出國報告(出國類別：國際會議)

參加東北亞區域技能競賽
日本邀請賽出國報告書

服務機關：勞動部
姓名職稱：勞動力發展署科長洪圭輝
勞動力發展署技能檢定中心簡任技正陳明山
出國地區：日本橫濱市
出國期間：106 年 6 月 21 日至 106 年 6 月 26 日
報告日期：106 年 9 月 18 日

出國報告名稱：參加東北亞區域技能競賽日本邀請賽出國報告書

頁數：47 含附件：■是 □否

出國計畫主辦機關：勞動力發展署技能檢定中心

聯絡人：陳明山

出國人員：勞動力發展署科長 洪圭輝

勞動力發展署技能檢定中心簡任技正 陳明山

出國類別：5.其他

出國期間：106 年 6 月 21 日至 6 月 26 日

出國地區：日本橫濱市

報告日期：106 年 9 月 18 日

關鍵辭：技能競賽

內容摘要：

本次東北亞區域技能競賽日本邀請賽係由日本正代表 Mr. Hiroshi Akimoto 以主辦國代表人身分，邀請我國、韓國等赴日參加機電整合等職類邀請賽。為推動東北亞區域技能競賽，過去我國、日本及韓國採階段性、循序辦理，由官方代表交流、裁判長交流、選手交流，至今（106）年起開辦邀請賽，逐步縮減各國在競賽規則及機具設備的差異，進而擴大成為東北亞區域技能競賽，又今年為國際賽年，本次邀請賽亦可作為國際賽前熱身賽。

本次日本辦理邀請賽包括機電整合及電訊布建等 2 個職類，由於我國全國賽目前尚未辦理電訊布建職類，尚無是職類國手，爰本次僅參加機電整合職類競賽，比賽地點在 FESTO 日本橫濱分公司。我國由陳振臺裁判長及蔡裕祥老師及機電整合職類 2 位國手參賽，藉以互相觀摩及學習，並交流評分標準，有助提升未來在國際賽的表現。

邀請賽期間，利用賽事空檔時段，參訪日本職業技能發展協會，拜會該會總裁田邊俊秀；參訪 POLYTECHNIC UNIVERSITY，瞭解日本政府在培育技職人才、提升技職人力資源的作法；另參訪 NISSAN 公司，瞭解該公司對於國手的培訓方式。另本次邀請賽，日本政府會同 FESTO 日本分公司共同辦理，FESTO 一直是世界機電整合領域的領導廠商，也是國際賽機電整合職類重要的贊助廠商，國際賽命題亦委由 FESTO 命題。此次日本政府結合民間企業，共同辦理由邀請賽，其作法或可作為我國未來在辦理類此邀請賽的參考。

目錄

壹、目的

本次東北亞區域技能競賽日本邀請賽係由日本正代表 Mr. Hiroshi Akimoto 以主辦國代表人身分，邀請我國、韓國等赴日參加機電整合等職類邀請賽(邀請函如附錄 1)，謹就此次赴日主要目的，分述如下：

一、參加該國機電整合職類邀請賽：配合今年 10 月國際技能競賽，指派我國裁判長及選手參加本次邀請賽，與日本、韓國、新加坡等國家代表隊進行國際賽前的暖身賽，此外，我國裁判長利用此一機會，與日韓國際裁判長交流國際賽評分重點，有利指導國手後續的準備，俾為 10 月國際技能競賽預作準備。

二、參訪日本職業技能發展協會(JAVADA)：日本技能競賽係由日本厚生勞動省指定 JAVADA 辦理，日本正代表 Mr. Hiroshi Akimoto 亦在該協會擔任要職。此外，該協會理事長田邊俊秀(Mr. Toshihide TANABE)自從兩年前上任後，對我國極為友善，利用本次參訪機會，除參訪 JAVADA 外，同時拜會 JAVADA 理事長。

三、參訪 POLYTECHNIC UNIVERSITY：該校成立於 1961 年，主要業務為產業訓練師的培訓、研究職業技能發展等，是日本製造業提供人力資源重要來源，亦是日本職業培訓的核心機構。本次參訪藉以瞭解日本政府在培育技職人才、提升技職人力資源的作法。

四、參訪 NISSAN 公司選手培訓：NISSAN 公司自 1977 年起就派員參加國際技能競賽，截至目前，計獲得 18 金 10 銀 7 銅，總計有 35 面獎牌。今年 NISSAN 公司在汽車噴漆及汽車技術等 2 個職類將代表日本參加今年國際賽。本次特別安排參訪該公司，同時知悉該公司對於國手的培訓方式。

五、觀摩日本政府偕同 FESTO 日本分公司辦理本次邀請賽作法：FESTO 係目簽機電整合領域的領導廠商、國際賽機電整合職類重要的贊助廠商，加上國際賽命題亦委由 FESTO 命題。此次邀請賽，日本政府特別邀請 FESTO 日本分公司協助，參採國際技能競賽的機具及命題，其作法或可為我國未來在辦理類此邀請賽的參考。

貳、過程

一、時間：106年6月21日至26日

二、行程

日期	行程內容
6月21日(三)	臺北松山機場/日本東京羽田機場 日本橫濱市(邀請賽歡迎會議) /接待晚宴
6月22日(四)	日本東京都/參訪 JAVADA 日本神奈川縣/參訪 NISSAN ZAMA FACTORY (邀請賽第1天)
6月23日(五)	日本橫濱市/參訪 FESTO K.K 日本神奈川縣/參訪 POLYTECHNIC UNIVERSITY(拜訪日本技術代表) (邀請賽第2天)
6月24日(六)	日本橫濱市/競賽檢討會議 (邀請賽第3天)
6月25日(日)	日本橫濱市(邀請賽座談會議) 日本文化參訪/橫濱市
6月26日(一)	日本橫濱市/日本東京羽田機場/臺北松山機場

三、參訪單位

(一)日本職業技能發展協會 (Japan Vocational Ability Development Association,簡稱 JAVADA)

1、JAVADA設立宗旨及運作

JAVADA 成立於 1979 年，是日本政府依據職業能力開發促進法（昭和 44 年法律第 64 號）所規劃成立，成立宗旨為：推動職業技能檢定，提升國民的職業能力水準。其同時兼具政府與產業雙方溝通、協調及合作等多重角

色。與政府合作層面：經日本中央政府核准設立後，負責辦理技能檢定考題命製、規劃執行技能檢定各項考試、國家技能競賽、全國技能競賽、成人組技能競賽、開發人力資源與各項工具及服務等相關工作；與產業合作層面：透過收集產業新知及專業技術、人力派遣需求等，提供職業能力提升與部門、設施發展等各項評估方案，協助解決產業問題，提升效能，是日本職業能力評估的專業機構。

JAVADA 專責任務為：職業能力的檢測、強化技能訓練基礎、協助職涯規劃及發展、加強產業技能競技、促進國際合作交流等五大領域：

(1)職業能力的檢測：包含職業技能測試與認證、企業技能測試、電腦服務技能評估測試、及 CAD 繪圖專家技能考試等。

(2)強化技能訓練基礎：提供職業發展支持工具、邀請具有豐富經驗的講師講授職業生涯、提供雇主及員工專家諮詢與職業能力發展資訊、準備與宣導職業能力評量標準、提供訓練及教育津貼系統（Trainging and Education Benefits System）之課程設計及資訊等。

(3)協助職涯規劃及發展：提供造物大師工匠計畫，即派遣專家提供諮詢服務、依其技能需求安排實務技能講授課程，經由專家技能檢測及鑑定，核發技能合格證照。

(4)加強產業技能競技：辦理青年技能大賽、全國技能競賽、成人組競能競賽等。

(5)促進國際合作交流：執行「技能評量系統之轉移與推廣計畫（Skill Evaluation System Transferand Promotion Program」，向亞洲國家推廣日本的技能評量系統，至 2015 年為止，已有超過 2000 位專家，11 個亞洲國家完成是項訓練課程。

JAVADA 發展了各種行業的職業能力標準、舉辦研討會及講座、建立和推廣職業能力評估方案、提供資訊及諮詢支持等，來促進技能和支持企業的人力資源開發，透過技能和發展傳承，協助日本職業發展與推廣；同時也舉辦各年齡層的技能競賽，包含 20 歲以下的青年技能競賽、全國技能競賽、成人組技能競賽等。

JAVADA 所需之營運經費來自日本厚生勞動省約佔半數，其餘則來自會員

繳交會費及該協會經營事業之收益所得。其在縣市皆設立分會組織，採會員制度，會員以各地分會、全國性團體及在地企業為主；透過邀請當地企業入會及參與會務，使其能瞭解及掌握各種行業所需職業能力，並能適時調整及優化技能標準，有效與業界技術能力對接，故辦理地區性技能競賽及相關活動，皆獲企業支持及有良好之互動。

2、本次參訪 JAVADA 成果：

(1)我國 7 月份邀請賽說明：因我國 7 月辦理東北亞區域邀請賽有邀請日本參賽，利用本次參訪 JAVADA 機會，針對我國邀請賽細節，與日方進行意見交流，讓日方更瞭解我國邀請賽的規劃。

(2)JAVADA 技能檢定辦理情形：JAVADA 除辦理技能競賽外，亦為日本技能檢定執行單位，參訪期間針對技能檢定辦理實務，與 JAVADA 進行交流。另 JAVADA 辦理技能檢定，同時亦販售技能檢定教材，本次 JAVADA 亦提供販售教材供我國參考。

(3)拜會 JAVADA 總裁田邊俊秀：本次特別安排拜會 JAVADA 總裁田邊俊秀，田氏對台灣風土人情極表興趣，我國代表也順道邀請田氏到台灣參訪，藉以強化兩國在技能競賽及技能檢定的交流。

(二) FESTO 日本分公司

1、FESTO 日本分公司概述

FESTO 日本分公司（Festo K.K），成立於 1977 年，為世界頂級製造商德國 FESTO AG & Co. KG 的日本子公司。FESTO 總部位於德國的埃斯林根(Eslingen)，是自動化科技的全球領導供應商。FESTO 最基本的產品範圍包括氣壓驅動器、電動驅動器、閥、閥島、安裝簡易的連結系統、移載組裝技術、空氣調理單元、接頭、真空技術、位置與品質監測、感測器與控制技術、及多樣化的教育訓練產品。FESTO 也提供廣泛的自動化產品與技術，所開發的氣壓零組件及電控產品多達 30,000 種，客製化、模組化產品也超過 20,000 項，在氣電整合、移載與組裝、齒輪皮帶驅動技術、定位系統，更擁有多項的自動化解決方

案經驗，能讓客戶運用在各種類型的特殊模組需求。因此，FESTO 在氣壓領域、獨特的企業化訓練以及教育課程等，於同業中保持指標性地位。

FESTO 不僅關注生產，更為未來生產世界的工作任務提供人員培訓。該公司在企業、職業院校與高等院校中設計並實施了培訓解決方案，以使人員能系統性地在動態複雜環境中的工作做好準備。而 FESTO Didactic 為 FESTO 集團的一個重要訓練機構，它通過 DIN ISO 29990：2010 認證(這是教育機構的質量管理標準，著重於學習成果、教學服務和培訓服務提供商的能力)，從經歷 50 多年的不斷探索和發展過程中，積極尋求工業應用與工業培訓、諮詢的完美結合，持續向企業、院校及培訓機構提供貼近工業現場的教學和培訓服務，其培訓的特點和優勢為：

(1)培訓聚焦於工業自動化相關技術，而非產品本身。

(2)採用真正的工業元器件，專業理論知識與實操練習的完美結合。

(3)遍布全球的分支機構、超過 40 種語言，在世界各地提供高品質的培訓服務。

FESTO Didactic 涵蓋的要點是：培訓內容和學習過程、培訓服務、資源支持傳播知識、課程設計、客戶的信息和方向、目標和評估方法、培訓師和績效管理的能力等。而所有的培訓師必須按照 FESTO 認證培訓專業人員的內部印章進行認證，以確保在培訓過程及成果的質與量。

2、FESTO 與國際技能競賽關係密切

FESTO 係機電整合領域的領導廠商，國際賽機電整合職類重要的贊助廠商，目前國際賽國際裁判長 Mr Michael Linn、國際副裁判長 Mr Hermann Studnitzka 均為 FESTO 員工，且國際賽命題亦委由 FESTO 命題，FESTO 與國際技能競賽關係極為密切。此次邀請賽由 FESTO 日本分公司協助，期間該公司特別表示 FESTO 總公司高層官員刻正規劃於 8 月來到亞洲，表達如有機會，希拜會我國勞動部及勞動力發展署。

(三) NISSAN ZAMA FACTORY

NISSAN 公司成立於 1933 年，為日本第 2 大汽車製造商，年產量僅次於豐

田（TOYOTA）汽車，是世界第 6 大汽車製造商，同時也是世界著名的汽車發動機製造商之一。其產品大量主流為轎車及卡車，最初主要服務國內市場，從 1950 年後開始向全世界出口。

NISSAN 公司為確保 NISSAN 集團的技術品質，並能與世界頂尖廠商進行技能水準交流，有效提升 NISSAN 產品質量的品牌形象與技術可靠性，同時兼顧職員技能養成培育與職涯發展，故自 1977 年起就派員參加國際技能競賽。NISSAN 公司傳承「日本製造」的精神，特別選任 22 歲以下員工參加技能競賽，並在企業經營理念及產業發展連結的思維下，選派技優員工參與國際技能競賽，參加職類包括汽車技術、汽車修理、機電整合、電子、銑床、CAD 等 6 項。截至目前為止，在參與日本全國技能競賽，獲得 89 金 101 銀 136 銅，總計有 326 面獎牌；在參與國際技能競賽，獲得 18 金 10 銀 7 銅，總計有 35 面獎牌。

NISSAN 公司訓練技能競賽選手兼顧「心、技、體」等 3 面向予以強化。在心靈方面：安排練習打禪及相關靜心課程等；在技能方面：安排具參加國際技能競賽經驗的得獎選手，同時也是 NISSAN 公司的跨國訓練師，擔任其專屬之訓練導師，以提供提升技能之相關專業訓練，並安排對手測試練習團隊增加比賽經驗等；在體能方面：安排攀登富士山、馬拉松 70 公里等。

NISSAN 公司對參加國際技能競賽選手的職涯發展也相當重視。包含在訓練期間運用企業內部大量資源投入強化技能訓練、訓練期間薪資照給、參賽後得升任成為該公司/協力廠商的技能訓練師或技術幹部、派駐全世界分公司等各項優渥條件，吸引留住技優人才。

今年 NISSAN 公司在汽車噴漆及汽車技術等 2 個職類將代表日本參加今年國際賽，同時將分別在 8 月中旬及下旬參加我國邀請賽，過去汽車噴漆及汽車技術等 2 職類，我國及日本在國際賽均有不錯表現（巴西國際賽為例，日本在汽車噴漆獲得金牌、我國優勝；我國在汽車技術獲得銅牌、日本優勝），透過邀請賽，讓兩國國手相互觀摩及學習，期在今年在阿布達比舉辦的國際技能競賽有更好的表現。

(四) POLYTECHNIC UNIVERSITY（PTU）

POLYTECHNIC UNIVERSITY 成立於 1961 年，主要業務為產業訓練師的培訓、研究職業技能發展等，是日本製造業提供人力資源重要來源，也是日本職業培訓的核心機構。PTU 除了培訓職業訓練師外，亦提供現有職業訓練師的進階訓練、研究與調查、學碩士課程等。

表一　日本 POLYTECHNIC UNIVERSITY 現況

項目	說明
培訓職業訓練師	職業訓練師訓練提供創新實務課程
現有職業訓練師的進階訓練	提升現有職業訓練師在技術及工程能力
研究與調查	針對職業教育訓練的趨勢、方法之研究，並將研究成果提供現有職業訓練課程上
學碩士課程	提供製造科學及技術領域的學碩士課程

PTU 在 2012 年 4 月規劃一個整合理論與實務的綜合訓練課程，凡完成 4 年的培訓者，將獲得生產技術的學士學位。在 2016 年 3 月，首批完成學位的學生到世界各產業界服務，有 60% 的畢業生受僱於私營公司，40% 為職業培訓師候選人，就業率達到 100%。緊接著在 2016 年 4 月成立職業發展和研究部，凡參與及完成 2 年實務訓練課程者，能夠獲得碩士學位。

本次參訪由日本國際技能競賽技術代表 Mr. Akira Kakimoto 安排及導覽，期間我國代表也針對該校的學生來源背景等與 Mr. Kakimoto 交換意見。期間特別介紹國際技能競賽電訊布建日本裁判 Dr Takuo Kikuchi，Dr Takuo Kikuchi 曾擔任國際賽裁判長多年、本屆國際賽擔任技能競賽經理， Dr Kikuchi 亦表示未來如我國有興趣參加國際賽電訊布建職類，他樂意提供相關經驗交流。

四、本次計有韓國、日本、新加坡及我國參與本次東北亞區域技能競賽日本邀請賽，經過 3 天競賽，新加坡成績最高、其次為我國、韓國、日本。查過往國

際賽機電整合職類，我國、韓國及日本成績在伯仲之間，上屆巴西國際賽，韓國獲得金牌、我國銀牌、日本優勝，實力均在伯仲之間。由於本次邀請賽僅為國際賽前熱身，參賽國家實力多有保留，重點在觀察彼此實力表現，惟我國在本次邀請賽，或有疏忽情事發生，殊為可惜。後續在國際賽宜應減少類此發生，避免影響整體表現。

五、本次邀請賽期間，日本厚生勞動省官員 Mr. Ken Kamae 前往競賽場觀賽，我國代表亦利用時間，與 Mr. Kamae 就技能競賽交換意見。Mr. Kamae 表示日本政府鼓勵透過技能競賽，可使年輕人擁有目標，協助產業界培養高技能的人力資源，亦是向民眾宣導技能的最好機會。我國代表亦簡介我國辦理的技能競賽，Mr. Kamae 表示未來有機會，亦能到我國觀摩技能競賽。

參、心得

一、日本辦理遴選國際技能競賽國手之流程與我國相似，國手必須參加全國技能競賽後，優勝選手代表日本參加國際技能競賽。查過去我國遴選國手的方式與日本方式相同，惟部分國手選出後，偶有國手意願或態度不適合參加國際賽情事，爰改成目前兩階段國手選拔賽遴選方式，從過去兩屆我國國際賽成績看來，現行兩階段遴選方式似乎較符我國國情。

二、日本參與國際技能競賽國手於選拔後，其培訓相關資源(如訓練師、機器設備、器具、資金等)，全由國手服務單位負責；又國手均為該企業在職勞工，故其訓練期間之薪資及相關職工福利，均比照企業制度辦理。此有別我國國手多為學生身分，尚無經濟能力，需政府提供相關協助。

三、日本 JAVADA 對於選派參加國際技能競賽國手之企業，依申請需求衡酌給予費用補助，金額約 100 萬日圓不等；此外，對於參加國際技能競賽選手，也會給予工具運送費用補助，減輕其經濟負擔。由於日本企業將負起後續國手培訓經費的責任，日本政府給予適度補助，此不同於我國，由裁判長擬訂培

訓計畫，政府支應大部分培訓費用。

四、日本 JAVADA 高層人員與厚生勞動省的官方人員，現行採輪調制度，約 2 年輪調 1 次，透過輪調制度，政府官方人員能夠瞭解技能檢定及技能競賽之實務運作及操作要領，俾能回饋並運用在政策規劃；而 JAVADA 高層人員則能透過政策參與，將業界運作實務與施政方針適時連結，使政策能夠被業界認同，有效推動。

五、日本 NISSAN 汽車公司等大型企業，長期贊助日本技能競賽，且企業內部也會設有專修學校，除培養企業所需基礎技術人才外，並透過技能訓練及競賽活動，長期系統化推動教育訓練，為該國在技能競賽爭取成績，並培育進階高級技師，藉由競賽活動使員工對公司保有高度向心力，加上終身僱用以及派駐國外分公司等升遷制度，使員工願意積極投入技能競賽，企業也透過贊助技能競賽爭取榮譽，勞資雙方互為良性循環。

六、為推動東北亞區域技能邀請競賽，我國與日本、韓國自 103 年起共同策劃，採階段性推動步驟：103 年進行官方代表交流、104 年則進行裁判長交流、105 年試辦選手交流，106 年起正式開辦邀請賽，逐步縮減各國在競賽規則及機具設備的差異，同時每年增加邀請賽職類，逐步擴大為東北亞區域技能競賽。

七、本屆東北亞技能競賽日本邀請賽之交流職類為機電整合，故比賽地點選在 FESTO 日本橫濱分公司辦理，我國由陳振臺裁判長及蔡裕祥老師與機電整合職類 2 位國手參賽。日本於邀請賽場地採開放式設計，方便民眾參觀，參觀民眾大部穿著西服或正式工作服，觀察各國競賽選手操作方法，另競賽場地，窗明几淨，讓參訪民眾舒適觀賞競賽，營造技職尊榮的體驗。

八、日本對於參加國際技能競賽獲獎之選手，並無發給任何獎金，僅有日本官方代表接見予以鼓勵，以及企業雇主於公司內部給予選手微薄獎勵，有別於韓國及我國獎金制度。另韓國對於參加國際技能競賽之選手，除頒發獎金外，對於金牌選手亦有免除服兵役之鼓勵，對此，我國刻正規劃技職國手 12 天補

充兵役之相關政策。

肆、 建議

一、本次日本邀請賽辦理機電整合職類，並依國際賽規格建置場地，特別是比照國際賽的作法，委請 FESTO 命題，使本次邀請賽更臻於國際規格的比賽，此亦可看出主辦國的用心。過去我國邀請賽，雖在場地設置國際化，惟競賽核心命題，仍由國內裁判長自行命題，或許未來我國亦可借鏡日本的作法，讓邀請賽命題能比照國際賽作法。

二、FESTO 是國際賽機電整合職類重要的贊助廠商，國際賽國際裁判長、國際副裁判長均是 FESTO 員工，且國際賽命題亦由 FESTO 命題。本次邀請賽機電整合職類在 FESTO 日本分公司辦理，更具進一步意義。過去我國邀請賽，多在分署辦理，固然在場地準備及人力動員具便利性，惟也侷限企業參與競賽範疇，未來我國邀請賽或可比照日本的作法，擇定在相關企業辦理，一方面讓企業能參與技能競賽工作，可強化企業持續參與或贊助意願，另一方面有助協助廣宣優良企業，使技能競賽達到雙贏的結果。

三、本次邀請賽定位在國際賽前的熱身，查日本、韓國及我國在國際賽成績均在水準之上且實力在伯仲之間，因此選手可藉由邀請賽互相觀摩及學習，此外裁判長可藉由邀請賽，相互認識並交流評分標準，有助未來在國際賽互相協助、合縱聯盟，類此邀請賽值得鼓勵。建議未來我國辦理邀請賽的職類數目能逐年增加，甚至可邀請相關國際裁判長或副裁判長一起參與，形成良性互動及循環，以利提升我國在國際賽的表現。

四、本次邀請賽期間， JAVADA 副局長 Mr. Tokiwa 提及本屆國際賽日本參賽 40 個職類，未來將徵詢各界看法，增加新的參賽職類。查國際賽每屆均增加 2~3 個新的職類，本次阿布達比國際賽亦增加 3D 數位動畫及船務物流等 2 個職類，未來我國在產業需求及選手來源無虞等條件下，似可考慮適度增加國際賽參賽職類，除讓我國相關職類青年有機會在國際舞台跟其他國家切磋技能外，

藉由國際賽的參與，帶動國內相關職類技能水準，強化技職人才培育，挹注產業需求。

五、目前東北亞區域技能競賽邀請賽，我國、日本及韓國業建立常態交流機制，採落地招待的原則。特別是日本，文化背景、勞動制度、技能水準等與我國相近，此次邀請賽有機會與日本厚生勞動省官員交流意見，均認為兩國可再進一步合作交流。未來似可在目前常態交流機制下，強化兩國高層官員的互訪，將交流層面逐步擴增散他領域。

附錄 1：日本職業技能發展協會邀請函

JAVADA

worldskills Japan

Invitation Letter

- for 2017 Northern East Asia Special Skills in Japan -

19 May 2017

Dear Mrs. Chiu-Kuei Huang,

We would like to express our sincere appreciation for your continuous support that you have kindly extended for the development of multilateral relationship among North East Asian WSI members.

On behalf of WorldSkills Japan, I take immense pleasure in inviting Taiwanese Team to our 2017 Northern East Asia Special Skills held in Yokohama from 21st June until 25th June 2017.

We are pleased to invite two Competitors, one Expert and one Interpreter in the skill of Mechatronics, and maximum two Delegates from Taiwan and Korea. The tentative schedules during the visit are as shown in the other attached document.

According to the agreement, we would bear expenses associated with the visit of two Competitors, one Expert, one Interpreter and two Delegates including accommodation, daily meals and domestic transportation (exclusive of airfare and insurance). Because of accessibility to the hotel on the first day, it would be appreciated if you could arrange the flight to arrive at Haneda International Airport located in Tokyo in the morning.

Please kindly provide us the names and other information of your Competitors, Experts, Interpreter and Delegates no later than Monday 29 May 2017 with the attached registration form. Should you have any question regarding the visit, please do not hesitate to contact us.

In addition, we welcome participation from Singapore on this occasion.

We look forward to meeting Team Taiwan in Yokohama.

Yours Sincerely,

秋本洋

Hiroshi Akimoto
Official Delegate of WorldSkills Japan

Attach: 2

附錄 2：參訪行程安排

Northern East Asia Special Skills in Yokohama, Japan
Itinerary for Delegates

For

Ms. SUN JIEUN from Korea,

Mr. CHEN MING-SHAN & Mr. HUNG KUEI-HUI from Chinese Taipei,

and Mr. LEE KIM CHENG from Singapore

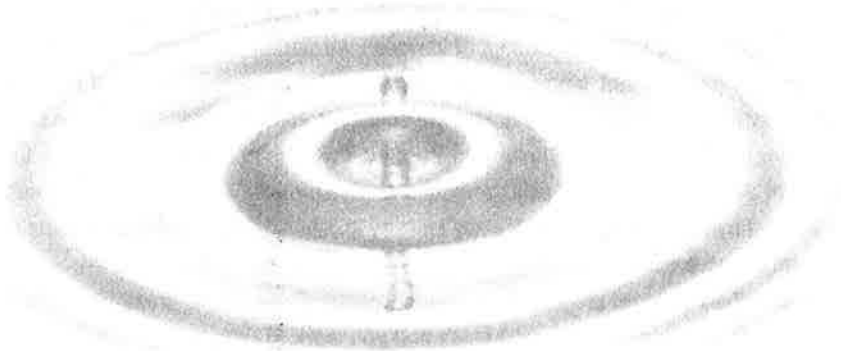
Date	Time	Event	Remarks
June 20 Tue		Singapore Team: Arrival at Haneda International Airport	
June 21 Wed.		Korean and Taiwan Team: Arrival at Haneda International Airport (Welcomed by our travel agency staff)	
		Transfer to Hotel	By Airport Limousine Bus
	15:30	Arrival at the competition venue at FESTO (Mr. Tokiwa from JAVADA welcomes delegates.)	
		Briefing etc.	
	17:00	Opening Ceremony	
	17:30	Transfer to the Hotel	By Bus
	18:30	Welcome Reception hosted by JAVADA Vice President Yamada	
June 22 Thu.		Breakfast at the hotel	
	8:30	Transfer to JAVADA, Tokyo	By Mini Bus
	10:00	Meeting at JAVADA with President Tanabe, Kamaishi, Tokiwa, and Sato	
	11:30	Transfer to Lunch Restaurant (Attendant: Sato)	By Mini Bus
	12:30	Lunch	
	13:30	Transfer to Nissan Factory	By Mini Bus
	15:00	Visit Nissan Zama Factory	
	17:00	Transfer to Hotel	By Mini Bus
	18:30	Arrival at Hotel	
	19:00	Dinner at Hotel	
June 23 Fri.		Breakfast at the hotel	
		Transfer to competition venue at FESTO	By Bus
	8:10	Observe the competition and FESTO company tour (attendant: Mr. Tokiwa)	
	12:10	Lunch box	
	13:10	Transfer to Polytechnic University	By Mini Bus

Guide to JAVADA

JAVADA

JAPAN VOCATIONAL ABILITY DEVELOPMENT ASSOCIATION

To make the best use of each individual's abilities



Japan Vocational Ability Development Association

JAVADA
JAPAN VOCATIONAL ABILITY DEVELOPMENT ASSOCIATION

For all working people.

Greetings

JAVADA contributes to sustainable social progress through vocational ability development.

Today, as structural changes in economies, especially global economic competition, become more intense, the environment surrounding companies is evolving significantly, including the issue of a shrinking society and the problems of how to maintain skills and secure human resources as the baby boomer generation goes into retirement. In the midst of such circumstances, in order to have rich and stable vocational lives, there is a need that each person develop and improve his or her own skills and for creation of an environment where companies and society are in a position to support career development.

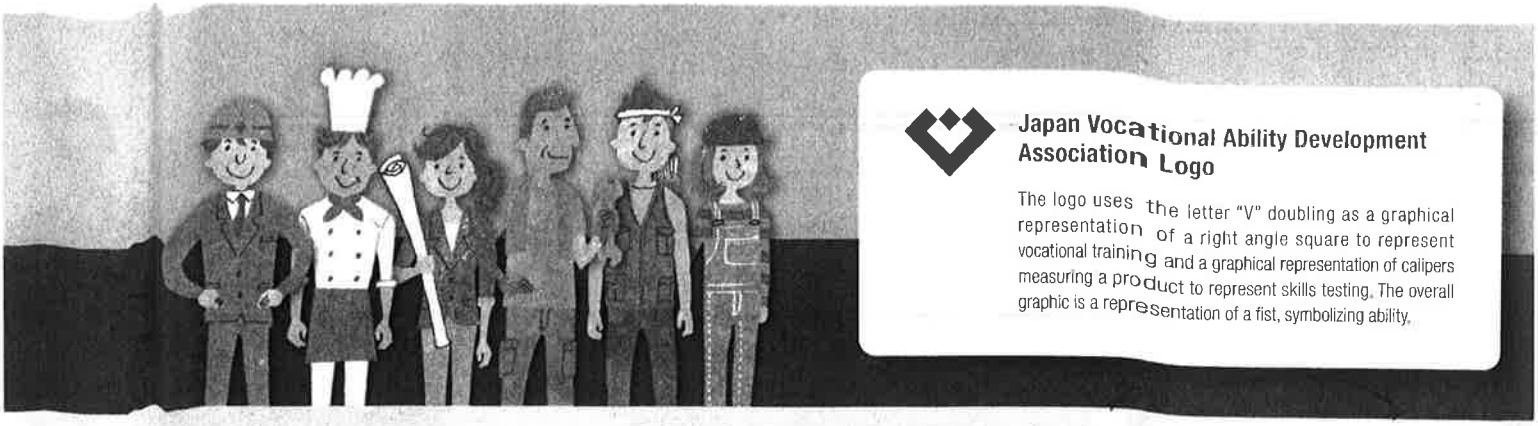
If Japan is to enjoy sustainable progress and become a vibrant society, it is also important that workers from all generations fully exert their individual skills. Encouraging women to return to work or find new employment when their children require less attention and promoting hiring of young people and employment of senior citizens after reaching retirement age is taking on importance when it comes to individual-oriented career development.

We at the Japan Vocational Ability Development Association (JAVADA) have been engaged in efforts to firmly respond to changing times and the needs of society ever since our establishment in 1979 based on the Human Resources Development Promotion Act.

As a specialist institution for evaluation of vocational ability, we use various projects related to vocational ability evaluation to ensure suitable evaluation and work to provide career development support for working people through the provision of various information, consultation support, etc. related to vocational ability development. Moreover, because Monozukuri and development of the human resources to support it form the foundations of industry, we engage in various projects related to skill promotion to foster respect for Monozukuri. Starting in 2013, we will be carrying out a Young Skilled Worker Development Support Project as a skill promotion-related project. We will endeavor to contribute to the development of manufacturing, which is a key industry in Japan, through effective passing on of skills and development of successors.

We will contribute to social progress by supporting career development, promoting skills and supporting human resource development at companies and will work to improve our services to tie that in to enriching the vocational lives of working people. Thank you for your continued guidance and cooperation.

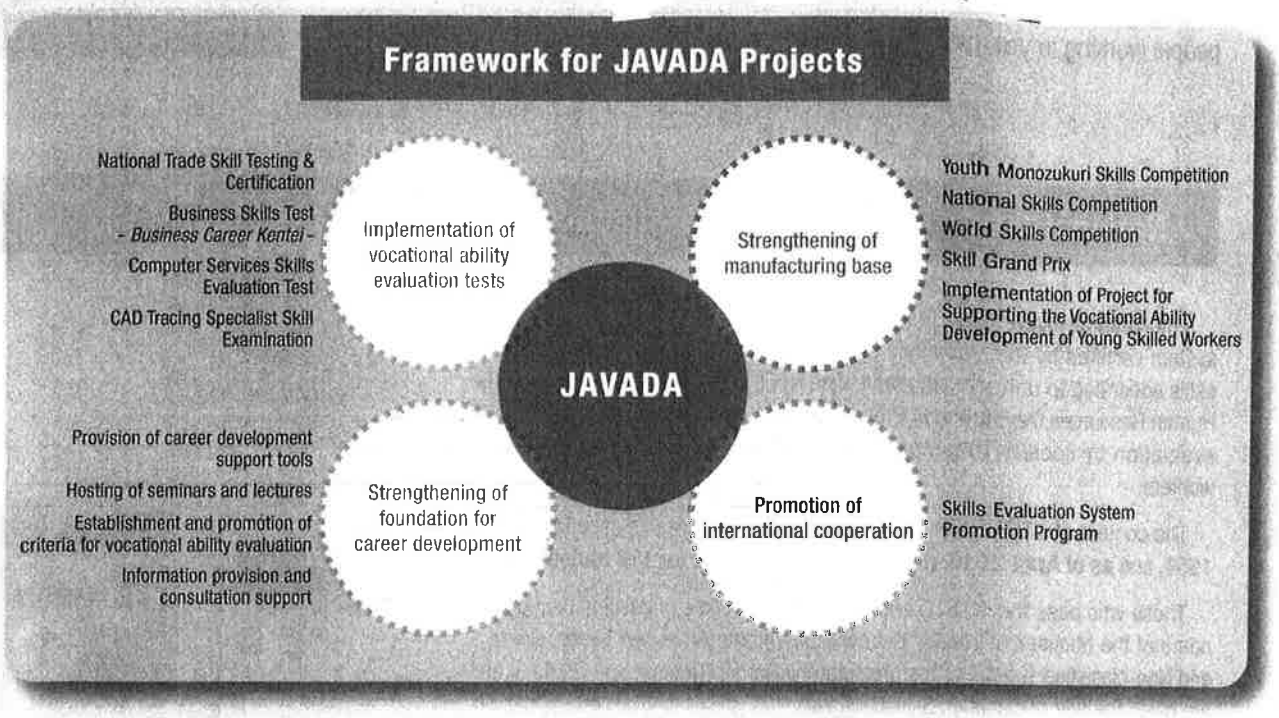
Kazuaki Kama
Chairman of the Japan Vocational Ability Development Association



Japan Vocational Ability Development Association Logo

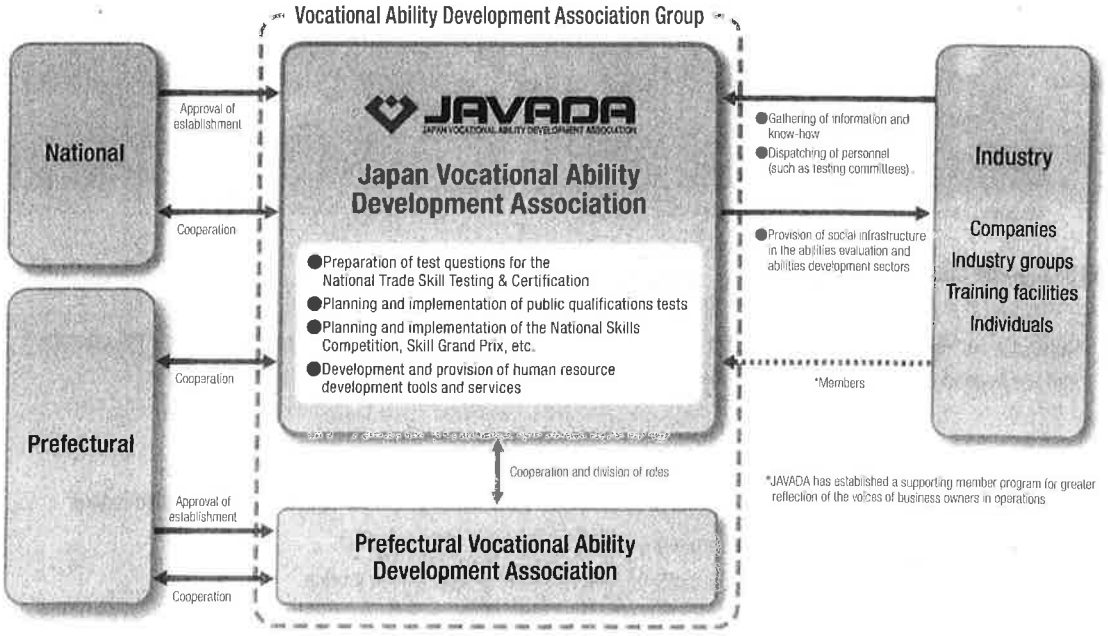
The logo uses the letter "V" doubling as a graphical representation of a right angle square to represent vocational training and a graphical representation of calipers measuring a product to represent skills testing. The overall graphic is a representation of a fist, symbolizing ability.

Framework for JAVADA Projects



Close Cooperation with Industry, and with the National and Prefectural Governments

The Japan Vocational Ability Development Association has created a fair and impartial abilities evaluation system, in close cooperation with industry and with the national and prefectural governments and, as a comprehensive public institution for vocational abilities development, joins the Prefectural Vocational Ability Development Association to provide a nationwide service.



Implementation of vocational ability evaluation tests

A proper evaluation of an individual's vocational abilities allows them to market their abilities and also provides a rough guide to set goals for future career development. For companies, it serves as a guideline for proper personnel evaluation criteria and appropriate human resource allocation.

JAVADA carries out the vocational ability evaluation tests below so that people working in various fields can obtain proper evaluations.

National Trade Skill Testing & Certification

Badge for Advanced Certified Skilled Worker

The National Trade Skill Test & Certification (NTSTC) is a national testing system certified by the Japanese government. It tests worker knowledge and skills according to uniform standards. The NTCSTC is carried out based on the Human Resources Development Promotion Act for the purpose of enhancing skill evaluation by society in general and improving the abilities and status of workers.

The content of NTSTC has been steadily expanded since its establishment in 1959, and **as of April 2016, it has been implemented for 112 trades*.**

Those who pass the NTSTC are awarded a certificate of passing bearing the name of the Minister of Health, Labour and Welfare (Advanced Grade, Grade 1 and Non-classified Grade) or the prefectural governor (Grade 2 and Grade 3) and are given the title of Certified Skilled Worker.

As of FY2014, more than **3.90 million people* have successfully passed** NTSTC, an achievement that has been highly lauded in the workplace as a sure certification of skill.

*Implemented by the Japan Vocational Ability Development Association and Prefectural Vocational Ability Development Association

Advanced Grade

Grade 1 and 2

Machining trade

Architectural sheet metal trade

Landscaping Service trade

Steeplejack trade

▼NTSTC grade classes

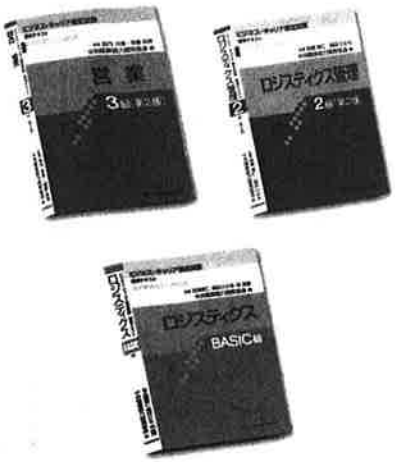
Currently, some skills tests are classified into Advanced, Grade 1, Grade 2 or Grade 3, while others are not classified and are instead categorized as non-classified grades. These test levels are described as follows:

Advanced.....Level of skill that should normally be held by a manager or supervisor
Grade 1 and Non-Classified Grade.....Level of skill that should normally be held by a senior-level skilled worker
Grade 2.....Level of skill that should normally be held by mid-level skilled worker
Grade 3.....Level of skill that should normally be held by starting-level skilled worker

Business Skills Test - Business Career Kentei - (Public Qualifications Test)

The business and career official certification examination is a test based on the vocational ability evaluation criteria defined by the Health, Labour and Welfare Ministry available for participants to take in line with their fields of work out of eight categories including personnel administration, HR development, and labor administration, sales and marketing, and production control and logistics, etc.

Since its start in 1994, this program has served over 450,000 examination participants and continues to be used by many companies in diverse business fields as a precondition for personnel advancement and promotion as well as for individual self-development.



Examination fields

Personnel administration, HR development, and labor administration; bookkeeping and accounting; sales and marketing; production control; corporate legal affairs and general administration; logistics; management information systems; business strategy

Grades

	Examination levels assume the following career profiles of participants.
Grade 1	At least 10 years of practical experience (aspiring to division head, director, or corresponding positions)
Grade 2	At least 5 years of practical experience (aspiring to department head, manager, or corresponding positions)
Grade 3	At least 3 years of practical experience (aspiring to section head, group leader, or corresponding positions)
Non-classified Grade	Students, job seekers, prospective job starters, new hires

Computer Services Skills Evaluation Test (Public Qualifications Test)

The Computer Services Skills Evaluation Test is for people who have learned computer operation methods or who are engaged in all kinds of services using computers in educational training facilities or business offices. It has been conducted together with the Prefectural Vocational Ability Development Association since 1983 to evaluate those abilities, and as of FY2015, more than 2.4 million people have taken it.

Divisions and grades are established for every level from beginner to expert. Those who pass the test are given the title of Specialist.

Since the examination content assumes prior work experience and permits an assessment of the skills available for job execution, the examinations enable the training and assessment of work-ready human resources.

CAD Tracing Specialist Skill Examination (certified by the Ministry of Health, Labour and Welfare)

This test, for people engaged in drafting operations using CAD in educational training facilities or business offices, was started in 1997 when it received certification from the Minister of Health, Labour and Welfare. To date, as many as 68,000 people have taken the test.

Skills required in drafting operations that use CAD are divided into two divisions, namely Machinery and Construction, with three grades in each division. The test consists of a Practical Skills Test for drafting operations centered on actual tracing, and a Written Test covering knowledge related to drafting operations, to enable comprehensive and accurate evaluation of individual skills. Furthermore, those who pass the test are awarded the title of Specialist.

Strengthening of the manufacturing base

"Monozukuri" has supported the development of Japan's economy and industry. With the aging of the baby boomer generation and the drifting of younger people away from manufacturing, this foundation is beginning to weaken. JAVADA is holding the following skills competitions to improve the level of skilled workers and to contribute to society by spreading the interest and importance of "Monozukuri" skills.

Youth Monozukuri Skills Competition

Targeting youth under 20 years old who are currently learning skills at vocational abilities development institutions, technical high schools or other such institutes of learning, this competition was launched in FY2005 for the purpose of providing them with goals and widening the horizons of young skilled workers.

Event	Year	Host prefecture	Number of competitors
10	2015	Yamagata	352
9	2014	Yamagata	353
8	2013	Iwate	333
7	2012	Iwate	290
6	2011	Hyogo	258

National Skills Competition

The National Skills Competition is a competition in which young skilled workers age 23 or under (except for a few job trades) pit their skills against each other. It is held for the purpose of encouraging the development of skilled workers of the next generation, and for having participants experience the importance and wonder of "Monozukuri". Spectators have the opportunity to view the monozukuri process up close, something normally not possible, and be amazed and inspired.

The National Skills Competition also serves as a qualifying event for the World Skills Competition.

Event	Year	Host prefecture	Number of competitors
53	2015	Chiba	1183
52	2014	Aichi	1200
51	2013	Chiba	1127
50	2012	Nagano	1097
49	2011	Shizuoka	1066
48	2010	Kanagawa	1028
47	2009	Ibaraki	983
46	2008	Chiba	953
45	2007	Chiba	980
44	2006	Kagawa	1158

World Skills Competition

The World Skills Competition is a competition between young skilled workers 22 years of age or younger (except for a few job trades) selected from countries all over the world and is held once every two years. Japan has achieved excellent results in these competitions ever since joining the 11th competition in 1962. The competition has been held three times in Japan, including the 19th competition in 1970 (Tokyo, Chiba), the 28th competition in 1985 (Osaka), and the 39th competition in 2007 (Shizuoka). The 39th competition was called the "International Skills Festival for All, Japan 2007."

JAVADA serves as the Japan representative member of World Skills International (WSI), the organizing committee for this global competition and, in addition to sending Japanese teams to the competition, plays an important role in the competition operations.

While the emerging nations of Asia are rising fast, resulting in ever stiffer competitions, the young expert craftsmen representing Japan, the founder of Monozukuri, always accomplish exceptional results that leave everyone else greatly impressed.

●World Skills Competition
Number of medals taken by Japan

Year	Host country (city)	Gold	Silver	Bronze
2015	Brazil (São Paulo)	5	3	5
2013	Germany (Leipzig)	5	4	3
2011	United Kingdom (London)	11	4	3
2009	Canada (Calgary)	6	3	5
2007	Japan (Shizuoka)	16	5	3
2005	Finland (Helsinki)	5	1	2
2003	Switzerland (St. Gallen)	6	2	4
2001	Korea (Seoul)	4	2	4
1999	Canada (Montreal)	6	3	2
1997	Switzerland (St. Gallen)	2	0	4




Skill Grand Prix

Worker skills have produced various tangible ideas and research results, supporting industry and enriching people's lives. At the same time, the question of how to pass on to the next generation the precious skills of seasoned skilled workers that have supported our country is an important challenge for the nation as a whole, going beyond industrial and regional frameworks.

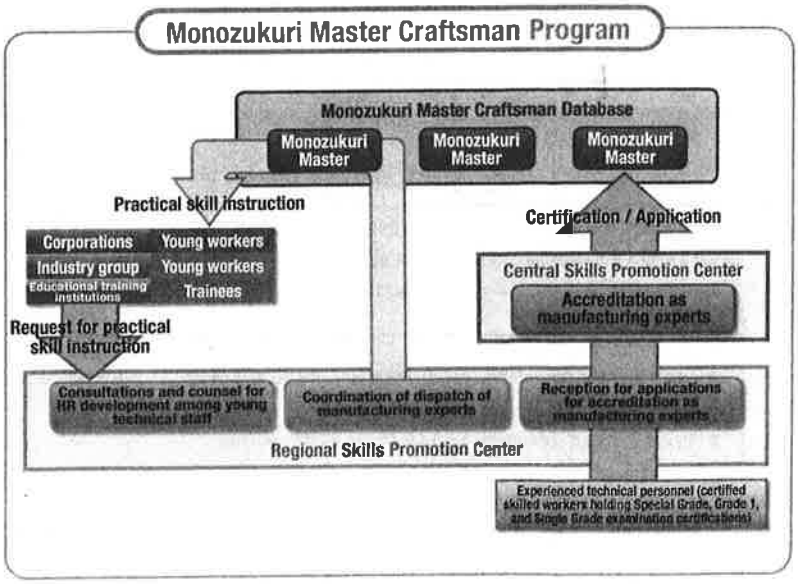
Skills Grand Prix is a competition held every two years and brings together experienced skilled workers from all over Japan possessing Advanced, Grade1 and Non-classified certifications.

This competition of highly skilled workers can serve to persuade young skilled workers and others of the importance of these skills and contributes to the development of the younger generation.

Implementation of Project for Supporting the Vocational Ability Development of Young Skilled Workers

As young people continue to drift away from Monozukuri and skills, preparing an environment in which young people can actively aspire to become skilled workers and training and equipping skilled workers with the advanced skills that will serve as the foundation for industry have become challenges.

Therefore, as a "Project for Supporting the Vocational Ability Development of Young Skilled Workers" JAVADA has been providing support for the training of young technical staff, as well as the succession to technical skills, based on a system of manufacturing experts where highly-skilled manufacturing personnel deliver technical guidance. Moreover, JAVADA contributes to fomenting the momentum for emphasizing technical skills through measures that include operating a portal site for disseminating information on improving the quality of certified skilled workers and the official skill certification examination systems., etc.



Strengthening of foundations for career development

The next generation has reached the point where each individual working person selects their workplace and way of working based on their vocational life design. To do this, it is important for people to understand their own vocational ability level and situation in order to determine goals and continue with career development. JAVADA prepares vocational ability evaluation standards and provides career development support tools and information to support the career development of individual working people.

Provision of career development support tools

●CADS & CADI

CADS (Career Development Sheet) is a tool designed to promote objective self-understanding and formulate a career plan for the future through the entry of information on a worksheet, while CADI (Challenge and Discovery Inventory) measures the attitude and skills said to be essential for career development as well as the personality traits necessary for it. Both tools were developed by JAVADA and they have been utilized in courses and lectures.

CADS
(Career Development Sheet)

CADI
(Challenge and Discovery Inventory)

●Change Management for Post-Retirement Workers - Workshop Teaching Materials

Continuing work after reaching the statutory retirement age has become commonplace. However, in order to continue performing without loss of inner drive amid changing work roles, fundamental capabilities for managing change are necessary. To this end, JAVADA has developed self-assessment tools, which participants will use under the guidance of an instructor after completing the course devised by JAVADA.

Seminars and Lectures

JAVADA holds advanced practical seminars and lectures, given by lecturers with rich practical experience, on the theme of career development support for corporate vocational ability development promoters and people in charge of human resource development.

●Lecture examples

- ▶Career development support dissemination and promotion seminar
- ▶"Vocational Ability Evaluation Criteria" Seminar
- ▶Student and youth career development officer support seminar
- ▶Training classes as instructors for the change management workshop for post-retirement workers

Vocational Ability Development Service Center

Vocational ability development service centers have been established in each region to provide business owners and employees with expert consultation and information regarding vocational ability development. Career development advisors and human resource development consultants with expertise in vocational ability development are stationed here to provide all kinds of consultation assistance regarding vocational ability development. Moreover, for consultations and counsel relating to career consulting including a "career diagnosis service," JAVADA has deployed career development supporters who hold career consultant qualifications.

Preparation and Dissemination of Vocational Ability Evaluation Standards

In order to clarify the human resources sought after by corporations as well as secure and train them, it is necessary to prepare a fair and highly transparent system for properly evaluating the vocational ability of employees. This will allow employees to objectively grasp their own abilities and also leads to them being able to set goals for career advancement.

We have prepared "Vocational Ability Evaluation Standards" applicable across various industries as the measure for practical vocational abilities based on cooperative links with industrial groups, etc., to promote social foundations enabling suitable evaluations of the vocational abilities of working people.

The Vocational Ability Evaluation Standards developed by JAVADA are broken down into a number of tasks (units) by work content and use the presenting of specific work action examples by level to clarify the abilities expected to be demonstrated by the people in charge of the work.

We have prepared evaluation standards by industry for 54 industries and 275 (As of May 2016) occupations as well as standards for administrative occupations spanning different industries.

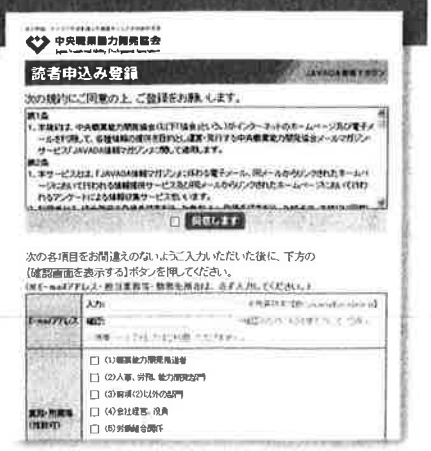
Customizing them to match the needs in specific companies enables more effective utilization.

Provision of support for course designation under Training and Education Benefits System and information on designated courses

The Training and Education Benefits System is run as one of the benefit programs of the employment insurance scheme to support the efforts of working people to engage in independent ability development and promote employment stability and re-employment. We provide support to education and training institutions wishing to receive course designations under the system and supply information on education and training courses that have received Minister of Health, Labour and Welfare designation.

JAVADA Information Magazine

Every month, we distribute an e-mail magazine providing useful information broadly related to ability development to human resources development promoters, people involved in vocational ability development at companies, people engaged in self-improvement, people thinking about taking ability evaluation tests, and other adults and students with an interest in careers. It is available free of charge to all who wish to subscribe.



▼Visit the URL below to subscribe.

http://www.javada.or.jp/magazine/

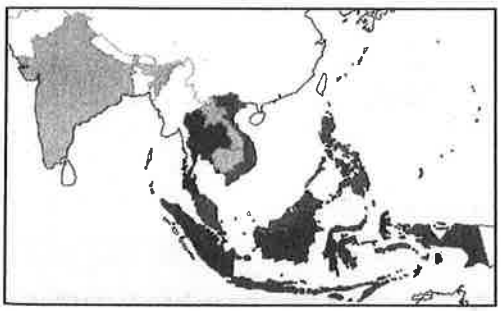
Promotion of international cooperation

Implementation of Skills Evaluation System Transfer and Promotion Program

In order to contribute to the improvement of the worker's skill and enhance the productivity of industries in Asian countries based in consultations with partnering countries, Since 2002 JAVADA has been training each year a fixed number of skill testing assessors and has been promoting the propagation of trade skill testing and certification and skill competitions. Moreover, JAVADA supports the training of human resources necessary for the creation, maintenance, and propagation of the national trade skill testing and certification system. Vietnam has since adopted the Japanese-style skill testing and certification system, while in Indonesia Japanese-style skill testing is applied in the Indonesian trade skill testing and certification system.

Providing two kinds of training courses, "Workshop on skill evaluation method" in order to learn evaluation standards and test questions and "Skill assessors training" to acquire ability in implementation skill testing and skill competition and marking test questions. More than 2,000 experts in 11 Asian countries have already completed training courses by 2015 and they are contributing to the improvement of the skill evaluation systems of their own countries.

Participant countries: 7 countries (as of June 2016)
Indonesia, Thailand, Vietnam, Cambodia, Laos, India, and Myanmar



Available Publications in the JAVADA Library

The JAVADA library contains a wide selection of workbooks and texts serving as test preparation and study materials for the ability evaluation tests developed at JAVADA. Additionally, we have developed CADS (Career Development Sheet), CADI (Challenge and Discovery Inventory), and other easy-to-use tools in support of career development, and have made them available for sale. You can order library publications from the JAVADA website.

http://www.javada.or.jp/ → **図書のお申し込み**
(Order information)

- ●技能検定試験問題集 (Skill Test Workbook)
- ●コンピュータサービス技能評価試験練習問題集 (Computer Services Skills Evaluation Test Study Workbook)
- ●CADS (キャリア開発シート) & CADI (環境変化自己診断ツール)
  (CADS (Career Development Sheet) and CADI (Challenge and Discovery Inventory))
- ●ビジネス・キャリア検定試験標準テキスト (Business Skills Test Standard Textbook)
- ●CADトレース技能審査試験問題集 (CAD Tracing Skill Test Workbook)

Prefectural Vocational Ability Development Association Addresses

Association name	Postal No.	Address	Telephone No.	Service Center Telephone No.	Skill promotion corner Telephone No.	Home Page address
Hokkaido Vocational Ability Development Association	003-0005	Hokkaido Vocational Ability Development Support Center 1-1-2 Higashi-sapporo 5-jo, Shiroishi-ku, Sapporo City	011-825-2385	011-825-2388	011-825-2387	http://www.h-syokunou.or.jp/
Aomori Vocational Ability Development Association	030-0122	Aomori Vocational Training School 43-1 Aza-Imata, Oaza-Nojiri, Aomori City	017-738-5561	017-738-6464	017-738-5561	http://www.a-noukaikyo.com/
Iwate Vocational Ability Development Association	028-3615	Iwate Industrial Technology Junior College 10-3-1 Oaza Minami Yahaba, Yahaba-cho, Shiwa-gun	019-613-4620	019-613-4621	019-613-4622	http://www.noukai.com/
Miyagi Vocational Ability Development Association	981-0916	16-1 Aoba-machi, Aoba-ku, Sendai City	022-271-9260	022-271-9223	022-727-5380	http://www.miyagi-syokunou-kyoukai.com/
Akita Vocational Ability Development Association	010-1601	Akita Prefectural General Vocational Training Center 1-2-1 Mukohama, Akita City	018-862-3510	018-823-0370	018-874-7135	http://www.akita-shokunou.org/
Yamagata Vocational Ability Development Association	990-2473	2-2-1 Shoei, Yamagata City	023-644-8562	023-644-4250	023-645-3131	http://www.y-kaihatu.jp/
Fukushima Vocational Ability Development Association	960-8043	5F Fukushima Prefectural Self-Government Hall, 8-2 Naka-machi, Fukushima City	024-525-8681	024-525-8680	024-522-3677	http://business2.plala.or.jp/fuvada/
Ibaraki Vocational Ability Development Association	310-0005	Ibaraki Prefecture Human Resource Development Center 864-4 Sulfu-cho, Mito City	029-221-8647	029-221-0639	029-221-8647	http://www.ib-syokkyo.com/
Tochigi Vocational Ability Development Association	320-0032	Tochigi Prefecture West Office, 1-3-10 Syowa, Utsunomiya City	028-643-7002	028-643-0023	028-612-3830	http://www.tochi-vada.or.jp/
Gunma Vocational Ability Development Association	372-0801	1211-1 Miyako-machi, Isezaki City	0270-23-7761	0270-23-7761	0270-23-7761	http://www2.gunmanet.ne.jp/g-vada/
Saitama Vocational Ability Development Association	330-0074	5F Saitama Prefectural Urawa Regional Building 5-6-5 Kitaurawa, Urawa-ku, Saitama City	048-829-2801	048-827-0075	048-814-0011	http://www.saitama-vada.or.jp/
Chiba Vocational Ability Development Association	261-0026	4-1-10 Makuhari Nishi, Mihama-ku, Chiba City	043-296-1150	043-296-1120	043-296-7860	http://www.chivada.or.jp/
Tokyo Vocational Ability Development Association	102-0072	7F Tokyo Job Center 3-10-3 Iidabashi, Chiyoda-ku, Tokyo	03-5211-2350	03-5211-2355	03-5211-2357	http://www.tokyo-nokaikyo.or.jp/
Kanagawa Vocational Ability Development Association	231-0026	6F Kanagawa Labor Plaza 1-4 Kotobuki-cho, Naka-ku, Yokohama City	045-633-5420	045-633-5423	045-633-5403	http://www.kan-nokaikyo.or.jp/
Niigata Vocational Ability Development Association	950-0965	4F Niigata Kosha Sogo Bldg. 15-2 Shinko-cho, Chuo-ku, Niigata City	025-283-2155	025-283-2144	025-283-2155	http://www.nvada.com/main.html
Toyama Vocational Ability Development Association	930-0094	2F Azumi-cho Daiichi Seimei Bldg., 7-18 Azumi-cho, Toyama City	076-432-9883	076-433-2578	076-432-8870	http://www.toyama-noukai.or.jp/
Ishikawa Vocational Ability Development Association	920-0862	3F Ishikawa Prefectural Vocational Ability Development Plaza 1-15-15 Hosai, Kanazawa City	076-262-9020	076-262-9027	076-254-6487	http://www.ishivada.com/
Fukui Vocational Ability Development Association	910-0003	4F Fukui-ken Shokuin Kaikan Bldg. 3-16-10 Matsumoto, Fukui City	0776-27-6360	0776-24-8839	0776-27-6360	http://www.fukui-shokunou.jp/
Yamanashi Vocational Ability Development Association	400-0055	2130-2 Otsu-machi, Kofu City	055-243-4916	055-243-4916	055-243-4916	http://www.yavada.jp/
Nagano Vocational Ability Development Association	380-0836	3F Nagano Prefectural Ladies' Hall 688-2 Minamiagata-machi, Minami Nagano, Nagano City	026-234-9050	026-234-9080	026-234-9050	http://www.navada.or.jp/
Gifu Vocational Ability Development Association	502-0841	Gifu Prefectural Human Resources Development Center 2-33 Gakuen-cho, Gifu City	058-233-4777	03-6758-2820*	058-210-1066	http://www.gifu-shokunou.or.jp/
Shizuoka Vocational Ability Development Association	424-0881	160 Kusunoki, Shimizu-ku, Shizuoka City	054-345-9377	054-347-4703	054-344-0202	http://shivada.com/
Aichi Vocational Ability Development Association	451-0035	2-3-14 Sengen, Nishi-ku, Nagoya City	052-524-2031	052-524-2035	052-524-2075	http://www.avada.or.jp/
Mie Vocational Ability Development Association	514-0004	4F Mie Prefectural Resident Service Center 1-954 Sakae-machi, Tsu City	059-228-2732	03-6758-2820*	059-225-1817	http://www.mivada.or.jp/
Shiga Vocational Ability Development Association	520-0865	5-2-14 Nango, Otsu City	077-533-0850	077-537-6868	077-537-1213	http://www.shiga-nokaikyo.or.jp/
Kyoto Vocational Ability Development Association	612-8416	Kyoto Prefectural Kyoto Vocational Training School 121-3 Takedaryuchi-cho, Fushimi-ku, Kyoto City	075-642-5075	075-642-5071	075-642-5075	http://www.kyo-noukai.com/
Osaka Vocational Ability Development Association	550-0011	6F Osaka Hon-cho Nishi Daiichi Bldg. 2-1-1 Awaza, Nishi-ku, Osaka City	06-6534-7510	06-6534-7512	06-4394-7833	http://www.osaka-noukai.jp/
Hyogo Vocational Ability Development Association	650-0011	1F Hyogo Labor Welfare Center 6-3-30 Shimoyamate-dori, Chuo-ku, Kobe City	078-371-2091	078-371-2094	078-371-2047	http://www.noukai-hyogo.jp/
Nara Vocational Ability Development Association	630-8213	2F Nara Prefectural Small/Medium-Sized Enterprise Hall 38-1 Nobori Oji-cho, Nara City	0742-24-4127	0742-24-4127	0742-24-4127	http://www.aaa.nara.nara.jp/
Wakayama Vocational Ability Development Association	640-8272	Wakayama Skill Center 3-3-38 Sunayama Minami, Wakayama City	073-425-4555	073-425-5455	073-499-6484	http://w-syokunou.com/
Tottori Vocational Ability Development Association	680-0845	5F Hisamoto Bldg., 2-159 Tomiyasu, Tottori City	0857-22-3494	0857-21-1626	0857-30-0708	http://www.hal.ne.jp/syokunou/
Shimane Vocational Ability Development Association	690-0048	2F SP Bldg., 1-4-5 Nishiyomeshima, Matsue City	0852-23-1755	0852-26-9331	0852-61-0051	http://www.noukai-shimane.or.jp/
Okayama Vocational Ability Development Association	700-0824	3F Amano Bldg., 2-3-10 Uchisange, Kita-ku, Okayama City	086-225-1546	03-6758-2820*	086-225-1580	http://www.okayama-syokunou.or.jp/
Hiroshima Vocational Ability Development Association	730-0052	5F Hiroshima Prefectural Information Plaza 3-7-47 Senda-machi, Naka-ku, Hiroshima City	082-245-4020	082-245-4294	082-245-4020	http://www.hirovada.or.jp/
Yamaguchi Vocational Ability Development Association	753-0074	4-3-6 Chuo, Yamaguchi City	083-922-8646	083-932-2335	083-922-8646	http://y-syokunou.com/
Tokushima Vocational Ability Development Association	770-8006	1-1-7 Shinhama-cho, Tokushima City	088-662-5366	088-662-0303	088-662-1974	http://www.tokunoukai.jp/
Kagawa Vocational Ability Development Association	761-8031	Kagawa Prefectural Local Vocational Training Center 587-1 Goto-cho, Takamatsu City	087-882-2854	087-882-6993	087-882-2910	http://www.noukai-kagawa.or.jp/
Ehime Vocational Ability Development Association	791-1101	2F Ehime Institute of Industrial Technology Administration Bldg. 487-2 Kumekubota-machi, Matsuyama City	089-993-7301	089-993-7336	089-993-7301	http://nokai.bp-ehime.or.jp/
Kochi Vocational Ability Development Association	781-5101	Kochi Vocational Training Center 3992-4 Nunoshida, Kochi City	088-846-2300	088-846-2305	088-846-2303	http://www.kovada.or.jp/
Fukuoka Vocational Ability Development Association	813-0044	2F Fukuoka Prefectural Human Resources Development Center 5-3-1 Chihaya, Higashi-ku, Fukuoka City	092-671-1238	092-671-5918	092-681-2110	http://www.fukuoka-noukai.or.jp/
Saga Vocational Ability Development Association	840-0814	1-15 Seisho-machi, Saga City	0952-24-6408	0952-24-6408	0952-24-6667	http://www.saga-noukai.or.jp/
Nagasaki Vocational Ability Development Association	851-2127	Nagasaki Vocational Training School 547-21 Kodago, Nagayo-cho, Nishisonogi-gun	095-894-9971	095-894-9971	095-883-1671	http://www.nagasaki-noukai.or.jp/
Kumamoto Vocational Ability Development Association	861-2202	Applied Electronics Research Center 2081-10 Tabaru, Mashiki-machi, Kamimashiki-gun	096-285-5818	096-285-5618	096-289-5015	http://www.noukai.or.jp/
Oita Vocational Ability Development Association	870-1141	Oita Prefectural Local Vocational Training Center 1035-1 Aza Furukawa, Oaza-Shimo Munakata, Oita City	097-542-3651	097-542-0163	097-542-6441	http://www.noukai-oita.com/
Miyazaki Vocational Ability Development Association	889-2155	2-4-3 Gakuen Kihanadai Nishi, Miyazaki City	0985-58-1570	0985-58-1570	0985-58-1570	http://www.syokuno.or.jp/
Kagoshima Vocational Ability Development Association	892-0836	9-14 Kinko-cho, Kagoshima City	099-226-3240	099-226-3240	099-226-3240	http://www.syokunou.or.jp/
Okinawa Vocational Ability Development Association	900-0036	3-14-1 Nishi, Naha City	098-862-4278	098-894-3230	098-894-3231	http://www.oki-vada.or.jp/

* For inquiries concerning the service centers in Gifu prefecture, Mie prefecture, and Okayama prefecture, please contact the Vocational Ability Development Association.

(As of June 2016)

JAVADA
JAPAN VOCATIONAL ABILITY DEVELOPMENT ASSOCIATION

Japan Vocational Ability Development Association

www.javada.or.jp

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Nishi Shinjuku Kimuraya Building 11F
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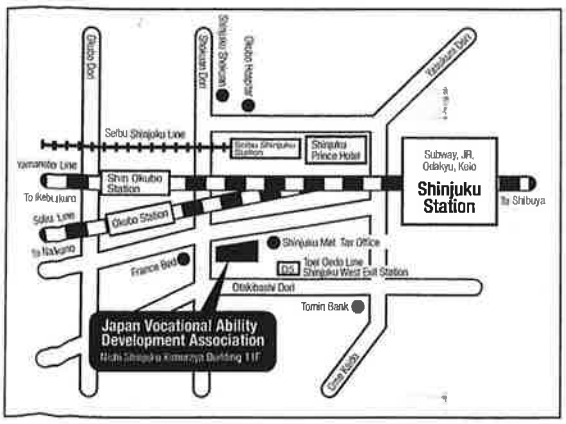


<Transportation Guide>
About 8 minutes walk from West Exit, Shinjuku Station of JR Line, Odakyu Line, Keio Line
About 7 minutes walk from Exit B15, Shinjuku Station of Tokyo Metro Marunouchi Line
About 3 minutes walk from North Exit, Seibu Shinjuku Station of Seibu Shinjuku Line
About 3 minutes walk from Okubo Station of JR Sobu, Chuo Line
About 7 minutes walk from South Exit, Shin-Okubo Station of JR Yamanote Line
About 5 minutes walk from Exit D5, Shinjuku West Exit Station of Toei Oedo Line

Vocational Education and Training(VET) at the Polytechnic University(PTU) Japan

Jun. 23, 2017

SYOKUGYO DAI
職業能力開発総合大学校 POLYTECHNIC UNIVERSITY

Logo: This stands for "Science" "Technology" and "Skill",

3 basic ideas of education and training

SYOKUGYO DAI
POLYTECHNIC UNIVERSITY

Contents

SYOKUGYO DAI
POLYTECHNIC UNIVERSITY

1. History of PTU Japan

1961 Establishment of the Tokyo Vocational Training Center at Kodaira city of Tokyo

Long term training school : 8 departments with 80 students

Dept. of forging and casting, mechanics, sheet metal and welding, electrics 1, electrics 2, mechanics of transportation, wood machining, painting

1965 Establishment of PTU

Central Vocational Training Center was reorganized to PTU and attached Central Vocational Training Center

1973 Movement of PTU to Sagamihara City, Kanagawa Prefecture and began to educate VET instructors thru its undergraduate course

1978 Establishment of Vocational Training Research center

1988 Establishment of Master Course of Engineering

2011 Polytechnic University of Japan was organized under the incorporated administrative agency "the Japan Organization for Employment of the Elderly, Persons with Disabilities and Job Seekers" and the Polytechnic University decided to close its undergraduate and graduate courses.

Its main role became

1) to educate VET instructors from active workers and undergraduates
2) to re-train VET instructors
3) to make research in VET

2012 Established new undergraduate course of "Bachelor of Science in Manufacturing Technology"

2013 Integrated campus to Tokyo and closed its Sagamihara campus

2014 Started long term and short term course for VET instructors

2015 The Institute of Research and Development moved and was integrated into Kodaira Campus

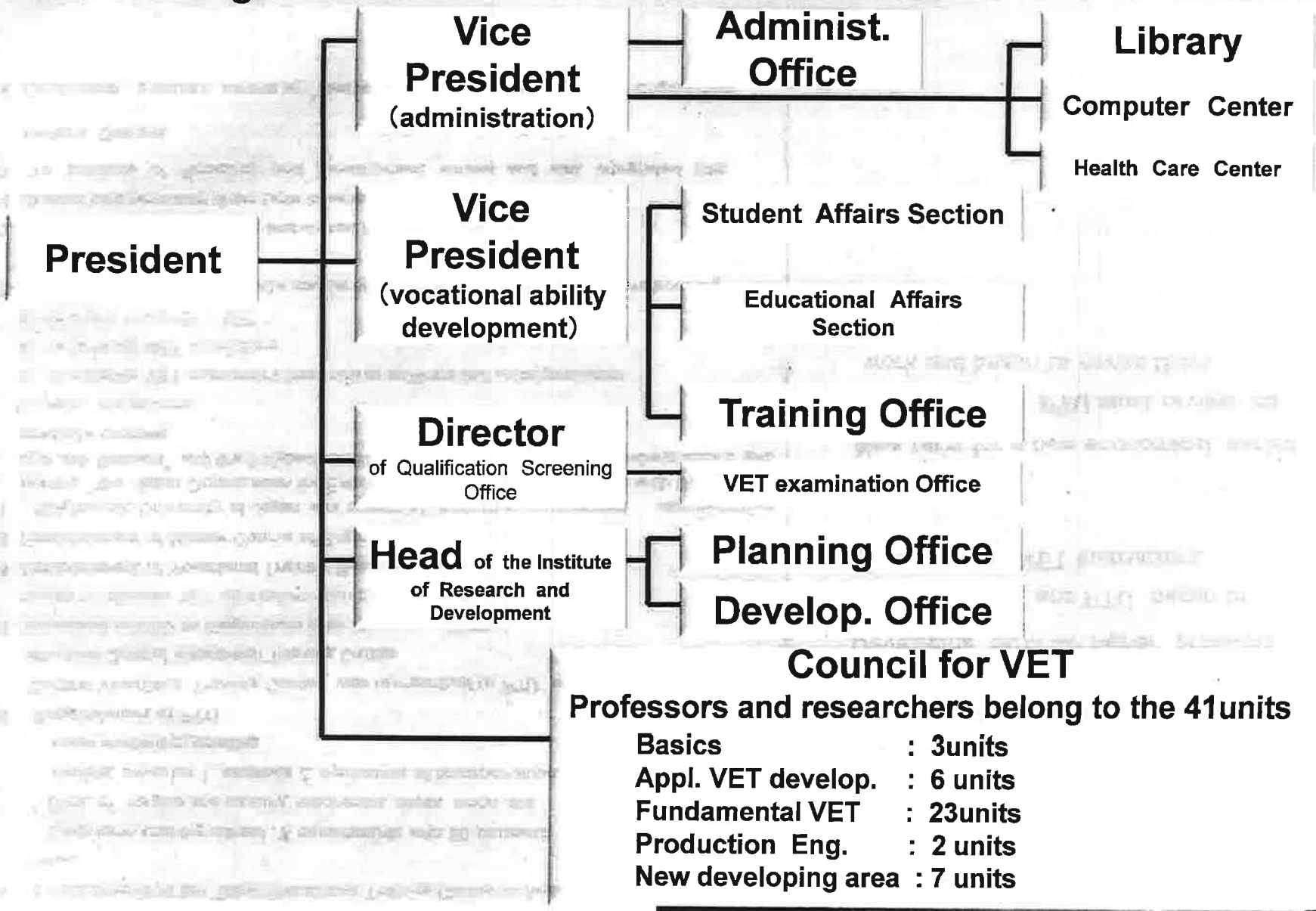
2016 Established graduate course of "Master of Science in Manufacturing Engineering!

Beginning term for modernization of manufacturing technology , and PTU provided more useful VET instructors to national/public/private polytechnic colleges and centers in Japan

Developing term for higher products manufacturing, and PTU began to provide more VET instructors.

New term for a new economical period of Japan , and PTU must review its work and began to revise them.

2. PTU Organization



3. 50- year history and new view for the next 50 years

50-year history (established in 1961 and half century ceremony in 2011)

- Provided 8164 VET instructors, 266 foreigners, who can innovate manufacturing technology. About 2200 VET instructors work today at national and local governments, and private companies.
- Contributed much to develop Japanese manufacturing competitiveness thru. educating and re-training VET instructors ,and manufacturing R&D.
- PTU began to find its new paradigm and realize it, affected by advancement of manufacturing technology and technics as well as their internationalization.

New aim of PTU after half a century since its beginning/founding

To lead and realize the Japanese new way of manufacturing by educating and up-grading VET instructors who can match the new demands of today and future.

1) Education of candidate VET instructors

To educate candidate VET instructors who can teach students to be more innovative at the manufacturing site of Japan by providing various kinds of practical curricula which can correspond to those manufacturing engineers and new comers from universities.

2) Up-grading capability of current VET instructors

To confirm the capability of current 5000 VET instructors by modernizing their technique/ technology/ engineering ability.

To function integrated producing ability according to the Vocational Development Plan (now 9th from 2011 to2015)

3) R & D for VET and VET instructors

Make research on the trend of VET, method to match it, and education method, and apply the results to educate VET instructors

4) Educate Bachelor of Manufacturing Science and Technology, Master of Science in Manufacturing Engineering

Bachelor of Manufacturing science and technology : to educate manufacturing process innovators so as to lead Japanese manufacturing, 4 divisions of mechanical, electrical, electronics and info and architectural engineering with 20 students for each. Master course of Science in Manufacturing Engineering was established in 2016.

4. Four Functions and Roles of PTU

①Training of VET instructors

○Long-term training course and Short-term training course

・To train in additional abilities including advanced expertise and skills and instruction techniques necessary to become high-level VET instructors; in order to receive such training, people must be employees of JEED, the prefectural governments, companies, etc. hired to be VET instructors and meet requirements such as some experience in the private sector and degrees from engineering universities. Master course of Science in Manufacturing Engineering was established in Long term training course in 2016.

○Training subject- change course

・To train VET instructors, etc. to obtain VET instructor licenses in new or additional subjects.

○Advanced training course

・To train VET instructors to teach advanced subjects in applied courses at Polytechnic Colleges.

②Re-training of VET instructors

○Training courses

・To re-train the current VET instructors in:
① Advanced technologies and expanded specialties to respond to technological innovations, etc.; and
②Instruction techniques, development of training materials, etc. to upgrade their instruction abilities

※Results in FY2015
Number of courses: 566; number of students: 5,226
Breakdown:
VET instructors in prefectural governments: 1,663
VET instructors in JEED: 2,488
Others: 1,075

・Some courses are provided in regional areas ("catered training") to improve conditions of participation

・The scope of eligible participants is expanded to include those holding leading positions in private educational and training institutions, to provide need-based training, in such areas as instruction techniques.

③Survey & research

○Survey & research

・Conduct survey & research necessary to make VET instruction practical and keep it up to date to the changes in industrial structures, technologies, etc.

○Development of training materials, courses, etc.

・Develop current and near-future training materials that contribute to implementation of effective VET

○Development of training techniques, evaluation methods, etc.

・**Disseminate information on training outcomes, etc.: e.g. IRD web pages**

※Results in FY2016
①Number of Web page access: 1,243,240
②Number of downloads: 92,368
③Distribution of research reports: Total of 3,378 institutions

④Bachelor course

○Advanced VET that contributes to facilitating the implementation of public vocational training, etc.

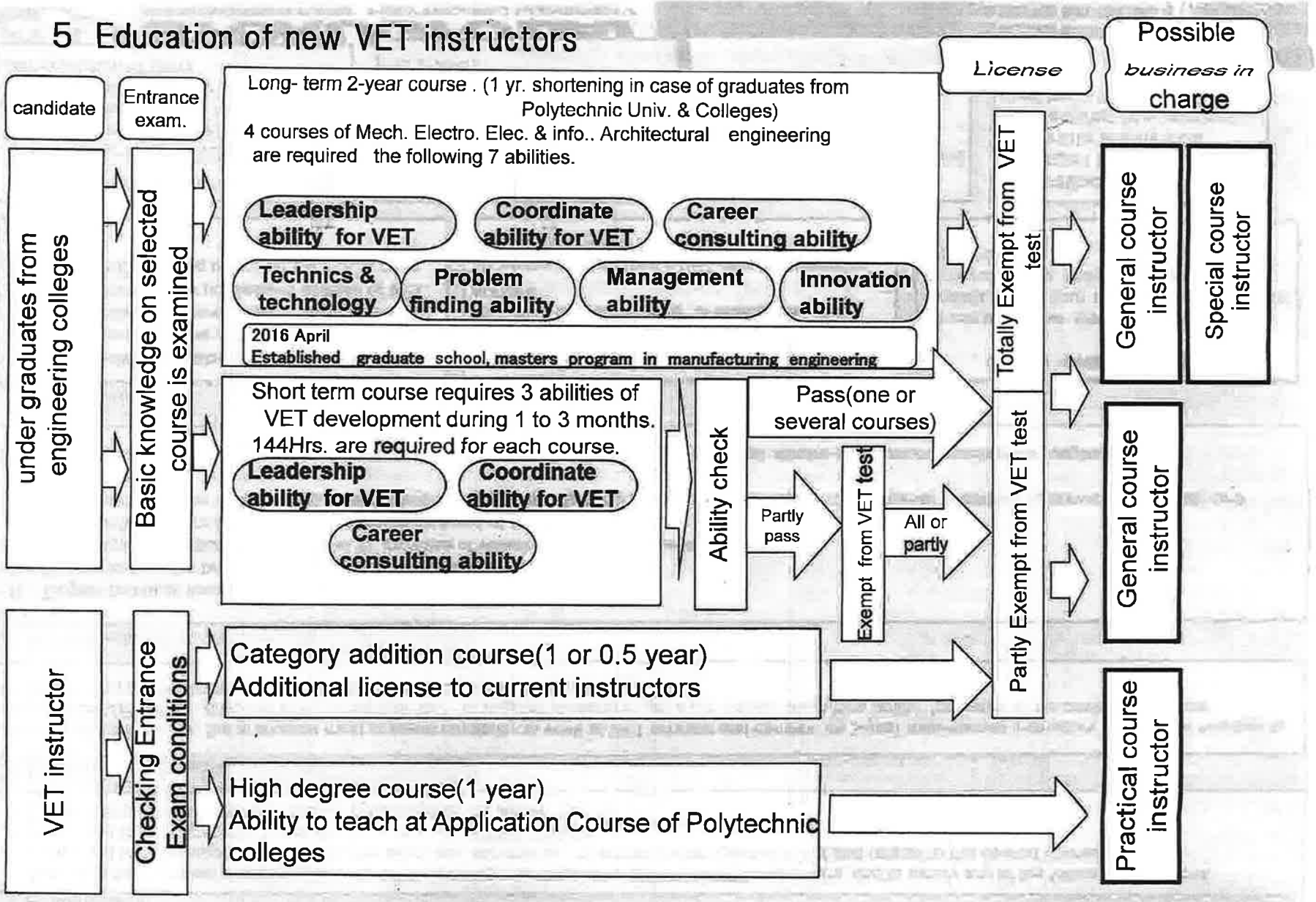
・Aims to train "process innovators" who have knowledge required to be VET instructors in the future (in the area of Monodzukuri) at higher education institutions that offer Bachelor's degrees recognized by the Ministry of Education, Culture, Science and Technology. A selected few group -- 80 students per grade -- studies Mechanical Engineering, Electrical Engineering, Electronics Information, or Architectural engineering.

・The number of credit hours for completing the requirements of those undergraduate degrees 5,600 hours/four years -- nearly twice as those required in general colleges in Japan of which about 3,300 hours are devoted to practice and experiments.

Promote Japan's vocational training through infrastructure development and international cooperation in developing countries

SYOKUGYO DAI POLYTECHNIC UNIVERSITY

5 Education of new VET instructors



5 - (1) Outline of long term education system for VET instructors

1. Candidate

Those who have passed entrance exam. for VET candidates or those who wish to be VET instructors, and to satisfy any of the following conditions.
1) Graduated from the department of colleges which are admitted by Japanese School Education Act and related to the desired license field.
2) Graduated from Polytechnic University or 4- year polytechnic colleges.
3) Those who possess the similar level of knowledge as the above 1) or 2)

2. Aims of education

After the current course, the graduates must possess capability to work at VET schools and centers as 3-year experienced instructors. They must manage to decide local VET policy, practical ability to work at VET, to support students to get a job (career consulting ability, formation of job cards, finding new business, etc.) as well as an evaluation of VET contents and its improvement.

3. Characteristics of Curricula

1) To gain technical level equivalent to Trade Skill Test 1.
2) To gain knowledge and practice to fit to career consultant.
3) To strengthen practical power to meet for increase of vocational training subjects (1080 hours).
4) To adapt for modern industrial and technological trend of advanced subjects.
5) To strengthen higher level of shop safety potentials by gaining life support knowledge as AED and emergency in addition to conventional safety and security subjects.
6) To admit VET instructor license to graduates of long- term course (mechanical, electrical, electro-information, architectural engineering)

4. Ability to gain

Leadership ability for VET

To train trainers from the young to the aged to the level of specified VET level under a given time and training environment by possessing abilities of VET. To manage VET training based on the PDCA cycle.

Coordinate ability for VET

To set a new course and/or review old ones according to requirements of enterprises and workers.

To advise and propose a VET plan of companies hearing their needs.

Career consulting ability

To consult career similar with those who finished a140- hour career consultant model proposed by the Ministry of Health,Labour and Welfare.

Technics & technology

To assist upgrading QCDSE(Quality, Cost, Delivery, Safety and Environment) at shop thru. manufacturing technics and technology of manufacturing, assembly and inspection of parts.

Problem finding and solving ability

To find substance of facing problems and to analyze their merit /demerit and to improve the problem.

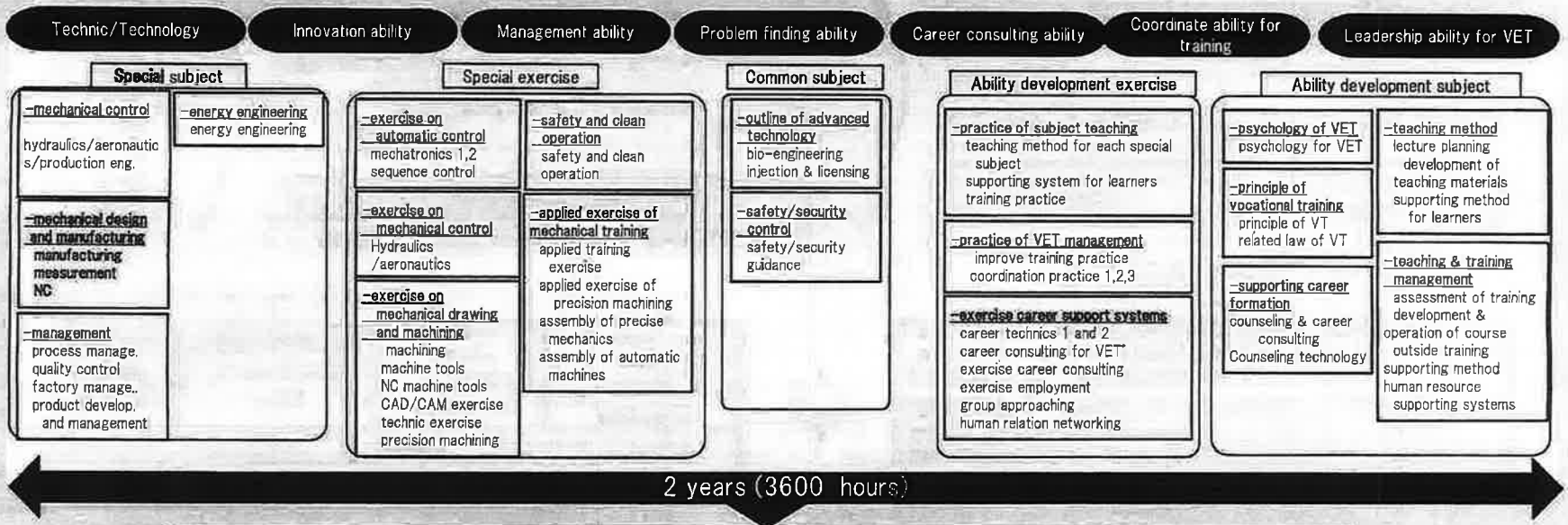
Management ability

To support proper technique and technology to realize high reliability, low cost, short delivery time on production line.

Innovation ability

To support the proposal of plan to innovate actions from manufacturing site,understanding company's strategy

5 -(2) Ability to be gained by learning subjects of long- term 2-year course .
-Case of Mechanical Education Course-



Educating high level of VET instructors who possess such 7 practical training abilities as to teach and train workers

curriculum of long- term education system for VET instructors

Training course	1. Common	2.Vocational development	3.Vocational development practice	4. Course subject	5. Course practice	total
Mechanical training course	108 hrs	432 hrs	1,260 hrs (1,080 hrs is occupied by practice at training place)	396 hrs	1,404 hrs	3,600 hrs
Electrical training Course				468 hrs	1,332 hrs	
Electronic info. training course				432 hrs	1,368 hrs	
Architectural training course				468 hrs	1,332 hrs	

5. (3) Graduate Course of Master of Science in Manufacturing Engineering" (Master's course)

① *Qualification for receiving the course*

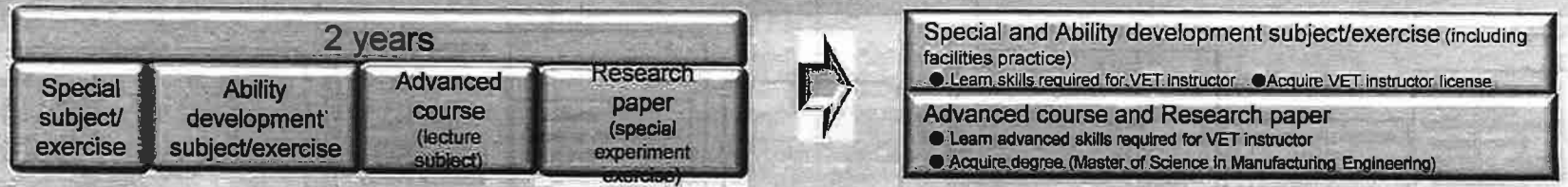
Those who have passed entrance examination for VET candidates or those who wish to be VET instructors, and to satisfy any of the following conditions.

1) Graduated from Polytechnic University in faculty of manufacturing science and technology or Polytechnic Colleges in practical course.
2) Graduated from the department of colleges which are admitted by Japanese School Education Act and related to the desired license field.
3) Those who possess the similar level of knowledge as the above 1) or 2).

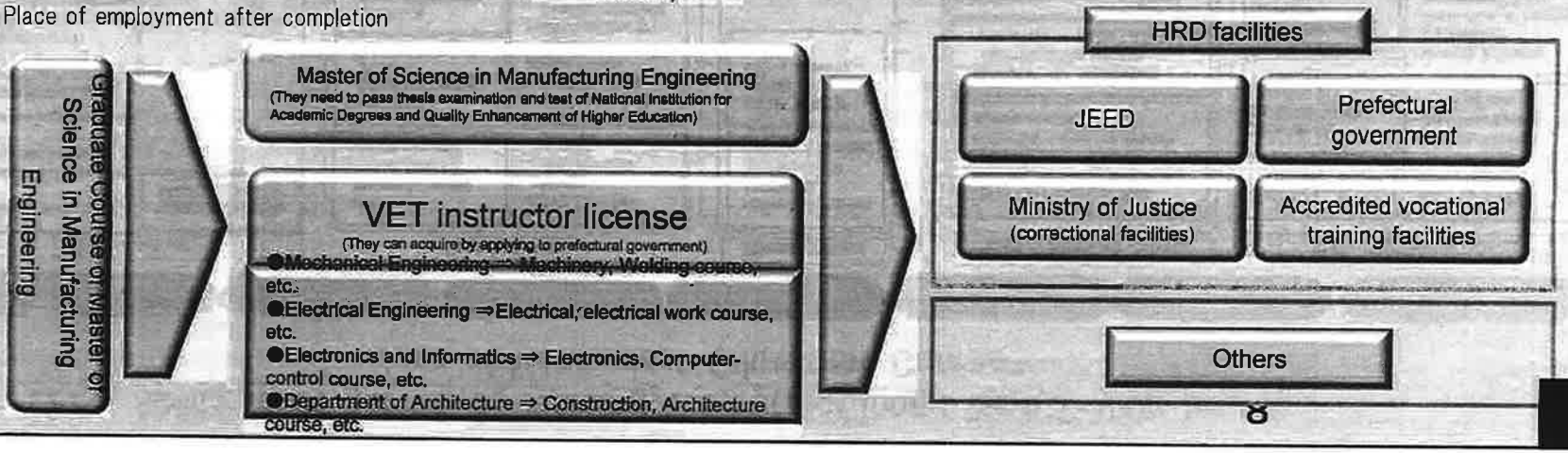
② Outline of Graduate Course of Master of Science in Manufacturing Engineering.

Aim	To train leaders in the field of human resources development who have up-to-date knowledge, technologies and skills and be able to develop VET instruction techniques etc. with research thinking.
Major	Department of Mechanical Engineering / Electrical Engineering / Electronics and Informatics / Architecture
Quota	20 (about 5 for each department)
Term	2 years *we do not shorten the training them for those who completed faculty of manufacturing science and technology or practical course.
Master's degree	Master of Science in Manufacturing Engineering

③ Curriculum structure



④ Place of employment after completion



5 -(4) Ability to be gained by learning subjects of short term course

1. Students

The following one of 5 who are employed or wish to work as VET instructor.

1･･･those who are permitted to try VET instructor exam. by Japanese VET law 30-3.
2･･･those who are permitted to receive seminars of VET law 39-1 by the Ministry of Health, Labour and welfare
3･･･those who wish to become VET instructor
4･･･those who are working as VET instructor
5･･･those who received VET instructor exam. By VET law 28-1.

2. Training hour, subject

1 to 3 months at PTU are required.

Training Period	Training hours
1- month	144 hours
3- month	432 hours
Less than 1 year	1400 hours

Necessary subjects can be selected among those of long- term training course in accordance with its training program.
Subjects are, Working ability for VET, Coordinate ability for VET, and Career consulting ability.

Leadership ability for VET	Coordinate ability for VET	Career consulting ability
Subject relating to VET instructor	Subject relating to coordinate ability	Subject relating to Career consulting
Course design (36H)	Training support method outside of training place (36H)	Outline of career consulting (36H)
Material development (36H)	Human resource development (36H)	Theory of career consulting (36H)
Supporting method for students (36H)	Course development and management (36H)	Basic skill for career consulting(36H)
Teaching method of technics (36H)	Coordination exercise (36H)	Practice of career consulting (36H)

3. Course feature

1) To provide only insufficient subject and ability to those who possess various experience
2) Those who pass the final exam. are admitted as those who graduated from long- term course.

5-(5) Outline of VET instructors' entering into new vocational categories

1) aim

6 months or 1 year training course to give a new or additional VET instructor license

2) department(following 18 kinds)

casting, mechanical engineering, structural iron works, plastics, welding, electrics, electrical operations, electronics, computer controls, architecture, wood works, plumbing, mechatronics, information control, automobile repair, combustion engine, painting, designing

5-(6) outline of VET instructors' advanced training cource

1) aim

1 year course to give special and applicable ability as well as research ability to those who graduate from PTU graduate course or admitted under similar circumstances.
The graduates can teach at practical courses of polytechnic colleges.

6. Re-training of current VET instructors

Course of expanding specialty, updating training potentials, and introducing business to graduates, etc. . 566 classes, 5226 VET instructors in 2015.

Otraining course

Training new instructors courses (5 Days): teach fundamental knowledge and technics.

Training method development courses(2~10 Days) :teach efficient training methods, training materials, and design of training course based on needs.

Training practical technic and technology(2~5 Days) : teach skill improvement of specialty and curriculum, workshop planning and management.

Training general instructors (2~5Days) courses: teach various kinds of knowledge and skills outside of special knowledge, technics and technology.

Curricula development

Lining and assembly of wood housing

Training particular subject courses(5days to 1 yr) : teach contents in depth at the dispatched companies.

Revision of curricula due to changes of needs in VET etc, and new curricula development

Ability to teach technics of wooden buildings for VET instructors

7. Survey, Research and Development

Survey & research on necessary VET instruction

Job Duty analysis of whole and systematic life-long vocation
Basic research on practical curricula for each vocation

Development of training courses and materials

Development of training materials
Expansion of training curricula at each training school

Development of training methods and evaluation

research on VET subjects for job seekers
quality assurance for VET made according to "the Act of Job Seekers"

Information Channel

Provide information through web pages, reports, special magazines, and the facilities for VET employees.
In 2016, web page access number 1,234,240, downloads 92,368, research reports sent to 3,378 facilities.

Private co., public VET facilities, etc.

Change of plans and actions of job training according to the change of training needs and people

Applied Example

Appl. to job duty analysis and workers' education as model data at companies and organization
Appl. to revise standards of vocational training

Appl. to teaching materials at public VET facilities
Appl. To VET facilities for their curricula, syllabi, and practical subjects

Appl. to training subjects to confirm states of technic and technology level of job seekers
Appl.to vocational training support by prefectural branch offices of JEED to private VET institutes for their curricula and evaluation

8. Outline of the 4 years Bachelor Course "Faculty of Manufacturing Science and Technology"

Faculty of Manufacturing Science and Technology is an undergraduate course for 4 years.
It consist of Science-Engineering-Technology, and aims to educate so-called "Process Innovators"
who can work to operate, manage, and innovate at manufacturing sites, which involve quality, production and structurel management .
At the same time, graduates will have enough knowledge to be VET instructors in future.

1. Features of Faculty

Setting combined practical/academic curricula (5,616 hours that is 1.8 times of study of normal colleges in Japan, and the contents of real exercises occupy 60 % of the total learning hours and the students can be real engineers and technologists.)

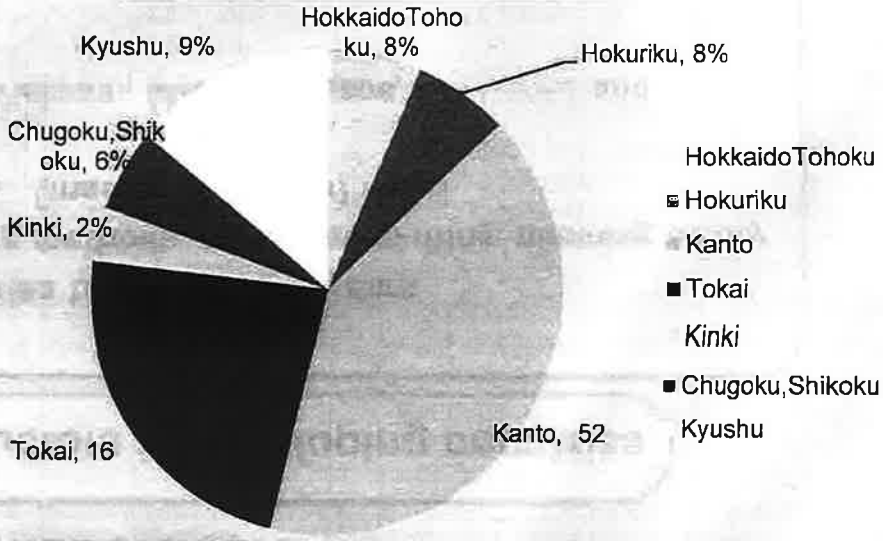
Real technic and technology can be acquined in small classes of skill exercise, experiment, and practice.

Bachelor of Science in Manufacturing Technology is given as well as many kinds of technology status .

2. Department, number, current number

Department	quota	Present number of students				
	class	1yr	2 yr	3 yr	4 yr	total
Mech. Eng.	20	20	24	13	22	79
Elec. Eng.	20	25	16	24	19	84
Electro-info eng.	20	22	31	21	14	88
Architect eng.	20	31	29	21	21	102
total for year	**80**	**98**	**100**	**79**	**76**	**353**

3. Students' home town



9. International collaboration

Upgrading ability of VET instructors in developing countries

【outline】
- # invite VET instructors in developing countries to Japan for 2 years
- # upgrade ability of those by teaching training methods, career consulting, planning ability of VET besides up-to-date technical skills (master's degree) New!

【receiving country】
- # Indonesia, Cambodia, Thailand, Philippine, Vietnam, Malaysia, Laos, Sri Lanka and Mongolia

【Capacity】
- # 2 persons

【receiving time】
- # April every year

(The number of people trained so far)

【invited VET instructors】since1963
1642 persons from 92 countries

【government-financed overseas students】since1992 till 2014
undergraduate course : 254 students (Sri Lanka 7, Vietnam 15) from 8 countries.
graduate course : 21 students from 4 countries

10. Cooperation to World Skills Competition and Youth Monodzukuri (manufacturing) Skills Competition, etc.

<cooperating action>

referees and competition members : subject preparation, management, cooperation on preparation

<main cooperating sort of operation>

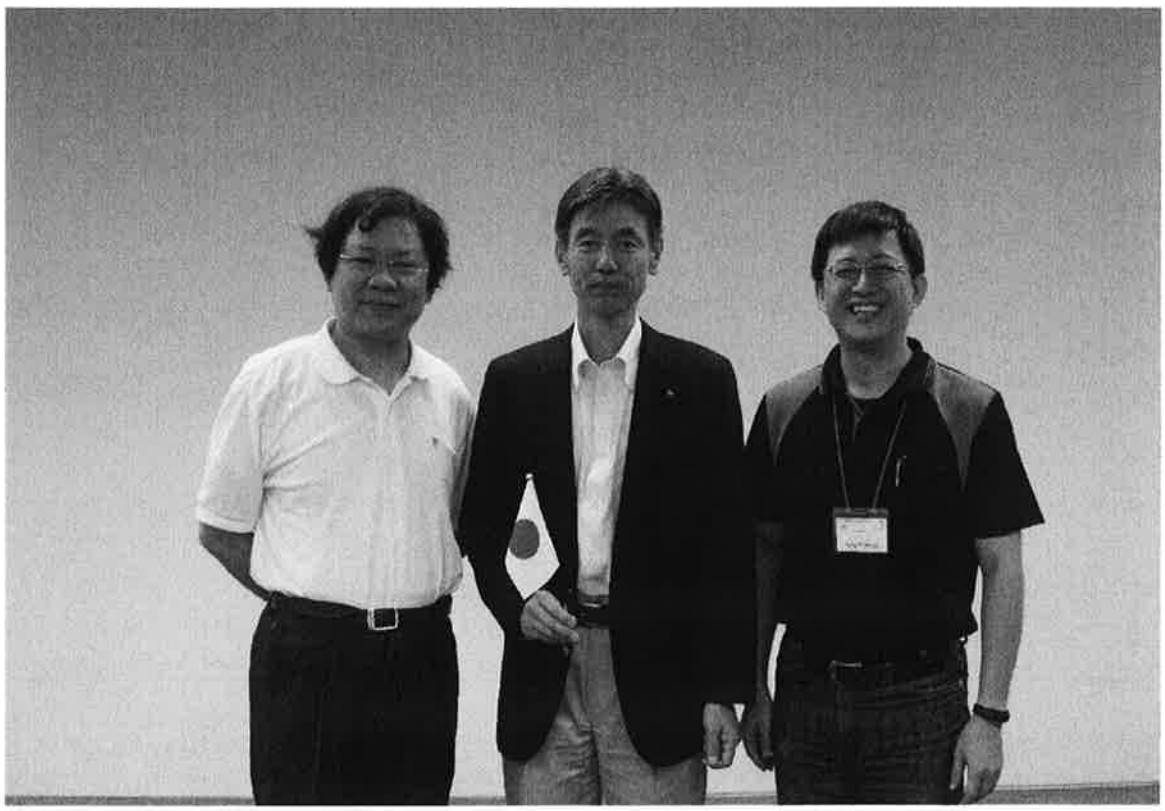
mechanics : assembly, molding, precise machinery assembly, mechatronics, mechanical drawings, milling machine, mechanical CAD, electro discharge machining, metal press, structural ironing, plating, molding, etc.
Electric : shop electrics, electrics operation, assembly of electro machinery, maintenance, drawings, etc
Electro/info : assembly of electro machinery, assembly of electric circuit, info. technology, LSI manufacturing, print assembly, ITPC network support, info. Network support, etc.
Architecture : furniture, fittings, carpenter, blocking, tiling, wood machining, etc

○2015 National Skills Competition (total 46 members of PTU joined)
chairman 1, oper. Member 1, referee of competition 38, supporter 6

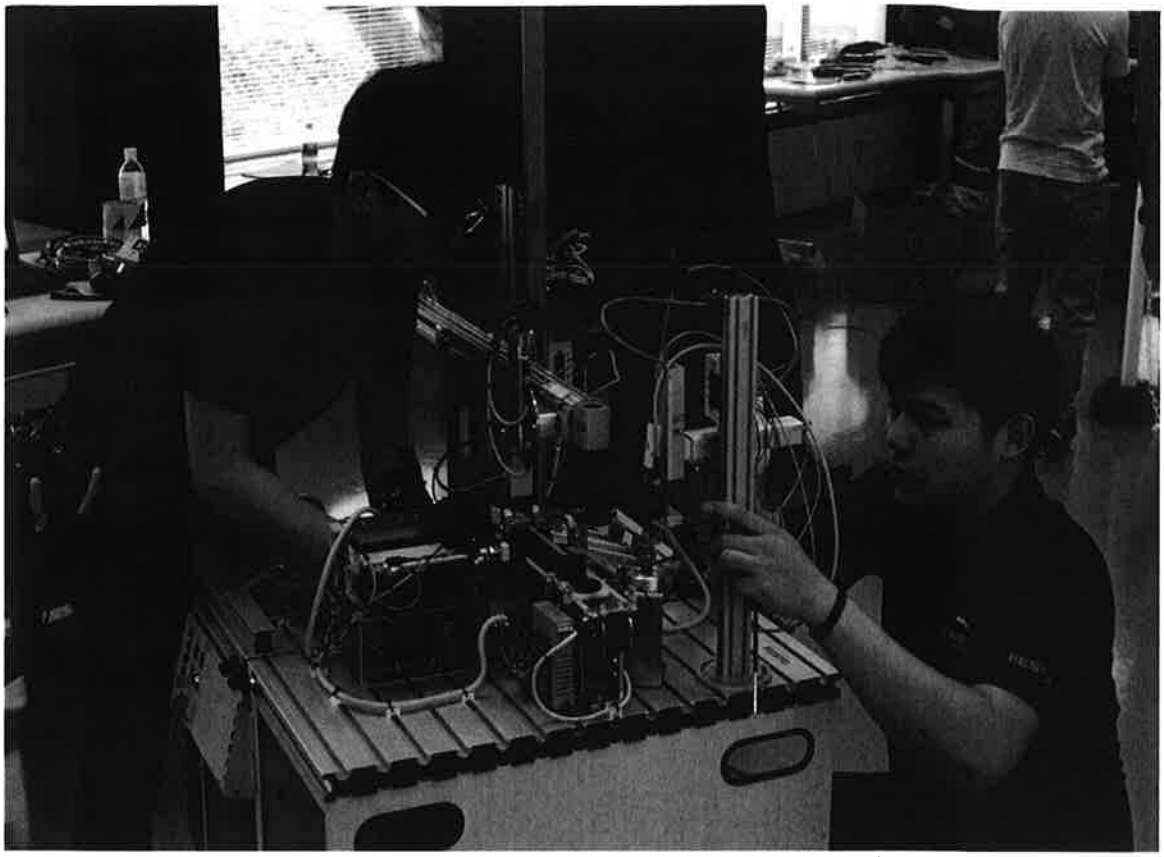
○2015 Youth Monodukuri Skills Competition (total 30 members of PTU joined)
technical chairman 1, vice chairman 1, oper. member 1, competition, member 19,
supporter 8.
○2015 World Skills Competition (2 Members of PTU joined)
Technical Delegate 1, Skill Competition Manager 1

附錄 3：參訪行程相關照片

照片一 日本、韓國、新加坡、我國代表團於競賽前合影



照片二 我國代表團與日本 JAVADA 副局長 TAKESHI TOKIWA 合影



照片三 我國機電整合職類選手於邀請賽現場剪影

照片四 我國代表團與厚生勞動省局長 KEN KAMAE, CIH (右 3)合影

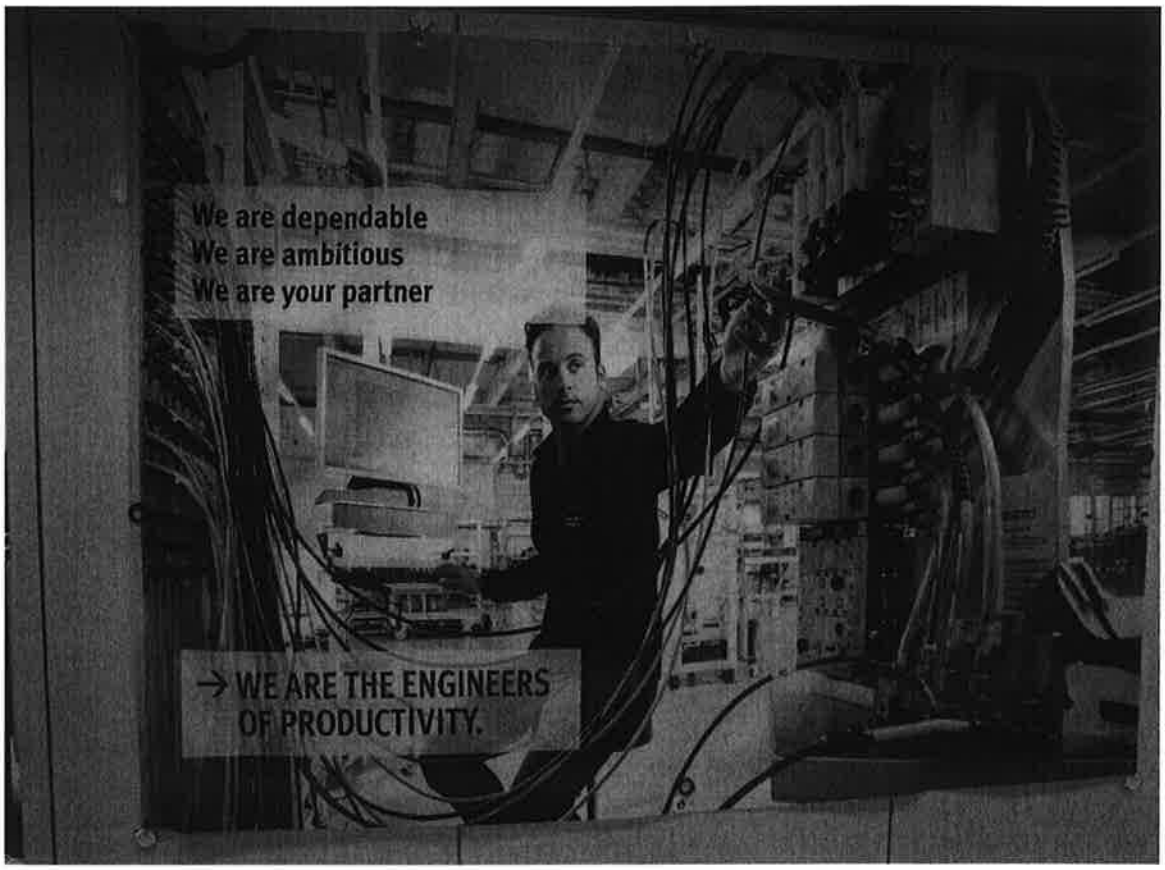
照片五 我國代表團與日本 JAVADA 理事長 TANABE(右 3)合影

照片六 我國代表團與日本 POLYTECHNIC UNIVERSITY 校長 TAKAO ENKAWA(前左 2)、日本技術代表 AKIRA KAKIMOTO(前右 1)合影

照片七 我國機電整合職類選手於邀請賽中獲得銀牌

照片八 我國代表團合影

相片九 我國代表團參訪日本 FESTO K.K



相片十 日本 FESTO K.K 機電整合職類海報