer is the one who is presenting the information, their own reflections on how well they presented the training program and its content is important. They can also offer information on how well they thought participants learned new information and how well they are progressing. The trainer can also provide information regarding on the job results if they are in the workplace. However, it is generally supervisors and managers who see on the job results more than the trainer.

**Other people** Other people who might evaluate the effectiveness of a training program include supervisors, managers and assessors. It is difficult for these people to evaluate the trainer or the content of the training program unless they are involved and can observe these areas. However, these people are valuable for gathering information on participant progress and on the job results.

# COLLECTING FEEDBACK

In order to provide a balanced evaluation of a training course, it is necessary to collect feedback and information about different aspects of the training. The following is an outline of the two main kinds:

## Qualitative

Qualitative data is difficult to measure and quantify but allows for feelings and attitudes to be included. Examples include: 1) participant attitude to program structure; and 2) how participants feel about the information provided.

## Quantitative

Quantitative data is easy to measure and quantify and relate to outputs, costs and time. Examples include: 1) number of participants completing the program; and 2) costs of providing the training.

Qualitative data is usually collected from open ended questions and should be quoted as it is, or grouped together into similar responses. Care must be taken not to interpret the response. The people reading the report will then have the opportunity to draw their own conclusions.

When collecting information to use for evaluation purposes, it is important to consider the question of ethical practices. Whenever people are asked for their opinions and judgments about aspects of their work or training one has to be aware that one is entering a very private domain. Questions need to be carefully phrased and their intent discussed with the respondents to avoid the interviewees' perception that their privacy is being intruded on.

Many people feel very threatened and even fearful when they are asked for this kind of information because they may not be sure exactly how it is going to be used. Confidentiality and privacy must always adhere to when gathering data. If it is possible to offer anonymity to participants when they answer questions or to give feedback it is more likely that the interviewer will receive a wider range of open responses.



# EVALUATION CRITERIA

There are several requirements that all evaluation methods must meet. The following is a summary of the five main criteria:

- Validity** Does the evaluation method measure what it is designed to measure? For example, if you want to gather information on whether participants have learnt to drive a forklift would you give them a questionnaire or observe them driving a forklift?
- Reliability** Is the information that the evaluation method has gathered consistent? If the same questionnaire was administered to the same participant two days later, the results should be the same, providing there has not been any new training.
- Clarity** All instructions and information given to the person providing feedback should be clear and simple to understand. Make sure that there are no ambiguities in any part of the process.
- Brevity** Keep the extent of the evaluation – the number of questions, for example – to a manageable level. If there is too much for participants to wade through, they may lose concentration or become frustrated. This could result in results not being consistent, not accurate and not completed.
- Economy** The method that you use should not be too time consuming or costly to administer and analyze. If, for example, you have a large group of participants, a survey would be easier to administer than, say, a one-to-one interview.

It is important to consider the degree of difficulty that may be encountered in analyzing results of the evaluation process and “scoring” them. If the process becomes too complex, the benefits for both the course evaluator and the course implementers may be reduced. It is also important to consider how useful the information is likely to be for all concerned.

## EVALUATION METHODS

There are many methods that can be used to evaluate a training program.

The methods selected will depend on the area being evaluated and the kind of information being sought. Table 3-2 shows a list of methods with its advantages and disadvantages.

Table 3-2: List of Evaluation Methods

<b>Method</b>	<b>Advantages</b>	<b>Disadvantages</b>
Observation	<ul style="list-style-type: none"> <li>➤ Easy to see a skill being performed competently</li> <li>➤ Non-verbal language can provide valuable information</li> </ul>	<ul style="list-style-type: none"> <li>➤ Intrusive</li> <li>➤ Is open to misinterpretation</li> </ul>
Interviews	<ul style="list-style-type: none"> <li>➤ Opportunity to provide opinions</li> <li>➤ Can monitor verbal and non-verbal responses</li> </ul>	<ul style="list-style-type: none"> <li>➤ Time consuming</li> <li>➤ Interviewer may influence responses</li> </ul>
Performance appraisals	<ul style="list-style-type: none"> <li>➤ Can discuss performance</li> <li>➤ Identify areas for improvement</li> </ul>	<ul style="list-style-type: none"> <li>➤ Participants information is usually confidential</li> </ul>
Self evaluation	<ul style="list-style-type: none"> <li>➤ Identifies own strengths and weaknesses</li> <li>➤ Helps reflect on own performance</li> </ul>	<ul style="list-style-type: none"> <li>➤ Can be time consuming</li> <li>➤ Participants may find it difficult to do</li> </ul>
Cos-Benefit analysis	<ul style="list-style-type: none"> <li>➤ Identify how much the program costs</li> <li>➤ Can cover many areas</li> </ul>	<ul style="list-style-type: none"> <li>➤ Time consuming</li> <li>➤ Cannot always attribute dollar value to all areas</li> </ul>
Questionnaires	<ul style="list-style-type: none"> <li>➤ Save time, economical to administer</li> <li>➤ Can cover a large number of participants</li> </ul>	<ul style="list-style-type: none"> <li>➤ Time consuming and difficult to prepare</li> <li>➤ May lose concentration if too lengthy</li> </ul>

By using a range of methods the evaluator will be able to gather more reliable information. If an interview is used, for example, a written questionnaire can also be administered so that there can be a crosscheck of the responses for accuracy.

Another important point to remember is that the information collected should always be of direct relevance to the evaluation being conducted.

For example, if the evaluation is primarily for the purpose of conducting a cost benefit analysis, then all information collected in the evaluation should relate specifically to this purpose. If on the other hand, the intention is to determine whether the trainee has achieved competency to industry standards, then the information gathered should relate specifically to his/her level of competency.

## **Effective questioning**

When collecting feedback on training questions can be designed in a variety of ways, including written questionnaires, interviews or verbal questions posed when observing a participant performing a task.

## **Interviews**

An interview is a set of questions, asked by the interviewer, where participant's answers are either summarized or recorded by the interviewer. Interviews provide the opportunity for participants to give their opinions and these can then be probed in detail by the interviewer.

If there are non-verbal responses that do not agree with the verbal message, it is then possible to follow up with further questioning during the interview to try to explain the perceived contradictions.

Some examples of interview questions are:

- ✓ What aspects of your safety training have you put into action? Please explain; and,
- ✓ What aspects of the training program have you found most useful? Please explain.

It is important that before commencement the interviewer clearly outlines the purpose of the interview and structures the questions appropriately. There are a number of things to keep in mind to ensure that the questions will be listened to and understood by all participants:

- ✓ Ask questions clearly and at normal pace;
- ✓ Use simple sentences;
- ✓ Repeat the question if necessary; and,
- ✓ Rephrase the question if necessary.

## **Questionnaires**

A Questionnaire is a set of written questions that are answered in writing by participants. The main advantage of using questionnaires is that they save time and are economical to administer.

When questionnaires are used to gather evaluative information, it is important to:

- ✓ Prepare the questionnaire carefully, giving consideration to the type of information required;
- ✓ Ensure that questions are written clearly and unambiguously;
- ✓ Provide all the information that participants need in order to respond validly to the questionnaire and to return it promptly; and,
- ✓ Avoid lengthy questionnaires.

### **Designing questions**

When designing an evaluation it is necessary to think about the questions that will be asked of each area. Some examples of appropriate questions are listed in Table 3-3:

Table 3-3: List of Questions

<b>Questions about the trainer</b>	<ul style="list-style-type: none"> <li>• Did the trainer present information in a clear manner?</li> <li>• Was the purpose of the training clearly explained?</li> <li>• Did the trainer provide opportunities to ask questions?</li> </ul>
<b>Questions about the training program</b>	<ul style="list-style-type: none"> <li>• Was the program well structured?</li> <li>• Was the program relevant to your work?</li> <li>• Were the training resources useful?</li> </ul>
<b>Questions about trainees</b>	<ul style="list-style-type: none"> <li>• Did trainees achieve the training outcomes?</li> <li>• Were trainees able to apply the information in their workplace?</li> <li>• Did trainees feel that their needs were met?</li> </ul>
<b>Questions about the training results</b>	<ul style="list-style-type: none"> <li>• Did the training increase productivity?</li> <li>• Did the training decrease workplace accidents?</li> <li>• Did the training result in better workplace performance?</li> </ul>

# **ANALYZING FEEDBACK**

As previously mentioned, because it is necessary to gather information during the training program one should not wait until the conclusion of a course to analyze the responses from participants. It is possible to make ongoing decisions about modifications based on the analysis of participants' feedback as soon as it is collected.

Information gathered for evaluation needs to be organized so that it can be easily interpreted. It is advisable to group information together in the form of a separate document or report such as a spreadsheet, graph, chart or computer printout so that the information can be displayed in a manner that is easy to follow.

If you are using a computer to display the information for you, make sure that you have a thorough understanding of the data before you draw any conclusions and present your information.

You should also consider the impact that different presentations could have on interested people. Take into account what they like and expect so that you can present your information.

Analyzing is the process of sharing information and getting consensus among people concerned what are the issues. Conclusion of the M&E should not be finalized only by the Monitors or Inspectors alone. There is no black or white type of simple answer to judge the course is good or bad. Involve as many people as possible who are involved in the training.

## **Dealing with the Evaluation results**

Once the evaluation results have been analyzed, it is possible to draw conclusions and make some recommendations. The recommendations may relate to: 1) Skills of the trainer; 2) Availability of resources; 3) Training methods used; and, 4) Clarity of program aims and purpose.

Changes recommended by the evaluation might occur throughout the training program. Participants may make observations in the early stages of the program which you will have the opportunity to respond to. Feedback should be accepted as constructive advice, acknowledged and incorporated wherever possible.

As information is gathered about the training program, the people involved in the evaluation may be very interested in what will be done with the findings. To keep faith with these people it is necessary to demonstrate that their input has been listened to, and their contribution valued.

While every endeavor needs to be made to be made to meet individual needs, there may be some difficulty encountered in modifying the entire program if only one person thinks it should change.

It is always a good idea to keep reviewing the evaluation approach, even when there do not appear to be any negative results.

# REPORTING

After analyzing the findings for the overall program, it is necessary to produce a report. This report will provide valuable information on the background, methodology and outcomes of the evaluation to: 1) trainers, supervisors / TVTC managers; 2) Provincial Office managers, Monitoring managers and staff; and, 3) TVTO HQs.

A few points should be kept in mind when preparing to communicate the evaluation findings:

- ✓ Select an appropriate time – this should be as soon as possible after the conclusion of the program;
- ✓ Target specific people and make the message meet their individual needs;
- ✓ Select the means of communication of the Report carefully. In some cases there may need to be written communication whereas in other cases oral communication may be sufficient;
- ✓ Remove emotion and bias from the communication and make sure the report is objective; and,
- ✓ The information gathered may have to be presented to additional people in the organization.

Two types of reports are:

- ✓ Review and update reports – which reflect on progress, and how the program is being fine tuned to take into account the feedback received; and,
- ✓ Final reports – which present the full range of findings, draw final conclusions and make recommendations for future programs.

The results of the M&E process should be shared with people involved in the all process of training development and implementation. Sharing information is one of important functions of M&E.

M&E is the process to develop consensus among people concerned about the quality of current training courses and direction of future activities.

# PROCESS STEPS

## OVERVIEW

Monitoring & Evaluation (M&E) will identify if the training course is effective as it was designed and will provide information for modification and improvement of the training management cycle.

M&E comprises the following four Steps:

1. Planning;
2. Data Gathering;
3. Analysis; and,
4. Reporting.

In order to monitor and evaluate whole aspects of training course, evaluation items are identified by breaking down the following 5 dimensions of the training course: 1) training delivery; 2) the trainer(s); 3) the Training Support Environment; 4) the trainee' learning experience; and, 5) the training outcome (refer to the Part 1 Explanatory Text 1.2 “Quality Indicator”).

This part of the Manual presents a logical flowchart of the process required to monitor and evaluate courses and outlines each major step in this process. It also provides examples of forms and templates that can be used in the process. These forms and templates can be selected, modified and customized for use as required.

It is important to remember that the objective of M&E is to provide the information in order to take effective actions for modification and improvement of the training management cycle. The information will only be of value if it is acted on by course designers and deliverers/trainers. One should also guarantee that the data obtained will not be used for any other purposes.



# LOGICAL FLOW CHART OF PROCESS STEPS

The four steps of M&E are described in the Figure 3-1.

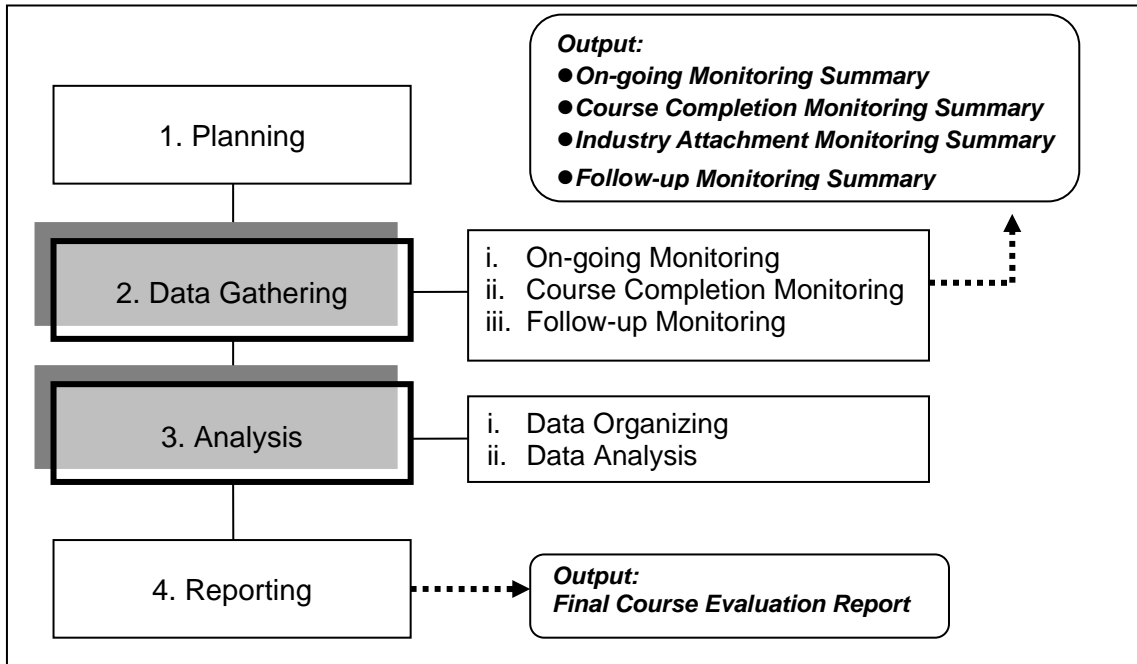


Figure 3-1: Logical Flow Chart of M&E

In this manual, the logical flowchart of the process is explained as: Step 1 Planning; Step 2 Data Gathering; Step 3 Analysis; and, Step 4 Reporting.

## EXPLANATION OF PROCESS STEPS

### STEP 1

### Planning

The background of the training course should be considered for making the monitoring & evaluation (M&E) plan by strategically combining three activities namely, On-going Monitoring, Course Completion Monitoring and Course Follow-up Monitoring.

Each activity comprises methods for data gathering. Table 3-4 shows the list of activities and methods.

Table 3-4: List of M&E activities and methods

Activity	Methods	Details
On-going Monitoring	Observation Monitoring	A monitor visits course the delivery site and checks documentations, observe course delivery, and interview to the trainers.
	Trainee's Feedback Monitoring	A monitor visits the course delivery site and checks the trainee's satisfaction by focus group interview or feedback questionnaire.
	Industry Attachment On-going Monitoring	A monitor visits the Industry Attachment workshop and check the progress and the trainee's satisfaction.
Course Completion Monitoring	Questionnaire Survey	A monitor visits the course delivery site, checks the trainee's satisfaction and gathers Feedback from the trainers through distributing questionnaires.
	Focus Group Interview	A monitor visits course the delivery site and gathers feedback data by conducting focus group interviews with trainees.
Follow-up Monitoring	Interview	A monitor visits the graduate's working place and gathers feedback data through interviews with graduates and their employers.
	Questionnaire Survey	A monitor sends out questionnaires to graduates and their employers to gather feedback data.

The training course background and Units of Competence (UOCs) included in the course should be first examined and then how to monitor and evaluate the course and summarize the findings should be planned.

On-going Monitoring focuses on gathering data during the delivery Course Completion Monitoring identifies what was happening during the delivery, and Follow-up Monitoring identifies what the result of the training course was.

On-going Monitoring can be conducted using the following 3 methods: Observation Monitoring, Trainees' Feedback Monitoring, and Industry Attachment Program Monitoring. In particular, newly developed training courses should be monitored frequently. However, less frequent or sampling and focused monitoring is effective when course courses have been delivered over a long period.

Although ongoing monitoring of courses is necessary, the most effective time to gather data is on course completion. The methods recommended for this evaluation on completion of a course include: questionnaire survey and focus group interviews conducted with trainees. It is preferable for a Monitor to use a combination of the recommended methods. It is important to note, however, that in order to derive quantitative data, it is necessary to use questionnaires.

Follow-up monitoring is aimed at gathering feedback data of the final outcomes of the training based on the performance of graduates who have been employed in the industry of the relevant training area. The recommended methods of gathering this data include: interviews with graduates and employers and use of questionnaire surveys used with graduates and employers. As far possible, a Monitor should visit selected graduates' working places and gather feedback from graduates and their employers or direct supervisors on their performance by conducting face-to-face interviews. Using questionnaires can save time and cost but there are two negative factors associated with them. Generally people are reluctant to spend the time to fill in written questionnaires especially if they are long and complex. The information provided in a questionnaire response can be insufficient if it is not verified by the course Monitor through discussions with the respondent.

See

**Appendix 3-1: Monitoring & Evaluation Plan Matrix**

## STEP 2

## Gather Data

The three sub-steps recommended for data gathering are: 1: On-going Monitoring, Sub Step 2: Course Completion Monitoring and Sub Step 3: Follow-up Monitoring. A final analysis of the data will be completed after the last sub step of the follow-up survey. However, it is advised that a summary gathered feedback data be provided to the trainers and relevant personnel right as soon as possible in order to enable modification and improvement of course development and delivery.

The process of gathering data in each step is described in Table 3-5.

Table 3-5: List of data to be gathered in each sub step

Sub Step	Quality Indicator
On-going Monitoring & Course Completion Monitoring	Training Delivery Dimension: Course Content / Trainee's Assessment / Learning Resources / Training Equipments / Safety/ Clear expectations
	Trainer Dimension: Instructional Skill / Technical knowledge Interpersonal Skill / Management Skill
	Training Support Environment Dimension: Training Room / Training Center Facilities / Administration and support
	Trainee's Learning Experience Dimension: Achievement / Motivation / Readiness / Overall Satisfaction
Course Completion Monitoring & Follow-up Monitoring	Training Outcome Dimension: Enrolment rate / Attendance Rate / Completion rate / Dropout Rate / Employment rate / Performance in workplace

<b>Sub STEP2.i</b>	<b>On-Going Monitoring</b>
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In this step, feedback data related to training delivery, trainer, training environment, and trainee's learning experience should be gathered during course delivery.

On-going Monitoring can be conducted using 3 methods including: Observation Monitoring, Trainee's Assessment Monitoring, Trainee's Feedback Monitoring, and Industry Attachment Program Monitoring. This manual explains how to monitor in each method respectively.

a. Observation Monitoring

Course documentation should be checked, and course delivery should be observed using the following quality indicators:

- ✓ Training Delivery;

- ✓ Trainer;
- ✓ Training Support Environment; and,
- ✓ Trainee's Learning Experience.

A Monitor should keep in mind that it is not possible to evaluate by observing a part of delivery. A Monitor's role is to gather pieces of data and reserve judgment until training delivery is completed.

It is also necessary to conduct interviews with the course trainers to check if the training has progressed in keeping with the Training Plan and to find out if there had been difficulties in implementing the training.

It is necessary then to summarize the gathered data into an On-going Monitoring Sheet

See  
**Appendix 3-2     On-going Monitoring Sheet**

b. Trainee Feedback Monitoring

Feedback data should be gathered by conducting focus group interview and/or distribute questionnaire to the trainees. This should be conducted after a Monitor understands the course situation by other methods so that a Monitor can gather effective feedback efficiently. And summarize the gathered data into an On-going Monitoring Sheet

See  
**Appendix 3-2     On-going Monitoring Sheet**  
**Appendix 3-3     Trainee's On-going Daily Feedback Questionnaire**  
**Appendix 3-4     Trainee's On-going UOC Feedback Questionnaire**

The Summary of gathered data should be provided to the trainers and relevant personnel preferably soon after data gathering so that it will help to modify or improve the course delivery.

c. Industry Attachment Program Monitoring Data Gathering

This sub step should be conducted when an industry attachment program is included in a training course. (It is highly recommended that all courses include some period of industry attachment if possible). Feedback data related to Training Delivery, Trainer,

Training Environment, and Trainee's Learning Experience should be gathered during the program. It should be checked if trainees are involved in practical hands on skills in necessary tasks by checking the Industry Attachment Task Completion Check Sheet filled out by supervisors at Industry. Important documents to be checked include:

- ✓ Schedule;
- ✓ Attendance Record; and,
- ✓ Industry Attachment Task Completion Check Sheet.

The use of an Industry Attachment Task Completion Check Sheet is an effective template to indicate the progress of program. It should be made sure that industry supervisors maintain this record on a daily basis. In addition, interviewing to trainees can be conducted to gather feedback data. This information can be summarized them into an Industry Attachment Activity On-going Monitoring Sheet.

Feedback data from trainees indicating their satisfaction with the attachment and industry supervisors in relation to their evaluation of the trainees should be gathered on completion of industry attachment.

See

**Appendix 3-5 Industry Attachment Task Completion Check Sheet**  
**Appendix 3-6 Industry Attachment On-going Monitoring Sheet**  
**Appendix 3-7 Industry Attachment Trainee's Feedback Questionnaire**  
**Appendix 3-8 Industry Attachment Industry Supervisor's Feedback Questionnaire**

The Summary of gathered data should be provided to the trainers and relevant personnel immediately after data gathering so that it will help to modify or improve the remaining course delivery.

## **Sub STEP2.ii Course Completion Monitoring**

In this step, feedback data related to Training Delivery, Trainer, Training Environment, and Trainee's Learning Experience, and fact data of Training Outcome should be gathered.

Feedback data from trainees should be gathered by asking them to fill out the questionnaire at the end of the course. It is important to explain the objective of the questionnaires and emphasize that the gathered information will be used only for improving the course. It should also be stated that the results will in no way have any bearing on the training result.

Trainers' feedback should be also gathered using a questionnaire at the end of the course.

See

**Appendix 3-9**    **Course Completion Trainee's Feedback Questionnaire**

Feedback data from trainees can be gathered by interviewing. Interviews can be conducted using the Course Completion Focus Group Interview Sheet. It has to be remembered however that an interview is a dynamic process. A Monitor should maintain an open mind. He/she can gauge the interest of interviewees and control the interview in such a way that they can obtain predictable and unpredictable feedback.

See

**Appendix 3-10**    **Course Completion Focus Group Interview Sheet**

The Summary of gathered data should be provided to the trainers and relevant personnel preferably soon after data gatherings so that it will help to modify or improve the course delivery.

### **Sub STEP2.iii**    **Follow-Up Monitoring**

This sub step should focus on gathering data related specifically to the training result. It is broken down into the two activities which incorporate the survey of employment situation of graduates and the survey of graduates' performance in their workplaces.

#### **1. Survey employment situation of graduates**

Employment situation of the graduates should be surveyed after a determined period from the course completion, and how the course helped graduates to or work in their

current workplaces should be interviewed by telephone. When the graduate cannot find a job, ask the reasons.

Having finding out employment situation, categorize graduates into below three:

- A) employed by the industry as same as the training area
- B) employed by the industry different from the training area
- C) not employed yet

See

**Appendix 3-11 Graduate Follow-up Monitoring Interview Sheet**

## 2. Survey graduates' performance in their workplaces

Feedback data should be gathered from the graduates of Category A and their employers by interview. Interviews should be dynamic and flexible enough to obtain effective feedback data for identifying issues of training standard, course curriculum and delivery. It is important to prepare well in advance by reviewing course content, target graduate's background, assessment record and Course Completion Monitoring feedback.

The feedback data, which should be gathered from the graduates and employers are as below.

From graduates

- ✓ Details of current job
- ✓ Performance in current job
- ✓ Overall satisfaction on the training course
- ✓ Suggestions for improving training course

From employers/supervisors

- ✓ Graduate's performance in current job
- ✓ Expectation from training

See

**Appendix 3-11 Graduate's Follow-up Monitoring Interview Sheet**  
**Appendix 3-12 Employer's Follow-up Monitoring Interview Sheet**



The Summary of gathered data should be provided to the trainers and relevant personnel preferably soon after data gatherings.

## **STEP 3**      **Analyze Gathered Data**

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In this step, all the gathered feedback data will be analyzed to evaluate the course. This step comprises two sub steps which are organizing gathered data and interpreting organized data. Since a lot of quantitative feedback data as well as qualitative data will be gathered, organizing these data in advance will make analysis easy and contribute toward effective analysis.

### **Sub STEP3.i**      **Organize Gathered Data**

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It is necessary to gather all inputs into a tally sheet. Once the data is recorded it is possible to calculate averages and deviations for each question in relation to each trainee and constructing appropriate graphs and charts. (The feedback data of On-going Monitoring, Industry Attachment Monitoring and Course Completion Monitoring should be organized immediately after the data gathering without waiting completion of Follow-up Monitoring.)

### **Sub STEP3.ii**      **Analyze Organized Data**

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Organized feedback data should be analyzed in every quality indicators and interpret it.

The key questions to be asked for analyzing are:

- ✓ The course helped trainee to develop their competency to work "in industry"?
- ✓ The course was delivered as it was expected?
- ✓ Are there any areas to improve?

In order to answer to the above key questions, analyze organized data in below view points.

- ✓ What quality indicators are high?

- ✓ What quality indicators are low?
- ✓ What quality indicators are varied by trainee?
- ✓ What UOCs are in high performance?
- ✓ What UOCs are in low performance?
- ✓ What UOCs are varied in performance by graduates?
- ✓ Are there any trainees whose feedback/performance is different from majority?
- ✓ What quality indicators have the gaps between trainee's feedback and trainer's feedback?
- ✓ What UOCs performances have the gaps between graduate's feedback and employer' feedback?
- ✓ What quality indicators have gaps between trainee's feedback and industry's feedback in Industry Attachment feedback data?
- ✓ Comparison of feedback between the different trainee's background categories.
- ✓ Comparison of feedback between the On-going monitoring, Course Completion Monitoring and Follow-up Monitoring.
- ✓ What comments are repeatedly coming up?
- ✓ Are there any comments that should be highlighted?
- ✓ Comparison of the data between this course and others.

Additional data in order to obtain various opinions from people involved in the training management cycle such as training standard development, curriculum development, and training delivery should be gathered through meetings and interview when analyzing. The below Table 3-6 shows the list of target process of training management to be considered for analysis.

Table 3-6: List of Target Process to be considered for analysis

Curriculum Development Process	<ul style="list-style-type: none"> <li>• Course Learning and Assessment Guide development</li> <li>• Studying units of competency</li> <li>• Identification of training tasks</li> <li>• Confirmation relevance and currency of tasks with industry</li> <li>• Training resources development (Training work books, other training resources, assessment matrix, assessment tools,</li> <li>• Training Plan development</li> </ul>
Course Preparation Process	<ul style="list-style-type: none"> <li>• Industry Attachment arrangement</li> <li>• Trainer's training</li> <li>• Recruitment</li> </ul>
M&E Planning	<ul style="list-style-type: none"> <li>• M&amp;E planning</li> </ul>

- 
- Evaluation tools
- 

It is recommending share the draft result with trainers and discuss for coming up with final conclusion. Course trainers are the most committed persons and know what happened during the delivery. They can help a Monitor to interpret the gathered data.

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## **STEP 4** Reporting

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Full range of findings should be presented with evidence data in the report. It should draw final conclusions by making issues clear with for each process of the training management such as “Training standard development”, “Curriculum development” and “Delivery”. Finally recommendations for further modification and improvement based on the findings will be summarized for each training management process and the report will be submitted to concerned parties.

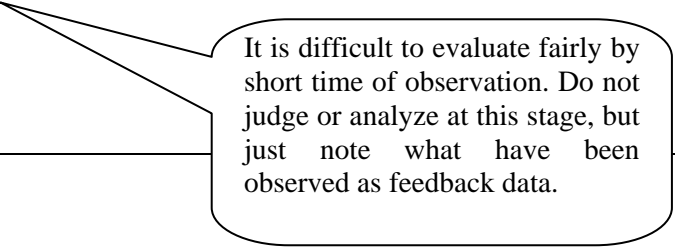
# APPENDICES

## Appendix 3-1: Form "Monitoring & Evaluation Plan Matrix"

Monitoring & Evaluation Plan Matrix			
<b>Target courses, areas:</b>			
<b>Background:</b>			
<b>Overall Strategy:</b>			
Element	Method(when and how)	Tools	Output
On-going Monitoring			
Observation Monitoring	<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">                     Describe when (how often) and how                 </div>	➤ Delivery Monitoring Sheet	On-going Monitoring Summary
Trainee's Assessment monitoring		➤ Delivery Monitoring Sheet	
Trainee's feedback monitoring		➤ Trainee's Daily Feedback Questionnaire ➤ Trainee's UOC Feedback Questionnaire	
Industry Attachment (IA) program monitoring		➤ IA Task Check Sheet ➤ IA Trainee's Feedback Questionnaire	IA Feedback Summary Form
Course Completion Monitoring			
Feedback Questionnaire Survey		➤ Course Completion Trainee's Feedback Questionnaire	Course Completion Monitoring Summary
Focus Group Interview		➤ Course Completion Focus Group Interview Sheet	
Follow-up Monitoring		➤ Graduate's Follow-up Monitoring Interview Sheet ➤ Employer's Follow-up Monitoring Interview Sheet	Follow-up Monitoring Summary
Final Output: Final Course Evaluation Report			



## Part 2: Delivery Observation

Domain	Feedback Data Observed
1 Training Course Delivery 1.1 Trainee's Assessment and Tools 1.2 Learning Resources 1.3 Workshop Equipments 1.4 Safety 1.5 Clear expectations by trainees	 <p>It is difficult to evaluate fairly by short time of observation. Do not judge or analyze at this stage, but just note what have been observed as feedback data.</p>
2 Trainer 2.1 Instructional Skill 2.2 Technical knowledge 2.3 Interpersonal Skill 2.4 Management Skill	
3 Training Support Environment 3.1 Rooms 3.2 Training Center Facilities 3.3 Administration and support	
4 Trainee's Learning Experience 4.1 Participation and commitment	

## Part 3: Trainee's Feedback (focus group interview, feedback questionnaire)

Domain	Feedback Data Collected
1 Training Course Delivery 1.1 Course Content 1.2 Trainee's Assessment and Tools 1.3 Learning Resources 1.4 Workshop Equipments 1.5 Safety 1.6 Clear expectations by trainees	
2 Trainer 2.1 Instructional Skill 2.2 Technical knowledge 2.3 Interpersonal Skill 2.4 Management Skill	
3 Training Support Environment 3.1 Rooms 3.2 Training Center Facilities 3.3 Administration and support	
4 Trainee's Learning Experience 4.1 Attendance 4.2 Achievement (Progress) 4.3 Motivation	

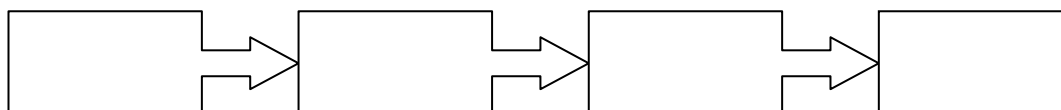
## Part 4: Trainer's Feedback (interview)

Domain	Feedback Data Collected
1 Training Course Delivery 1.1 Course Content 1.2 Trainee's Assessment and Tools 1.3 Learning Resources 1.4 Workshop Equipments 1.5 Safety 1.6 Clear expectations by trainees	
2 Trainer 2.1 Instructional Skill 2.2 Technical knowledge 2.3 Interpersonal Skill 2.4 Management Skill	
3 Training Support Environment 3.1 Rooms 3.2 Training Center Facilities 3.3 Administration and support	
4 Trainee's Learning Experience 4.1 Attendance 4.2 Achievement (Progress) 4.3 Motivation	

**Part 5: Comments and Recommendations from Monitor**

Describe here what a Monitor found out and what a Monitor discussed with the trainers. Future recommendation should be summarized here.

**Reporting**





## Appendix 3-3: Form "Trainee's On-going Daily Feedback Questionnaire"

### Sample A

Date: \_\_\_\_\_ Name of Trainee: \_\_\_\_\_

<What did you learn today?>

There questions can be modified depending on what data a Monitor needs to collect.

< Has the training of today changed any of your perspective?>

<Are trainer's instruction and training equipment good enough to learn today's subject?>

<Any problems in today's session?>

## Sample B

Date: \_\_\_\_\_ Name of Trainee: \_\_\_\_\_

<What was good in today's session?>

<What was difficult in today's session?>

<Any comment>

## Sample C

Date: \_\_\_\_\_ Name of Trainee: \_\_\_\_\_

	Yes	So so	No
1. I could achieve today's goal.	3	2	1
2. Trainer's instruction was easy to understand.	3	2	1
3. Assessment was Farsi.	3	2	1
4. Learning resource was good.	3	2	1
5. Training equipment was good.	3	2	1
6. Training was safety.	3	2	1

<Any Comments>

## Appendix 3-4: Form "Trainee's On-going UOC (Unit of Competence) Feedback Questionnaire"

Please provide your feedback by answering below questions. All information collected will be used only for the purpose of improving the training course and will not be disclosed to any other third parties. The results will in no way have any bearing your training result.

Date: \_\_\_\_\_ Name of Trainee: \_\_\_\_\_

	Excellent	Good	So-so	Bad
1. How much of this UOC did you learn?	4	3	2	1
2. How was trainer's teaching method in this UOC	4	3	2	1
3. How was the workbook for this UOC	4	3	2	1
4. How were the training facilities/equipments/tools for this UOC?	4	3	2	1

<Any Comments>

There questions can be modified depending on what data a Monitor needs to collect.

A Monitor can obtain quantitative data. It is effective identify the trend in over time.

## Appendix 3-5: Form "Industry Attachment Task Completion Check Sheet"

Unit of Competence: Inspect and Service Brakes		
Trainee Name		
Supervisor Name		
Company Name		
Training Course	Name of training course	
	Training Center	
	Industry attachment period	

Task	Done in Workplace	Comments	Date	Signature
<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">                     State the task expected done in the industry attachment.                 </div>				
Comments		<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">                     When industry supervisor observed a trainee is engaged in the task, supervisor will mark.                 </div>		<div style="border: 1px solid black; border-radius: 15px; padding: 5px; display: inline-block;">                     Supervisor's signature                 </div>

## Appendix 3-6: Form "Industry Attachment On-going Monitoring Sheet"

1.1 Monitor's Name	
1.2 Date & Time	
1.3 Name of Training Course	
1.4 Training Center	
1.5 Name of Company	
1.6 Name of Trainer in Charge	

### Part 1: Document Check

Item	Check	Comment
Schedule	<input type="checkbox"/> OK <input type="checkbox"/> Problems	Prepared properly?
Task check sheet	<input type="checkbox"/> OK <input type="checkbox"/> Problems	Progress, coverage:

### Part 2: Activity Observation

Domain	Feedback Data Observed
1 Training Course Delivery 1.1 Trainee's Assessment and Tools 1.2 Learning Resources 1.3 Workshop Equipments 1.4 Safety 1.5 Clear expectations by trainees	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; display: inline-block;"> <p>It is difficult to evaluate fairly by short time of observation. Do not judge or analyze at this stage, but just note what have been observed as feedback data.</p> </div>
2 Supervisors at industry 2.1 Instructional Skill 2.2 Technical knowledge 2.3 Interpersonal Skill 2.4 Management Skill	
3 Company Environment 3.1 Rooms 3.2 Training Center Facilities 3.3 Administration and support	
4 Trainee's Learning Experience 4.1 Participation and commitment	

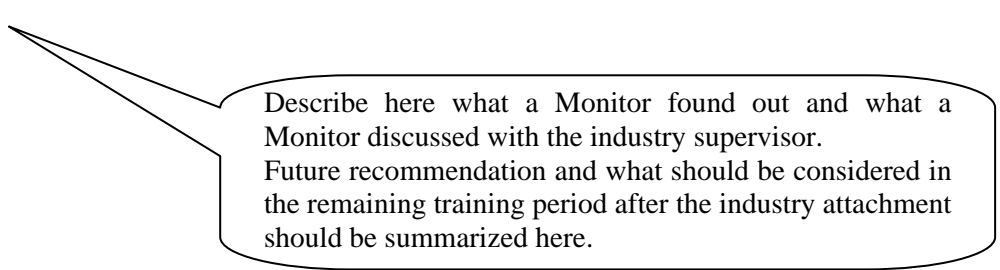
### Part 3: Trainee's Feedback (focus group interview)

Domain	Feedback Data Collected
1 Training Course Delivery 1.1 Course Content 1.2 Trainee's Assessment and Tools 1.3 Learning Resources 1.4 Workshop Equipments 1.5 Safety 1.6 Clear expectations by trainees	
2 Trainer 2.1 Instructional Skill 2.2 Technical knowledge 2.3 Interpersonal Skill 2.4 Management Skill	
3 Training Support Environment 3.1 Rooms 3.2 Training Center Facilities 3.3 Administration and support	
4 Trainee's Learning Experience 4.1 Attendance 4.2 Achievement (Progress) 4.3 Motivation	

### Part 4: Supervisor's Feedback (by interview)

Domain	Feedback Data Collected
5 Trainee's Learning Experience 5.1 Attendance 5.2 Achievement (Progress) 5.3 Motivation	

### Part 5: Comments and Recommendations from Monitor



Describe here what a Monitor found out and what a Monitor discussed with the industry supervisor. Future recommendation and what should be considered in the remaining training period after the industry attachment should be summarized here.

## Appendix 3-7: Form "Industry Attachment Trainee's Feedback Questionnaire"

The purpose of conducting this questionnaire survey is to collect information and data in order to know about your learning result as well as improve the industry attachment training program. All information collected will be used only for that purpose and will not be disclosed to any other third parties. The results will in no way have any bearing your training result. Please provide your feedback on the industry attachment by filling out below form. Your honest and frank feedback will be greatly appreciated.

Background Information		
Trainee	Name	
	Name of company	
Training Course	Name of training course	
	Training Center	
	Industry attachment period	

[Please describe what you learned and impact to your learning.]



<b>Part 1 : Your activities (Technical Skills)</b>				
<b>Did you practice or observe tasks related to below UOC by Industry Attachment program?</b>	<b>Not at all</b>	<b>No</b>	<b>Yes</b>	<b>Yes, very much</b>
1. UOC 1	1	2	3	4
2. UOC 2	1	2	3	4
3. UOC 3	1	2	3	4
4. UOC 4	1	2	3	4
5. UOC 5	1	2	3	4
Below skills are not yet trained in the course but if there is any				
6. UOC 6	1	2	3	4
7. UOC 7	1	2	3	4
8. UOC 8	1	2	3	4
9. UOC 9	1	2	3	4
10. UOC 10	1	2	3	4
[Comments]				

<b>Part 2 : Your activities (Employability Skills)</b>					
<b>Did you learn below employability skills by Industry Attachment program?</b>	<b>Not at all</b>	<b>No</b>	<b>Yes</b>	<b>Yes, very much</b>	<b>No Idea</b>
21. Communicate ideas and information	1	2	3	4	0
22. Work with others and in teams	1	2	3	4	0
23. Solve problems	1	2	3	4	0
24. Use technology	1	2	3	4	0
25. Collect, analyse and organize information	1	2	3	4	0
26. Plan and organize activities	1	2	3	4	0
27. Learn and update yourself	1	2	3	4	0
[Comments]					

<b>Part 3: Your feedback</b>					
	Bad	Not Good	Good	Very Good	No Idea
31. Effectiveness of the Industry attachment	1	2	3	4	0
[Comment]					
32. Tools and equipment at the workplace	1	2	3	4	0
[Comment]					
33. Safety at the workplace	1	2	3	4	0
[Comment]					
34. Support from people at the workplace	1	2	3	4	0
[Comment]					
35. Overall satisfaction of the industry attachment program	1	2	3	4	0

## Appendix 3-8: Form "Industry Attachment Supervisor's Feedback Questionnaire" (for Industry Supervisors)

Thank you very much for tremendous effort for providing experience of working in industry. It will be very much appreciated if you could give feedback on trainee's performance in your workplace on the completion of the industry attachment. This feedback will be immediately given to the trainees and will help them to recognize their current level and support their effective training. Your kind cooperation will be highly appreciated.

Course Title	
Period	
Name of trainee	

### Part 1 : Trainee's performance (Technical Skills)

How did the trainee perform below skills?	Bad	Not Good	Good	Very Good	No activity
1. UOC 1	1	2	3	4	0
2. UOC 2	1	2	3	4	0
3. UOC 3	1	2	3	4	0
4. UOC 4	1	2	3	4	0
5. UOC 5	1	2	3	4	0
Below skills are not yet trained in the course but if there is any					
6. UOC 6	1	2	3	4	0
7. UOC 7	1	2	3	4	0
8. UOC 8	1	2	3	4	0
9. UOC 9	1	2	3	4	0
10.UOC 10	1	2	3	4	0

[Comments]

**Part 2 : Trainee's learning (Employability Skills)**

How did the trainee perform below skills?	Bad	Not Good	Good	Very Good	No Idea
21. Communicate ideas and information	1	2	3	4	0
22. Work with others and in teams	1	2	3	4	0
23. Solve problems	1	2	3	4	0
24. Use technology	1	2	3	4	0
25. Collect, analyze and organize information	1	2	3	4	0
26. Plan and organize activities	1	2	3	4	0
27. Learn and update yourself	1	2	3	4	0

[Comments]



## 1 About Training Course delivery

(1: Strongly disagree, 2: disagree, 3: Neutral, 4: agree, 5: strongly agree)

	Question	Please circle the number	Not known
1.1 Course Content	1.1.1 Course content was what I expected	1 2 3 4 5	0
	1.1.2 Course content was practical	1 2 3 4 5	0
	1.1.3 Course was at the right level for me	1 2 3 4 5	0
1.2 Trainee's Assessment	1.2.1 The way of assessing trainee was faire.	1 2 3 4 5	0
	1.2.2 Assessments were based on realistic activities.	1 2 3 4 5	0
	1.2.3 Assessments were useful for me to know how much I know.	1 2 3 4 5	0
1.3 Learning Materials	1.3.1 Learning materials were easy to understand	1 2 3 4 5	0
	1.3.2 Learning materials included necessary information	1 2 3 4 5	0
	1.3.3 Learning materials were available when I need.	1 2 3 4 5	0
1.4 Training Equipments	1.4.1 Training equipments were up to date.	1 2 3 4 5	0
	1.4.2 Training equipments were in good condition.	1 2 3 4 5	0
1.5 Safety	1.5.1 I didn't face any dangerous situation during the course.	1 2 3 4 5	0
1.6	1.6.1 Workshop had safe environment for training.	1 2 3 4 5	0
1.7 Clear expectations	1.7.1 I had enough information about the course before course started.	1 2 3 4 5	0
	1.7.2 I know what I was expected to learn.	1 2 3 4 5	0
<Your Comments>			

## 2. About Trainer

	Question	Please circle the number	Not known
2.1 Instructional Skill	0.1.1 I was encouraged to ask questions to trainer	1 2 3 4 5	0
	0.1.2 I could clearly understood trainer's instruction	1 2 3 4 5	0
2.2 Technical knowledge	0.1.3 I was satisfied with trainer's technical knowledge on the subject delivered	1 2 3 4 5	0
2.3 Interpersonal Skill	1.1.1 I was encouraged to keep on learning by trainer	2 2 3 4 5	0
2.4 Management Skill	2.1.1 I was satisfied with trainer's time management	1 2 3 4 5	0
<Your Comments>			

### 3 About Training Support Environment

	Question	Please circle the number	Not known
3.1 Room	3.1.1 The room condition was good enough for the training	1 2 3 4 5	0
3.2 Facilities	3.2.1 Facilities of the training center was satisfactory	1 2 3 4 5	0
3.3 Administration and support	3.3.1 Administration and support of the training center was satisfactory.	1 2 3 4 5	0
<Your Comments>			

### 4. About Your Learning Experience

	Question	Please circle the number	Not known
4.1 Achievement	I am satisfied with my achievement	1 2 3 4 5	0
	The course prepared me for work	1 2 3 4 5	0
	I learned to work with people.	1 2 3 4 5	0
	I learned to plan and manage my work	2 2 3 4 5	0
4.2 Motivation	I looked for my own resources to help me to learn	1 2 3 4 5	0
	I approached trainers, TVTC staff if I need help	1 2 3 4 5	0
	I pushed myself to understand difficult things	1 2 3 4 5	0
4.3 Overall Satisfaction	I am satisfied with the training course	1 2 3 4 5	0
	I would recommend this course to others	1 2 3 4 5	0
<Your Comments>			

## 5. Your Comments

5-1. What was best thing in the training for you?

5-2. What was bad thing in the training for you?

5-3. Please give any other comments



## "Sample Questions for Course Completion Trainee's Feedback Questionnaire"

These are the sample questions for feedback questionnaire as examples.

### Training Delivery Dimension

#### Course Content:

- The information I was learning was current and up to date.
- I was learning the skills for my chosen career.
- The course focused on relevant skills.
- The course combined theory with practice to support me in both understanding and applying the information provided.
- The mix of classroom, demonstration, simulation and workshop was effective in covering all the information required to complete the course successfully.
- Session hours and its length were appropriate.
- Implementation of the course was punctual.

#### Learning Materials:

- Access to training books and handouts was good.
- Training books and handouts quality was good.
- General & technical equipment & co-educational material were good.
- Practicality of materials in the training context was good.
- The learning material was written in clear plain language
- I could readily find the information I needed in the learning materials.
- The learning materials to be current so that I could be sure that I had the most up to date information
- The learning materials covered all the information I needed to complete the course successfully
- The learning materials was supported by video or multimedia material
- The learning materials indicated useful links to sources of information including Internet site

#### Clear Expectation:

- The course outline gave an accurate indication of what I was to learn.
- The course outline gave me a good understanding what was expected from me.
- The timetable gave an accurate indication of when and where I was expected to learn.

#### Trainee's Assessment:

- Assessment requirements were provided at the beginning of the subject/module.
- The assessment requirements were clear to me.
- The assessment items made me confident that I could perform the required tasks to the required standard.
- Assessment conditions, e.g. re-submits, were clear and reasonable.
- The assessment items were appropriate and well linked to the learning activities and program.
- I received adequate and timely feedback on my progress.

#### Training Equipment:

- The number of the equipment was enough for the number of trainees.
- Training equipment was same as used in workplace.
- Overall, I was satisfied with the training equipment for this course.

#### Safety:

- I did not have any experience of danger.

- Safety was always considered during the course.

#### Trainer Dimension

##### Instructional Skill:

- Trainer's effort in material delivering in the workshop was good.
- The trainer had the expertise to effectively teach this course.
- The instructor paced the program to meet my needs and that of the other participants.
- The instructor used the learning resources to support the activities in the program.
- The trainers made the subject as interesting as possible.

##### Technical knowledge:

- Trainer's command of the subject was good.
- Trainers had relevant industry experience.

##### Interpersonal Skill:

- Trainer's success to encourage trainee's participation in discussions and activities was good.
- Social skills of trainer in treating trainees were good.

##### Management Skill:

- Trainer's capability and patience in planning and delivering the material was good.
- Dominance in managing the class was good.
- Punctuality of the trainer based on the schedule was good.
- Homework and assignments have helped me learn.

#### Training Support Environment Dimension

##### Rooms:

- Class air-conditioning, brightness, and sanitation space were good.
- Room environment made me concentrate on the session.

##### Facilities:

- Satisfaction of dormitory equipment was good.
- Overall, I was satisfied with the training center's facilities.

##### Administration and support:

- Hospitality during the course was good.
- Code of conduct of those in charge of training was good.
- The size of the classroom was adequate.
- The standard classroom facilities were adequate (Audio-visual/overhead projectors/etc).
- The atmosphere in the classroom was comfortable (heating/cooling/lighting).
- Staff treated me with respect.
- Staffs were friendly and helpful.

#### Learning Experience Dimension

##### Achievement:

- I developed the skills expected from this course.
- I developed the knowledge expected from this course.

##### Motivation:

- I was motivated to learn all through the course.

##### Overall Satisfaction:

- Overall, I would rate the quality of your educational experience high.
- Overall, I was satisfied with the quality of teaching.

## Appendix 3-10: Form "Course Completion Focus Group Interview Sheet"

Instructions for a Monitor  
 Obtain the documents listed in the Part 1.  
 Prepare basic data of the course  
 Set some specific points to interview by checking basic data and interview to the course trainer.  
 When starting, inform that the purpose of conducting this focus group interview survey is to collect information in order to improve the training course. All information collected will be used only for that purpose and will not be disclosed to any other third parties. The results will in no way have any bearing your training result.

Monitor's Name	
Date & Time	
Name of training course	
Training Center	
Name of Trainers	

### Part 1: Basic Data of the Course

List of Trainees

No. of Applicant	No. of enrolment	No. of Dropout

Training Course Content (UOCs)

Schedule of the Course

Attendance Check List

<b>Attendance Rate</b> <small>(NO. of Attending days /NO. of trainees x training days)</small>	0% (xx days/xx days)  *Excluding IA
Name of trainees who had bad record of attending record	

Assessment Record

UOC Achievement Rate		%
(No. of achievement UOCs x trainees/Total NO. of UOCs x trainees)		
UOC	Practical Assessment	Theoretical Assessment
1: UOC 1		
2: UOC 2		
3: UOC 3		
4: UOC 4		
5: UOC 5		
6: UOC 6		
7: UOC 7		
8: UOC 8		
9: UOC 9		

Training Resources

On-going Monitoring Summary

<p>&lt;Issues&gt;</p>
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## Part 2: Focus Group Interview

- Specific points to interview

Specific point	Comments and Opinions from Trainees
Point-1:	
Point-2:	
Point-3:	
Point-4:	
Point-5:	

### Part 3: Feedback from Trainees

Domain	Comments and Opinions from Trainees
<p>1 Training Course Delivery</p> <ul style="list-style-type: none"><li>1.1 Course Content</li><li>1.2 Trainee's Assessment and Tools</li><li>1.3 Learning Resources</li><li>1.4 Workshop Equipments</li><li>1.5 Safety</li><li>1.6 Clear expectations by trainees</li></ul>	
<p>2 Trainer</p> <ul style="list-style-type: none"><li>2.1 Instructional Skill</li><li>2.2 Technical knowledge</li><li>2.3 Interpersonal Skill</li><li>2.4 Management Skill</li></ul>	
<p>3 Training Environment</p> <ul style="list-style-type: none"><li>3.1 Rooms</li><li>3.2 Training Center Facilities</li><li>3.3 Administration and support</li></ul>	
<p>4 Trainee's Learning Experience</p> <ul style="list-style-type: none"><li>4.1 Attendance</li><li>4.2 Achievement (Progress)</li><li>4.3 Motivation</li></ul>	

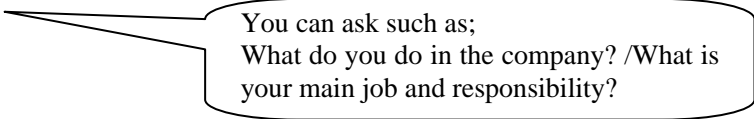
## Part 4: Comments and Recommendations







**Category A: For those who are employed with related job ---- Your current situation**

1 Company	What is your company?
	Name
	Telephone No.
	Address of your working place
	Business Line
	No. of employees
Is it changed after the course participation? <input type="checkbox"/> Yes <input type="checkbox"/> No	
2 Title/Position	What is your title in the company?  Is it changed after the course participation? (if you are in same company) <input type="checkbox"/> Yes <input type="checkbox"/> No
3 Responsibility (content of work)	  Is it changed after the course participation? (if you are in the same company) <input type="checkbox"/> Yes <input type="checkbox"/> No
4 Employment status	What is your employment status? (if you are in the same company.) <input type="checkbox"/> A:Full Time <input type="checkbox"/> B:Part Time <input type="checkbox"/> C:Self-employed  Is it changed after the course participation? <input type="checkbox"/> Yes <input type="checkbox"/> No

# Interview Sheet

## Category A: --- your performance in your current job

1 Overall Satisfaction		Strongly Disagree	Disagree	Agree	Strongly agree	Do not know
	1.1 My skills and knowledge developed in the training were relevant for my current job in overall.	1	2	3	4	0

2 Technical Skill and Knowledge by UOC	State the UOC included in the training course.	Strongly Disagree	Disagree	Agree	Strongly agree	Do not know	
	2.1 Course helped me to perform UOC 1	1	2	3	4	0	
	[Problem/Comment]						
	2.2 Course helped me to perform UOC 2	1	2	3	4	0	
	[Problem/Comment]						
	2.3 Course helped me to perform UOC 3	1	2	3	4	0	
	[Problem/Comment]						
	If response was 1 or 2, ask reason by questions such as ; ➤ Were there any problems in <u>specific elements</u> ? ➤ Were there any problems in <u>trainee's assessment</u> ? ➤ Were there any problems in <u>learning resource</u> ? ➤ Were there any problems in <u>training equipment</u> ? ➤ Were there any problems in <u>trainer's instruction</u> ?						
	2.4 Course helped me to perform UOC 4	1	2	3	4	0	
	[Problem/Comment]						
2.5 Course helped me to perform UOC 5	1	2	3	4	0		
[Problem/Comment]							
2.6 Course helped me to perform UOC 6	1	2	3	4	0		
[Problem/Comment]							
2.7 Course helped me to perform UOC 7	1	2	3	4	0		
[Problem/Comment]							

	2.8 Course helped me to perform UOC 8	1	2	3	4	0
	[Problem/Comment]					
	2.9 What is your weakness in technical skill and knowledge?					
3 Employability Skill		Strongly Disagree	Disagree	Agree	Strongly agree	Do not know
	3.1 Course helped me to communicate ideas and information	1	2	3	4	0
	3.2 Course helped me to work with others and in teams	1	2	3	4	0
	3.3 Course helped me to solve problems	1	2	3	4	0
	3.4 Course helped me to use technology	1	2	3	4	0
	3.5 Course helped me to collect, analyze and organize information	1	2	3	4	0
	3.6 Course helped me to plan and organize activities	1	2	3	4	0
	3.7 Course helped me to learn and update by himself/herself	1	2	3	4	0
4 Overall Comment	Please give your comment for improvement of the training course.					

End of the Category A.



**Category C: For those who are not employed at the moment ---- Your current situation**

1	[ ] No	1.1 Please explain the situation:
		1.2 Does the course help you to do your current activity? [ ]1:Strongly disagree [ ]2:Disagree [ ]3: Agree [ ]4: Strongly agree Please explain your answer:
	[ ] Yes	1.1 How are you looking for a job? 
		1.2 Does the course help you to search for a job? [ ]1:Strongly disagree [ ]2:Disagree [ ]3: Agree [ ]4: Strongly agree Please explain your answer:
2	[ ]1:Strongly disagree [ ]2:Disagree [ ]3: Agree [ ]4: Strongly agree Please explain your answer:	
3	[ ]Yes -> What skills and knowledge you need? ( )	
	[ ]No Are you currently enrolled in further study? [ ]Yes -> What is the program? ( ) [ ]No	

End of the Category C.

## Check list for Conduction of Follow-up Monitoring

1. Preparation
2. Telephone interview to graduate
3. Face to Face Interview to graduate
4. Face to Face Interview to employer

Step	Action
1. Preparation	<input type="checkbox"/> Review UOC and Monitoring reports <input type="checkbox"/> Reconfirm list of target graduate and contact telephone number <input type="checkbox"/> Prepare "Follow Up Interview Survey Sheet" for target graduates <input type="checkbox"/> Simulate interview
2. Telephone interview to graduate	<input type="checkbox"/> Review his assessment record, evaluation, and comment <input type="checkbox"/> Bring Interview Sheet, UOC, etc.
3. Face to Face Interview to graduate	<input type="checkbox"/> Reconfirm date, time and place of visit <input type="checkbox"/> Review his assessment record, evaluation, and comment <input type="checkbox"/> Bring necessary documents
4. Face to Face Interview to employer	<input type="checkbox"/> Reconfirm date, time and place of visit <input type="checkbox"/> Review his assessment record, evaluation, and comment <input type="checkbox"/> Bring necessary documents

## Appendix 3-12: Form "Employer's Follow-up Monitoring Interview Sheet"

\*Collect data by face to face or telephone interview

The purpose of conducting this questionnaire survey is to collect information and data in order to improve the training course. All information collected will be used only for that purpose and will not be disclosed to any other third parties. Your employees and your privacy will be protected. Please provide your feedback on the employees who participated in our training course by answering below questions. Your kind cooperation will be greatly appreciated.

<b>A. Background Information (For all Categories)</b>											
Date of survey											
Name of Interviewer											
Graduate (target) information	Name: Course: Center: Training Period:										
1 Company Information	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 60%; padding: 2px;">Name</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">Telephone No.</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">Address of your working place</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">Business Line</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">No. of employees</td><td style="padding: 2px;"></td></tr> </table>	Name		Telephone No.		Address of your working place		Business Line		No. of employees	
Name											
Telephone No.											
Address of your working place											
Business Line											
No. of employees											
2 Interviewee information	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 40%; padding: 2px;">Name</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">Title</td><td style="padding: 2px;"></td></tr> <tr><td style="padding: 2px;">Responsibility</td><td style="padding: 2px;"></td></tr> </table>	Name		Title		Responsibility					
Name											
Title											
Responsibility											
3 Relationship to graduates	<div style="border: 1px solid black; border-radius: 15px; padding: 10px; display: inline-block;">             Interviewee should be in the position to judge graduate's performance. Maybe direct boss or supervisor is good           </div>										
4 Contact telephone No.	Cell Phone No.: Office Phone No. :										
5 Objective of sending employees to training	(will be asked only for Mega Motor)										

## B. Questions on performance of graduate

**For Category A** (This part should be asked only for Category A)

		Strongly Disagree	Disagree	Agree	Strongly agree	No Idea
		State the UOC included in the training course.				
	He/She can perform in UOC 1	1	2	3	4	0
	[ Problem/Comment]					
	He/She can perform				4	0
	[Problem/Comment]					
	He/She can perform UOC 3	1	2	3	4	0
	[Problem/Comment]					
	He/She can perform UOC 4	1	2	3	4	0
	[Problem/Comment]					
6 Technical Skill	He/She can perform UOC 5	1	2	3	4	0
	[Problem/Comment]					
	He/She can perform UOC 6	1	2	3	4	0
	[Problem/Comment]					
	He/She can perform UOC 7	1	2	3	4	0
	[Problem/Comment]					
	He/She can perform UOC 8	1	2	3	4	0
	[Problem/Comment]					
	4.1 What is his/her weakness in technical skill and knowledge?					



<b>(For Category A)</b>							
5 Employability Skill		Strongly Disagree	Disagree	Agree	Strongly agree	No Idea	
	5.1	He/She can communicate ideas and information	1	2	3	4	0
	5.2	He/She can work with others and in teams	1	2	3	4	0
	5.3	He/She can solve problems	1	2	3	4	0
	5.4	He/She can use technology	1	2	3	4	0
	5.5	He/ She can collect, analyze and organize information	1	2	3	4	0
	5.6	He/ She can plan and organize activities	1	2	3	4	0
	5.7	He/ She can learn and update by himself/herself	1	2	3	4	0
6 Overall satisfaction	If I need to recruit more technical staff, I want to employ graduates from the training course.		1	2	3	4	0
	I am satisfied with his/her performance of current job in overall.		1	2	3	4	0
	[Comment/What are the problems?]						

<b>C. Over all Comment</b>	
<b>(For Category A)</b>	
Please give you any comments on his/her performance in the workplace and expectation from the training course.	



