

JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)

MINISTRY OF ECONOMY
THE UNITED MEXICAN STATES

**FINAL REPORT
FOR
The Study on
Training and Certification System of
Consultants for Small and Medium Enterprises
in
The United Mexican States**

(SUMMARY)

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Abbreviation

ARIPO	Artesanías e Industrias Populares
BANCOMEXT	Banco Nacional de Comercio Exterior, S.N.C.
BANRURAL	Banco Nacional de Crédito Rural
BCI	Banco de Comercio Interior
BDC	Banco de Datos de Consultores (CIPI)
CANACINTRA	Cámara Nacional de la Industria de la Transformación
CANACO	Cámara Nacional de Comercio
CANAIPES	Cámara Nacional de la Industria Pesquera
CANIRAC	Cámara Nacional de la Industria Restaurantera
CAST	Centro de Asistencia y Servicios Tecnológicos
CAT	Programa de Crédito al Servicio de Consultoría (NAFIN)
CETRO	Centro para el Desarrollo de la Competitividad Empresarial
CIATEJ	Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Jalisco, A.C.
CIATEQ	Centro de Investigación y Asistencia en Tecnología y Diseño del Estado de Queretaro, A.C.
CICY	Centro de Investigación Científica de Yucatán
CIDESI	Centro de Ingeniería y Desarrollo Industrial
CIDETEQ	Centro de Investigación y Desarrollo Tecnológico en Electroquímica, S.C.
CIMAV	Centro de Investigación en Materiales Avanzados, S.C.
CIMO	Programa de Calidad Integral y Modernización
CINVESTAV	Centro de Investigación y Estudios Avanzados del Instituto Politécnico Nacional
CIPI	Comision Intersecretarial de Política Industrial
CIQA	Centro de Investigación de Química Aplicada
CNAD	Centro Nacional de Actualización Docente
CNEC	Cámara Nacional de Empresas de Consultoría
CNIC	Cámara Nacional de la Industria de la Construcción
COMART	Comité de Apoyo a la Actividad Artesanal
COMIN	Comisión Mixta para la Modernización de la Micro y Pequeña Industrial
COMINSA	Corporación Mexicana de Investigación en Materiales, S.A. De C.V.
COMPITE	Comité Nacional de Productividad e Innovación Tecnológica
CONACYT	Consejo Nacional de Ciencia y Tecnología
CONALEP	Colegio Nacional de Educación Profesional Técnica
CONCAMIN	Confederación de Cámaras Industriales de los Estados Unidos Mexicanos
CONCERTEC	Comité de Concertación para la Modernización Tecnológica
CONOCER	Consejo de Normalización y Certificación de Competencia Laboral
COPARMEX	Confederación Patronal de la República Mexicana
COPLADE	Comité de Planeación de Desarrollo (Federal o Estatal)
COPLADEMUN	Comité de Planeación de Desarrollo Municipal
CRECE	Centro Regional para la Competitividad Empresarial

FIDEIN	Fideicomiso para el Estudio y Fomento de Conjuntos, Parques, Ciudades Industriales y Centro Comerciales
FIDETEC	Fondo de Investigación y Desarrollo para la Modernización Tecnológica (CONACYT)
FIRA	Fideicomisos Instituidos en Relación con la Agricultura
FOGAIN	Fondo de Garantía y Fomento a la Industria Pequeña y Mediana
FOMIN	Fondo Nacional de Fomento Industrial
FONAES	Fondo Nacional de Empresas de Solidaridad
FONEI	Fondo Nacional de Equipamiento Industrial
FONEP	Fondo Nacional de Estudios y Proyectos
FORCCYTEC	Fondo Nacional para el Fortalecimiento a las Capacidades Científicas y Tecnológicas Estratégicas
IIE	Instituto de Investigaciones Eléctricas
IMP	Instituto Mexicano del Petróleo
IMSS	Instituto Mexicano del Seguro Social
INAOE	Instituto Nacional de Astrofísica, Óptica y Electrónica
INCARURAL	Instituto Nacional de Capacitación Rural
INEGI	Instituto Nacional de Estadística Geografía e Informática
INFOTEC	Fondo de Información y Documentación para la Industria
INI	Instituto Nacional Indigenista
INIFAP	Instituto Nacional de Investigaciones Forestales, Agropecuarias y Pesqueras
ININ	Instituto Nacional de Investigación Nuclear
IPN	Instituto Politécnico Nacional
IQS	Internacional Certification of Quality System S.C.
ITAM	Instituto Tecnológico Autónomo de México
ITESM	Instituto Tecnológico de Estudios Superiores de Monterrey
IVA	Impuesto al Valor Agregado
JETRO	Japan External Trade Organization
JICA	Japan International Cooperation Agency
LANFI	Laboratorios de Fomento Industrial
NAFIN	Nacional Financiera, S.N.C.
NORMEX	Sociedad Mexicana de Normalización y Certificación
OJT	Entrenamiento sobre la Marcha del Trabajo (On the Job Training)
PAI	Programa de Apoyo a la Industria Mediana y Pequeña
PAT	Programa de Asistencia Técnica (BANCOMEXT)
PCT	Programa de Centros Tecnológicos (CONACYT)
PIB	Producto Interno Bruto
PIEBT	Programa de Incubadoras de Empresas con Base Tecnológica
PMT	Programa de Modernización Tecnológica (CONACYT)
PND	Plan Nacional de Desarrollo
PREAM	Programa para la Vinculación de las Empresas

PRODEM	Programa de Desarrollo Empresarial (NAFIN)
PROMYP	Programa de Apoyo a la Micro y Pequeña Industria
PRONASOL	Programa Nacional de Solidaridad
QAN	Quality Adviser Network, S.C.
QC	Control de Calidad (Quality Control)
RCCT	Registro de Consultores Tecnológicos (CONACYT)
RICSA	Red Interamericana Organismo de Certificación de Competencias Laborales
SARH	Secretaría de Agricultura y Recursos Hidráulicos
SAGARPA	Secretaría de Agricultura, Ganadería, Desarrollo Rural, Pesca y Alimentación
SCT	Secretaría de Comunicaciones y Transporte
SDN	Secretaría de la Defensa Nacional
SE	Secretaría de Economía
SECODAM	Secretaría de Contraloría y Desarrollo Administrativo
SECTUR	Secretaría de Turismo
SECUD	Secretaría de Educación, Cultura y Deportes
SEDAF	Secretaría de Desarrollo Agropecuario y Forestal
SEDER	Secretaría de Desarrollo Rural
SEDESOL	Secretaría de Desarrollo Social
SEDIC	Secretaría de Desarrollo Industrial y Comercio
SEGOB	Secretaría de Gobernación
SEMAR	Secretaría de Marina
SEMARNAT	Secretaría del Medio Ambiente y Recursos Naturales
SEMIP	Secretaría de Energía, Minas e Industria Paraestatal
SEP	Secretaría de Educación Pública
SEPESCA	Secretaría de Pesca
SRE	Secretaría de Relaciones Exteriores
SHCP	Secretaría de Hacienda y Crédito Público
SNC	Sociedad Nacional de Crédito
SRA	Secretaría de la Reforma Agraria
SS	Secretaría de Salud
STPS	Secretaría del Trabajo y Previsión Social
TPM	Mantenimiento Total Productivo (Total Productive Maintenance)
TQC	Control de Calidad Total (Total Quality Control)
UAM	Universidad Autónoma de México
ULSA	Universidad La Salle
UNAM	Universidad Nacional Autónoma de México
UTT	Universidad de Transferencia de Tecnología
UVM	Universidad del Valle de México

Introduction

Introduction

1. Background of the Study

- (1) A wide variety of programs in support of the small and medium enterprises of Mexico are provided by a similarly wide variety of organizations, owing to the importance Mexico assigns to promotion of the SME sector. A number of those organizations (including public entities and governmental financial institutions dedicated to development) provide diagnostic and guidance services by Mexican consultants as an effective method of raising the technical and managerial levels of SMEs. The Ministry of Economy (SE) provides SMEs with consulting services through CETRO-CRECE network and COMPITE over the country.
- (2) Mexico, nevertheless, confronts the dual problem of a shortage of consultants qualified to provide diagnostic and guidance services to SMEs, and a need to improve the quality of such consulting services. The national system for certifying and registering consultants, it should be added, has been set up and is becoming well established. Some complaints have been registered, however, regarding the new certification system.
- (3) Against this background, the Ministry of Economy requested the Government of Japan to undertake this study with a frame work of the following.

2. Objective of the Study

This study has the objective of formulating a training and certification system for SMEs consultants who are to provide diagnostic and guidance services to SMEs so that the SMEs can improve the level of the managerial and technical standards in the face of the intensifying pressure of international competition that has resulted from the liberalization of the economy and policies for market opening.

The study as is embodied in this report and with the cooperation of the counterpart body, CETRO-CRECE, therefore has included a pilot project in Mexico for training of consultants, and derivation of recommendations for diagnostic and guidance methods based on the prevailing conditions; in addition it formulates a plan for creation and operation of a system for certifying and training consultants for assisting Mexico's SMEs.

3. Target Sector

The study is primarily concerned with manufacturers of small and medium scale.

4. Geographic Scope

The study was principally carried out in Mexico City; the pilot project was done in Mexico and Puebla States.

Mexico City was the site of studies and discussions on the existing system owing to the location there of the counterpart body, SE and CETRO as well as many other related institutions. In Mexico and Puebla states there are a large number of SMEs, and the head office of CRECE. CRECE has 32 branch offices; the two in these areas were selected for the pilot project.

5. Scope of the Study

The scope of this study is as indicated in Table 1 of the Scope of Work document (S/W) agreed upon by the Preparatory Study Team dispatched by JICA, and CETRO, on September 5, 2000.

6. Counterpart and Steering Committee

The counterparts for the study were the SE and CETRO-CRECE; the following 16 organizations composed a Steering Committee for the study. The counterparts worked out of the office of the Steering Committee. Six institutions were added to the committee subsequent to the signing of the S/W.

- 1) SE (Secretaría de Economía)
- 2) CETRO (Centro para el Desarrollo de la Competitividad Empresarial)
- 3) CIPI (Comisión Intersecretarial de Política Industrial)
- 4) CONOCER (Consejo de Normalización y Certificación de Competencia Laboral)
- 5) COMPITE (Comité Nacional de Productividad e Innovación Tecnológica)
- 6) CIMO (Calidad Integral y Modernización)
- 7) NAFIN (Nacional Financiera, SNC)
- 8) BANCOMEXT (Banco Nacional de Comercio Exterior)
- 9) ITESM (Instituto Tecnológico de Estudios Superiores de Monterrey)
- 10) ITAM (Instituto Tecnológico Autónomo de México)

Table 1 Scope of the Study

1. *Review of SMEs' current situation and development policies of SMEs in Mexico*
 - 1.1 *Review of general situation of SMEs and identification of consulting needs of SMEs*
 - 1.2 *Review of policy and measures related to SMEs development*
2. *Study on existing system of SMEs consultants*
 - 2.1 *Review of existing SMEs consulting system*
 - 2.2 *Assessment of SMEs consultants' activities and their level*
 - 2.3 *Examination of applicability of Japanese training and certification system for SMEs consultants*
3. *Review and elaboration of the consulting methodology for improvement of existing SMEs and creation of new enterprises*
 - 3-1 *Review of Japanese experience on the consulting methodology*
 - 3-2 *Elaboration of the consulting methodology applicable to the Mexican SMEs*
4. *Pilot project implementation of enterprises diagnosis and SMEs consultants training*
 - 4-1 *Identification of SMEs consultants' formation and training needs for the pilot project*
 - 4-2 *Conducting pilot training for CETRO-CRECE Network consultants*
 - 4-3 *Conducting pilot diagnoses of model companies based on the elaborated consulting methodology*
 - 4-4 *Assessment of the pilot project results and the applicability of the experience of the pilot project to the CETRO-CRECE Network*
5. *Formulation of organization design and implementation guidelines of training and certification system*
 - 5-1 *Designing implementation organization of training and certification system*
 - 5-2 *Formulation of enterprises diagnosis guideline*
 - 5-3 *Formulation of training guideline*
 - 5-4 *Formulation of examination and certification guideline*
6. *Conclusion and recommendations*

- 11) ULSA (Universidad La Salle)
- 12) CNEC (Cámara Nacional de Empresas de Consultoría)
- 13) CONACYT (Consejo Nacional de Ciencia y Tecnología)
- 14) UNAM (Universidad Nacional Autónoma de México)
- 15) IPN (Instituto Politécnico Nacional)
- 16) UVM (Universidad del Valle de México)

7. Study Schedule

Four field trips were made in the course of the study. The primary working objective of the field trips were as follows.

(1) Field Trips

- 1) First field trip (Feb. 2 to March 26, 2001; 44 days)
 - Basic study of the certification and training system
 - Company visits (26 in Mexico and 26 in Puebla)
 - Seminar to present the contents of the Japanese scheme for certifying SME Consultants (March 13)

- 2) Second field trip (June 3 to July 14, 2001; 42 days)
 - Study of the certification and training system
 - Implementation of the first pilot project (Mexico City; 3 weeks)

- 3) Third field trip (Sept. 2 to Oct. 13, 2001; 42 days)
 - Study of the certification and training program
 - Implementation of the second pilot project (Mexico and Puebla; 3 weeks)
 - Opening of Seminar I (Oct. 5; Mexico and Puebla)

- 4) Fourth field trip (Nov. 26 to Dec. 5, 2001, 10 days)
 - Presentation and discussion of the draft final report
 - Opening of Seminar III

(2) Reports

- 1) Feb. 2001 Inception Report
- 2) Mar. 2001 Progress Report (I)
- 3) June 2001 Progress Report (II)
- 4) Sept. 2001 Interim Report

- 5) Oct. 2001 Progress Report (III)
- 6) Nov. 2001 Draft Final Report
- 7) Jan. 2002 Final Report

Chapter 1

Present Status and Issues of the Consulting Industry in Mexico

Chapter 1 Present Status and Issues of the Consulting Industry in Mexico

1.1 SMEs in Mexico

The definition of enterprise scale used in Mexico, using the criterion of number of employees, as shown in Table 1.1-1, and in Table 1.1-2 the distribution of enterprises by sector by scale is provided. From these data, it is evident that the number of enterprises in Mexico is 3,300,000, of which 99.8% are micro-, small or medium enterprises. Of this, 96.2% are microenterprises and thereby include the informal enterprises sector and sole proprietorships. The data are for the number of enterprises as an economic unit, and therefore exceeds the actual number of companies.

Table 1.1-1 Mexico's Definition of Company Scale (By Number of Employees)

Industrial Sector	Micro-enterprises	Small enterprises	Medium enterprises	Large enterprises
Manufacturing	0 ~ 30	30 ~ 100	101 ~ 500	501 or more
Commerce	0 ~ 5	6 ~ 20	21 ~ 100	101 or more
Services	0 ~ 20	21 ~ 50	51 ~ 100	101 or more

Source: Diario Oficial de la Federation; March 15, 2000

Table 1.1-2 Distribution of Companies by Sector by Scale

Industrial Sector	Micro-Enterprises	Small enterprises	Medium enterprises	Large enterprises	Total	(Unit: 1,000)
						Of which Micro, Small and Medium
Manufacturing	377.0	11.9	5.5	1.5	395.8	394.3
Commerce	1,513.3	66.0	12.8	2.0	1,594.2	1,592.1
Services	1,233.7	16.2	4.7	3.1	1,257.8	1,254.6
Others	36.8	0.5	0.1	1.0	37.5	37.4
Total	3,160.8	94.5	23.0	6.8	3,285.2	3,278.4
Total (%)	96.2	2.9	0.7	0.2	100.0	99.8

Source: INEGI

1.2 Supply and Demand of Consultants, and Registration

Because the Ministry of Economy considers the promotion of microenterprises and SMEs to be an important policy, it views consultation through corporate diagnosis and

guidance as indispensable for achievement of that policy objective. The Ministry of Economy estimates, however, that if, provisionally, 15,000 companies a year, that is a current tempo, were to be provided with such consultation it would require 40 years to satisfy the demand. To overcome this shortfall of consultation capacity, the ministry has formulated a plan for creation of CONSULTE, which would educate 4,000 to 5,000 consultants a year as preparation for them to work on behalf of micro- and SMEs. New graduates of CONSULTE would be primarily assigned to providing diagnosis to micro for adoption of modern management practices. Here, however, note that as shown in Table 1.1-3, the estimated number of registered consultants in 2000 was 2,135, and the number of instances in one year wherein they provided consulting service came to 14,554.

The number of consultants registered at CIPI-BDC, as of October 30, 2000, was 1,701 (see Table 1.1-4). The coverage of the BDC data is some 80% by comparison to the information collected by the JICA team as compiled in Table 1.1-3 of its still-short history.

Table 1.1-4 Number of Consultants Registered with CIPI-BDC

(As of October 30, 2001)

Name of Program	Implementing Agency	No. of Registrants
CETRO-CRECE Network	SE	145
COMPITE	SE	57
ISO 9000	SE	122
RCCT	CONACYT	565
CAT	NAFIN	73
PAT	BANCOMEX	17
CIMO	STPS	692
FONAS	ES-SEDESOL	30
Total (%)		1,701

Source: CIPI

The sole governmental agency which permanently employs consultants is CETRO-CRECE, which has 305 consultants. The remaining 86% represent not much more than registrations, as many of these other consultants are engaged only in repetition of standard programs offered by their employers. Consultants with COMPITE, for example, are assigned solely to repetition of COMPITE's workshops. A similar situation prevails at CONACYT. The programs at these institutions each have their own features, and it would be difficult for a consultant to work for more than one institution.

Table 1.1-3 Overview of Consultant-Related Institutions (As of 2000)

Entity	Year est.	Status (Oversight agency)	Contents of Services	No. of beneficiary enterprises	Ratio of micro-enterprises	Ratio of manufacturers	No. of full-time consultants	No. of branches ²
CETRO- CRECE	1996	Private (SE)	Direct-contact consulting	5,637	90	33	305	80 (32 states + 48 offices)
COMPITE	1997	Foundation (SE)	Direct-contact consulting	2,000	62	90	200	Consultants in 23 states
CONAYCT	1970	Science & Technology Agency (Min. Edu.)	Subsidies, credits for consultant costs	392	N.A.	N.A.	577	Regional reps in 11 locations
NAFIN	1934	Nat'l bank (Min. Fin.)	Credits for consultant costs	5,000	90 ³	80	255	32 domestic, 5 abroad branches
BANCOMEX	1937	Nat'l bank (Min. Fin.)	Subsidies for consultant costs	1,025	70	95	106	41 domestic, 3 abroad branches
CIMO ¹	1988	Central gov't (Min. Labor)	Subsidies for consultant costs	500	66	27	692	Reduced from 72 to 32
				14,554			2,135	

(Notes)

1. CIMO stopped consulting support activities in April 2001. For the number of CIMO's registered consultants, the number in the CIPI-BDC databank is used.
2. Branch numbers are as of June 2001.
3. Inclusive of small enterprises

Source: JICA Study Team work; see table at the end of Chapter 3 for details

1.3 Characteristics of Governmental Agencies' Consulting Services

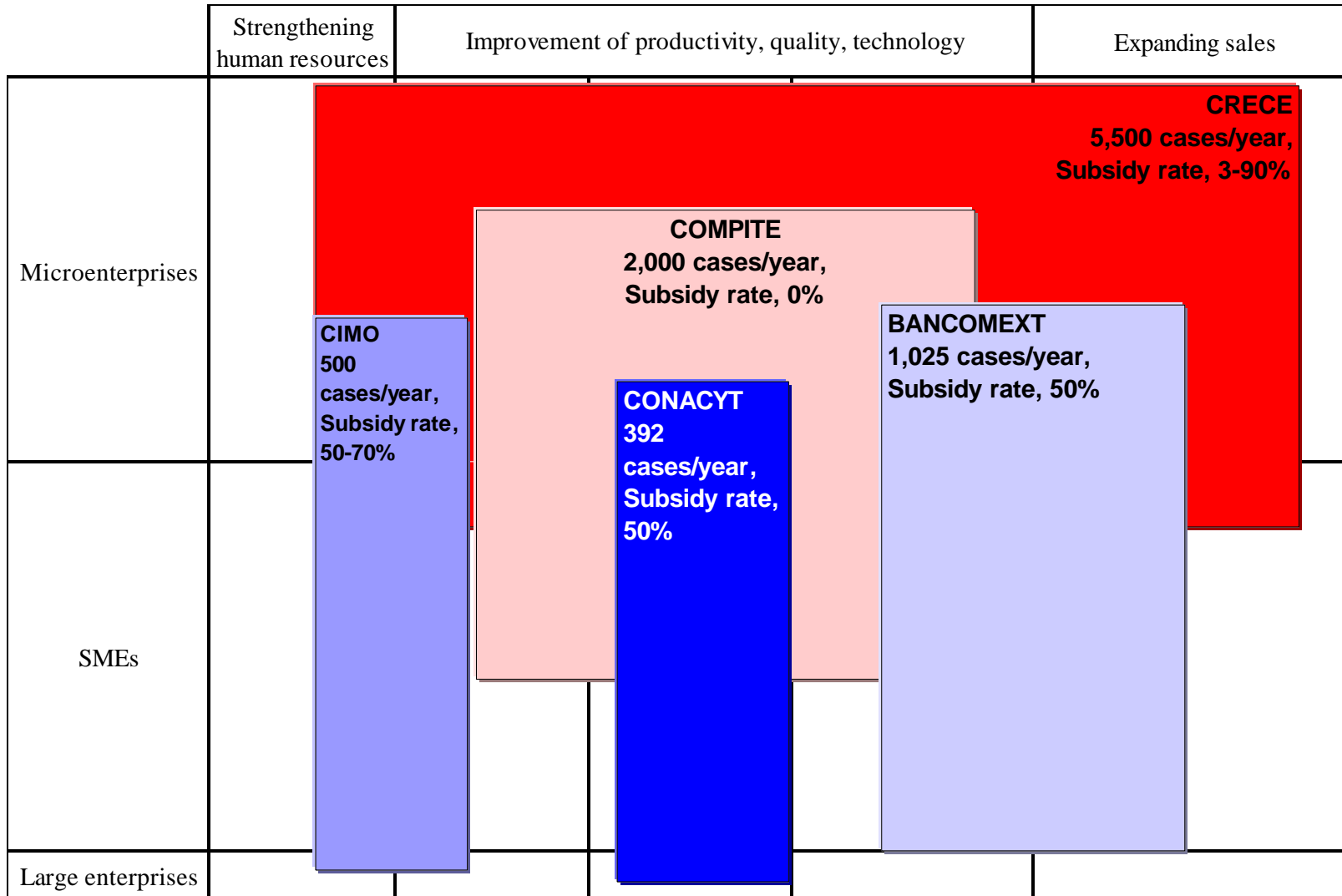
The area of activities within consulting services in Mexico can be demarcated into private-sector activities and governmental development programs. Those in the first group are provided to large and medium size enterprises, are diverse in content, and are provided at prices determined in the market for such services. Governmental consultation programs are provided to SMEs and microenterprises, and are primarily concerned with overall corporate diagnosis and technological improvements. Consulting programs for SMEs and microenterprises for the most part are governmental programs, and are implemented by the agencies in charge of the programs with use of support in such forms as subsidies. This study has been conducted with attention given primarily to the public consulting services provided to SMEs and microenterprises.

The following five entities are the major Mexican government agencies related to consulting on behalf of SMEs and microenterprises.

- CETRO-CRECE: Comprehensive enterprise diagnosis for microenterprises, by full-time consultants
- COMPITE: Guidance for improvement of production management techniques by hired consultants
- CONACYT: Subsidies or credits for costs of consultants required for modernization of technology
- NAFIN: Credits for costs of consultants for improvement of technology
- BANCOMEX: Subsidies for costs of consultants for export promotion

In addition to these, the Ministry of Labor's CIMO had provided consulting-support services but terminated them in April 2001. This was a result of the decision to have the ministry be dedicated the education and training of workers. It is likely that CETRO-CRECE, having a network of branch offices, will inherit the work that had been done by CIMO. Mention can also be made of CNEC, the private-sector association of consultants, as a related body. This organization, however, was formed as an association of civil engineering and architectural consultants, and at this time is not engaged in SME consulting on a substantial scale. A schematic diagram of the features of these organizations is provided as Figure 1.1-1.

Figure 1.1-1 Target Enterprise Categories of Entities Providing Consultant Support Services



Source: JICA Team Mission

* NAFIN is excluded owing to its activities being limited to finance.

Chapter 2

Present Status and Issues of Mexico's Consultant Certification System

Chapter 2 Present Status and Issues of Mexico's Consultant Certification System

2.1 CONOCER's General Standards for Consultants

(1) Background of the Determination of the General Standards

Mexico's system of certification of consultants has been devised within the framework of the technical skills certification system. To provide assurance of what is represented by technical skill levels and to improve the capabilities of technical workers, a system for public certification of standards is a vital necessity. One reason would be to improve the hiring process by standardizing the meaning of specific skill levels mentioned in help-wanted advertising as well as in personal histories submitted to employers. Through the present day, use has been made of diplomas and certificates of completion submitted by job applicants, and by in-house testing by employers, but these measures are not sufficient for the objective evaluation of abilities. Recognizing the need to adopt an initiative to correct this situation, CONOCER was established in 1995 with assistance from the World Bank and IDB, as a national agency for defining technical skill standards, measuring worker abilities according to those standards, and certifying that the workers had specifically defined technical skills.

Subsequent to a recommendation in a 1997 JICA study that a consultant certification system be adopted, consideration of including consultants in the certification program was made, primarily at CIPI, and CONOCER began to develop standards for consultants. In August 10, 1999 at CIPI's sixth meeting, SME consultant certification program was agreed, and in January 18, 2000 at CIPI's seventh meeting, the use of CONOCER's General Consultant Standards (First Version) was approved. The First Version was begun for trial use for the Second Version that is now under use. At the ninth CIPI meeting of January 22, 2001, it was decided that all consultants engaged for development programs subsidized by the government have been required to be certified as meeting these CONOCER standards. Although this requirement was to be effective from August 2001, there then were an insufficient number of evaluation and accreditation offices, few consultants could be certified, start was postponed to 2002. It was anticipated that the number of certified consultants would increase during 2001 as required for implementation of the government-assisted programs.

Any person seeking technical certification must go to an accredited testing center or commonly known by an evaluation center for evaluation. The results are sent to an

certification agency where the appropriateness of the evaluation procedures has been reviewed, and this agency then forwards its recommendation to CONOCER, the accreditation body. Certification of consultants follows the same procedures.

(2) Procedures for Certification of General Consultants

The stated purpose in having a scheme for certification of consultants is to assure transparency, objectivity and uniformity; the scheme has a three-layer hierarchy: accreditation, certification, and evaluation (testing). The roles of each are as follows.

Role of the Accreditation Body (CONOCER)

1. Establishing the criteria for certifying status
2. Signing of certificates and registration of consultants
3. Management and validation of the verification system
4. Approval of certification agencies and testing centers

Role of the Certification Agency (RICS, IQS)

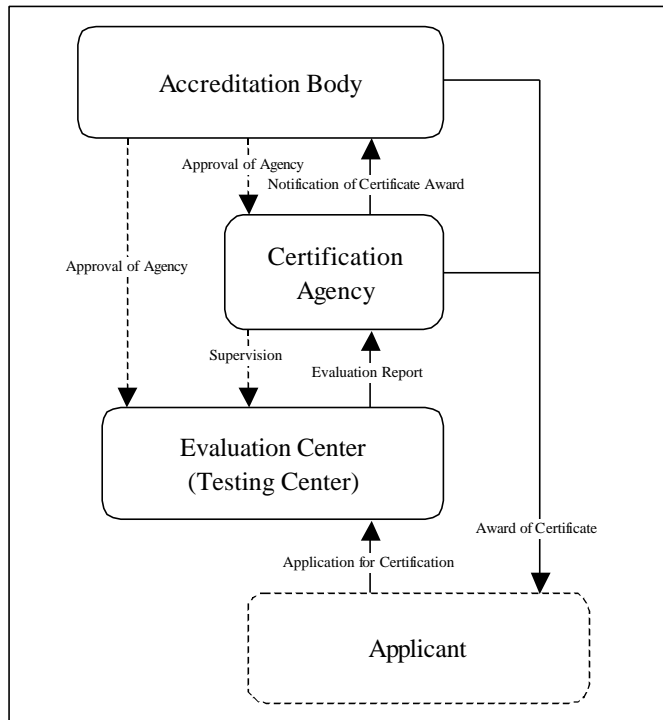
1. Check of the evaluation process used by evaluation centers
2. Development of evaluation tools
3. Decision on awarding of certificates on basis on evaluation results
4. Signing of certificates

Role of the Evaluation Center (Currently nine centers and increasing)

1. Evaluation by testing of applicants
2. Public information on the certification system

The roles of these three are inter-related as shown in the diagram below, where the broken lines represent the flow of verification and the solid lines the process of certification of applicants.

Figure 2.1-1 Flow Diagram for General Consultant Certification



(3) Actual Testing Procedures at Evaluation Centers

Judgment on whether the applicants actually possess the required competence is to be done solely by the Evaluation Center or the Testing Center. The standards for judging competence to function as a general consultant are made up of five units. Each unit has two or three elements (see Table 2.1-1). Competence is to be judged separately for each unit. Considerable time and expense would be required, however, for each applicant to be judged unit by unit, so that in practice most of applicants apply the five units at the same time.

Table 2.1-1 Evaluating Units and Evaluating Elements

Evaluating Unit	Evaluating Element
1 Competence to introduce a system into an existing organization	<ul style="list-style-type: none"> • Competence to draft implementation plans • Competence to design procedures and processes • Competence to implement plans
2 Competence to complete a consulting project	<ul style="list-style-type: none"> • Competence to complete work • Competence to evaluate results of an introduced system
3 Competence to analyze status of a company	<ul style="list-style-type: none"> • Competence to acquire information on past & present conditions • Competence to discern opportunities for the future amidst existing conditions
4 Competence to design new support systems	<ul style="list-style-type: none"> • Competence to design support systems • Competence to select systems to be introduced
5 Competence to market consulting service	<ul style="list-style-type: none"> • Competence to offer appropriate form of support to target enterprises • Competence to decide scope of services • Competence to contract for services

Source: CONOCER

The person evaluating applicants determines whether applicants have competence for each element or not. The evaluation is made by three means, confirmation of actual experience, the confirmation of possession of knowledge, and the confirmation of competence to develop. The actual methods used are written tests for confirming possession of knowledge, role playing for confirming competence to develop, and evaluation of submitted documents for confirmation of actual experience. Allocation of points to obtain a score is about as follows.

Actual experience (verified by examining physical products):	60%
Development potential (role playing):	30%
Knowledge (7):	10%

Almost all of the evaluation is determined by review of documents as evidence of actual experience.

(4) Present Status of Certification Using General Consultant Standards

As of February 2001, 306 persons have been certified using the standards for general consultants. Certification is by means of scoring or evaluation units (see tale 2.1-1). It is not necessary to be scored all at once for each of the five units (credit), and an applicant can acquire scores for all five over a period of time. The extent of certification as of February 2001 is that 1,530 units have been awarded. The composition of certification done by RICSA to date is as follows.

Table 2.1-2 Number of Certified General Consultants

(As of February 2001)

Consultancy	No. Certified
CIMO	196
COMPITE	20
CONACYT	1
CONOCER	9
CETRO-CRECE	2
FONAES	4
SECOFI-NAFIN-CAT	3
Independent individual consultants	71
Total	306

Source: RICSА interviews

2.2 Issues Related to General Consultant Standards, and Recommendations

(1) Conclusion and Issues

1) Issues Arising from the “Generality” of Standards

According to CIPI, the general consultant standards used by CONOCER are intended for certifying consultants who serve micro- and SMEs, but they appear to have been developed for use by consultants working in all or any field. They would be used, for example, in both manufacturing and by consultants in civil engineering or construction work. The standards are devised to comprehensively evaluate competence at business processes in the areas of sales, booking orders, diagnosis, implementation, and reporting, but there are no separate standards for specialized fields.

2) Professional Level of Certified Consultants

There seems not to be clear yet in effective means to evaluate the professional level of a person who has met the standards for certification as a general consultant. The professional level of certified consultants depends upon the criteria used by each evaluation center or evaluator. Evaluation is supposed to be done on the basis of all of the criteria, but because use is made of document review, objectivity in the application of standards is endangered. Further, these standards set the minimum level for a consultant’s competence, and hence are lower than the master level at CETRO-CRECE or the registration standards at COMPITE and CONAYCT.

3) Problems Attending the Mandatory Acquisition of Certification

From 2002 consultants who are to participate in official or subsidized development programs are required to possess certification by the general consultant standards.. This is mandatory, but in actuality at present it is estimated that there are 2,135 consultants at present, and certification delays will delay in implementation of SME promotion programs of the Government. The significance of the system itself would be lost if, as a means of coping with this situation, standards were lowered and essentially all applicants were deemed deserving of certification. Conversely, among the specialized consultants registered at CONACYT there are some who do not meet requirements of so generalized existing standards conversely of their specialties. A tendency is already evident for specialized consultants who have pride in their professional ability to refrain from certifying, further lowering the authority of the standards.

4) Certification Expenses

Evaluation is done for the fee of 7,000 pesos (about 8,000 with addition of VAT), and required seven hours. Applicants must also expend time and incur some expense to assemble the documents required for submission. The true cost of obtaining certification must be considered as the direct expense plus imputed expense (the value of the applicant's time) plus the opportunity cost. Governmental institutes that are work in the consulting area are moving towards covering all or part of the direct expense, but some institutions are constrained from so doing. Charging a high fee, to an independent consultant who must bear the entire cost, hampers the increase in applications.

5) Evaluation Method

A delicate relationship exists between the standards used and the method of applying them. The weakest points would be that given the emphasis on document review tools for evaluating "ability and knowledge themselves" have not been adequately prepared and deployed. This would be a consequence of the use of ISO procedures. For applicants, because to the business of collecting and preparing application documents, the key aspect of evaluation i.e. the measuring of professional level is somewhat slipped out. After the number of testing centers is increased, it is possible that there will be a concentration of applicants at those centers said to be easier places in evaluations. There is no reason not to expect some lenient centers to emerge, if centers scramble for the limited number of applicants.

(2) Recommendations

1) Make High-Demand Area, Microenterprises, the Objectives for General Consultant Standards

In order to eliminate the ambiguity caused by “Generality” as noted in the previous section, it is judged necessary to make the general consultant standards applicable for work on behalf of microenterprises and small-scale enterprises, by consultants providing initial-phase, comprehensive diagnoses. Even if the professional level of such work is relatively low, it would be satisfactory to provide effective guidance to microenterprises. It is suitable if a quantitatively adequate response is made to the enormous demand consulting services for the microenterprises that are scattered far and wide within the nation.

2) Additional Adoption of Consulting Standards to Cope with A Diversity of Requirements

The targets of promotion policies for SME and microenterprises are not limited to the latter. In order to improve the international competitiveness of Mexican companies in the world market, it is necessary to promote the modernization process at the level of medium and small enterprises as well. This requires arranging for certification of consultants who can meet higher level requirements at SMEs. In addition to junior consultants as defined by present schemes for general consultants, Mexico needs a certification system for consultants of a higher professional level than these junior consultants. It is recommended to add new certification standards for certifying senior SME consultants and technical consultants by industrial sector or type of business. The new certification standard shall include paper test for objective evaluation of applicants.

3) Study of Special Measures to Be Adopted During the Transition Period

Initiatives are needed (1) to ensure an adequate number of supply of certified consultants to meet requirements when employment of certified consultants will become mandatory since 2002 for government programs, (2) to correct the shortcomings of general consultant standards in the face of need for specialized consultants, (3) and to reduce the financial barrier to acquiring certified status. As measures to prevent and reduce confusion at the time the new system starts to function, it would be necessary to adopt some exceptional measures. It would be useful to give consideration to a grandfather’s clause whereby qualified consultants are entirely or partly exempted from the undergoing testing, or from

waiving test fees. These measures also cope with the expected shortage of certified consultants when the mandatory certification system will come effect in 2002.

4) Introduction of a Certification Renewal Arrangement

There is no provision in the existing general consultant standards for renewal of status. In order to ensure that consultant capabilities remain in harmony with the changes of the times, it is advisable to adopt a status renewal arrangement.

Chapter 3

Present Status and Issues of the Consultant Training System in Mexico

Chapter 3 Present Status and Issues of the Consultant Training System in Mexico

3.1 Overview of the System

Programs for preparing people to be consultants can be broadly divided into three categories, (1) college education in graduate's and master's courses (2) public programs for adults, offered by colleges and consulting-related institutions, and (3) internal training programs by consulting-related entities. The present situation for these three in Mexico is as follows.

- 1) IPN and UNAM are the two universities where courses are offered in the basic subjects required for working as a consultant. Both are old-line, national universities and have offered these courses since a considerable time ago. The courses are not a full set of subjects to create consultants but contain subjects necessary for consulting jobs.
- 2) Adult education programs are offered by some private universities such as ITESM and UVM. These are relatively new and are designed to match the general consultant standards of CONOCER. The courses and models used were developed by NAFIN and CANACINTRA for use by the universities. UNAM, a national university, at the request of CNEC plans to offer in the near future a program to satisfy the CONOCER standards; it is to include courses selected by the university. CNEC has offered courses on management of consulting firms through its subsidiary, IMDT, since five years ago.
- 3) Well-developed internal training programs are deployed at CETRO-CRECE and COMPITE. At the former there are three programs, at as many levels. At the latter, man-to-man OJT is combined with on-the-job screening is employed.

A schematic representation of the above three categories is shown in Table 3.1-1. In terms of scale, i.e., the number of persons trained, the category with the largest number is the first, college education, with 1,350, followed by the second category, diploma programs for adults, with about 100, and the third, in-house training with about 200. Thus, the scale of adult education and training to become a consultant is small in number of trained persons. Many of the programs combine classroom work with study in the field, because it is recognized that both broad knowledge and the capability of applying it to real-world situations are necessary attributes of a consultant. The college courses and in-house training do not comply with the CONOCER general consultant standards. Almost all of the adult education programs under planning comply with CONOCER

Table 3.1-1 Present Status of Training Courses

Category	Status	Institution & Course Name	Target			Annual enrollment	Focus of Education	Duration (Semester or Month)	Net Hours		Applicability of General CONOCER Standards	Fee in Pesos
			Bachelor's	Master's	Adults				Class-room	Lab or field work		
College course	On-going	(IPN) Accounting & Consulting	x			450	Accounting audits Consult. techniques	1S	72	30	NO	
		(UNAM) Int'l Consulting		x	x	120	General consulting	1S	56	168	NO	
	Planning	(CETRO-CRECE) CONSULTE	x			780 (5000) *	Business management Consult. techniques Pedagogy	2S	106	2 mos., 3 times	NO	
		ITESM		x		N.A.	N.A.	2S	N.A.	N.A.	N.A.	
Adult education	Closed	(NAFIN-ITESM) Old form			x	(50)	CONOCER standards	3M	120	16 ~ 20	YES	20,000
	On-going	(NAFIN New form) Business development (promotion) & consultants			x	80	Kaizen practices	3 ~ 5M	120	As suitable	YES	22,000
		(CNEC-IMDT) Consulting & Management			x	20	Consultancy management	2M	64		NO	12,000
	Planning	(UMAM-CNEC)			x	N.A.	CONOCER standards + selectives	12M	150	N.A.	YES	18,000 - 20,000e0
		(UVM-CANACINTRA)			x	N.A.	CONOCER standards	N.A.	80	20	YES	5,000
Training of registered outsiders, in-house	On-going	(CETRO-CRECE) PROCASE			x	about 30	CRECE method	0.1M	24		NO	
		(COMPITE) WORKSHOP			x	about 100	COMPITE method + ability to apply in practice	2 ~ 3M		200	NO	
In-house training		(CETRO-CRECE) DECOIN-1, DECOIN-2			x	about 100	CRECE method	0.7M	53	100	NO	

*The number of future participants anticipated by this year's pilot project at CONSULTE was 5,000.

Source: Interview of the JICA team

standards or are said to comply to them. In historical terms, whereas the college courses and in-house training programs are made up of content based on own interest, the relatively recent adult education programs were deliberately patterned to comply with the CONOCER standards. The oldest course planned on the basis of the CONOCER standards, however, the old-form course by NAFIN (NAFIN-ITESM course), has had low attendance and is not being offered at this time. Nevertheless, the number of attendance to the old NAFIN-ITESM course is exceeded by the new-form NAFIN program and new UNAM program, which are not based on the CONOCER standards but offer higher level of education.

3.2 Issues and Recommendations Related to Training for SME Consultants

(1) Issues and Conclusion

1) Demand for Adult Education Programs

We cannot say that adult education programs today are popular. There appears to be little incentive to take adult education programs at this time. This is explained by the inability of diploma-holders to immediately find employment upon completion of the programs, nor to attain an increase in income. That is, there is little real demand for those diplomas. It is necessary for there to be a situation wherein the diploma and the certification system are linked, so that earning a diploma facilitates gaining a consultant's professional credentials and thereby entry into a well-paying field. Perhaps because the certification system is still new in Mexico, this kind of linkage has not yet been made.

2) Problems in the University Courses

It has been by means of the establishing of CONSULTE that a consultant preparatory program has been incorporated in a college curriculum. This was begun with a full application of the final two semesters to consultant education courses. The purpose behind offering this program is to increase the supply of consultants who can assist SMEs and microenterprises. Several problems can be anticipated. First of all, not all of the persons who go through this program will go into consulting work, so the increase of SME consultants that the objective of establishing the program will be achieved is by no means clear. A second problem is how to set up an organization that will provide support to offset the lack of experience of the fresh graduates, and how to assure them of gaining income.

3) Relations with the Institutions' In-house Programs

Governmental consulting-related organizations such as CETRO-CRECE and COMPITE operate internal training programs as one of the means to carry out their mandated functions. It would be suitable to consider two alternatives for improvement of these programs: either making the programs also accessible to outsiders as adult education programs, or creating public courses that incorporate some of the in-house material.

(2) Recommendations

1) Clarification of the Position of the Adult Education Courses

It is necessary that the consultant preparatory programs for adults have curricula matching the objective of satisfying demand. This demand, including potential demand, can be seen as having two areas. One is that the courses must be provided with curricula that anticipate the items used in examining applicants for consultancy certification. Under the present situation, wherein the standards for the current general consultant standards rely largely on the review of documentary evidence, it cannot be said that there is high demand for education in this area. If, however, the combination of a paper test, a practice test and an interview test as recommended by this report is adopted for certification of senior consultants, there would be a surge in demand.

A second area would be to provide a venue for education and training courses for self-study by persons aspiring to be consultants. The JICA study team implemented as a pilot project a training program for CETRO-CRECE senior consultants. It is said that consultants in other organizations expressed interest in participating in this project. It is necessary to study the matter of creating a training course having an integrated and high-level curriculum of both management and technical subjects.

It would be suitable to identify as the target or participant group for this as including, in addition to consultants, managers and employees of private-sector companies. The incentive for participants would be self-development.

2) Expanding the Horizon of Educational Courses in College Programs

The Ministry of Economy, which is behind the planning and operation of CONSULTE, desires that the graduates become consultants, or seek employment in private firms, or set up their own businesses. Whereas this is a proper way of

thinking, graduates of the existing college programs for training consultants already show this pattern. There is a problem in that the level of demand for consultants is not now at a high level, and financial resources are not yet enough for paying for such fresh consultants. College courses focus on modern management techniques that can be used in companies operating in the real world. Therefore CONSULTE graduates have the knowledge needed by private companies.

Regarding opening of CONSULTE, it should be kept in mind that a high evaluation should be obtained from private companies when its graduates seek employment. Moreover it is also recommendable that CONSULTE opens its doors to adults too, by offering them the opportunity to be trained in preparation for work as consultants. CONSULTE should also offer education opportunities to adults even who do not acquire certification in the fields of modern management techniques and production methods to the community.

Chapter 4

Program for Strengthening the SME Consultant Certification System

Chapter 4 Program for Strengthening the SME Consultant Certification System

4.1 The Role of the SME Consultant

(1) The Role of Promoter of National Policy for Support of SMEs

Mexico has deployed many programs for the support of the SME sector. Implementation of these programs is entrusted to a variety of organizations, and these organizations employ consultants to accomplish their objectives. Therefore, one important role of the SME consultant is to assist in the realization of SME promotion policy.

(2) Offsetting the Scarcity of Managerial Resources Among the SMEs

SMEs suffer from chronic shortages of human resources, finance, and equipment. By utilizing his knowledge and experience, the SME consultant directly and indirectly assists SMEs to overcome these shortages.

(3) Contribution to Improving SME Competitiveness

Following the progression in size from microenterprise to small to medium size company there is an increase in proximity to international markets and competition with imports. By utilizing the modern technology known to or held by the consultant, the SME consultant contributes to modernizing SMEs so that they have improved competitiveness.

4.2 The Special Nature of the SME Consultant

Compared to the consultant working for large enterprises, a consultant assisting SME has the following special features in the environment in which he functions.

(1) National Support Programs Are the Main Venue

Micro-, small- and medium-size enterprises by their very nature require assistance by consultants. But this demand does not smoothly emerge in the form of a market demand factor because these companies tend to lack the financial resources to hire consultants, and tend to lack the ability implement necessary changes. This is the reason behind national subsidies for part of the cost of SME use of consultants. The market for consultancy services for large enterprises is to a great extent defined by large-scale projects, but the

market for the services of SME consultants is primarily the various national programs in support of the SMEs.

(2) A Field Where Individual Consultants Are Active

It is because of the reasons stated above that SMEs lack funds for the fee and overhead for hiring a company in the consulting business. Therefore most of the SME consultants are independent business operators.

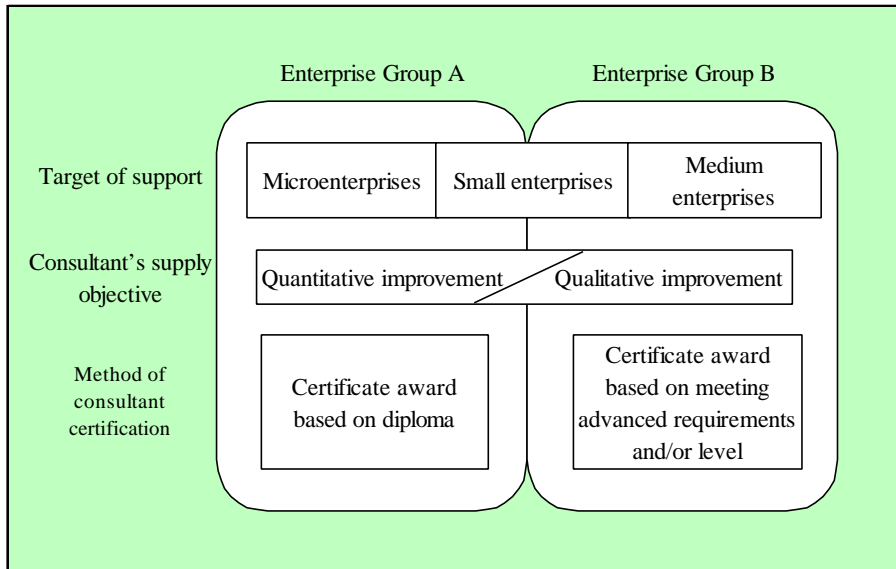
(3) Requirement of Having Wide and Practical Knowledge and Experience

In providing consulting services to a large enterprise, the consultant is assigned to a specific task and a team is formed to work towards the objective. An SME consultant, for the reason given in 2) above, cannot work in this manner. For this reason it is necessary for the SME consultant to acquire a wide range of knowledge and experience so as to work with many facets of a diversity of problems.

4.3 The Duality of SME Consultants

Micro-, small and medium scale companies are often lumped together, but among the small companies smaller ones will be found some which retain natures of microenterprises (company group “A” above). Some larger companies among the small scale ones, moreover, can be grouped together with medium companies (group “B”). The definition used for microenterprise of a manufacturing sector in many countries is that they have 10 or fewer employees, but the Mexican definition is 30 or fewer. Government support policies should be enunciated separately for the smaller enterprises in SMEs or group A, and the larger enterprises in SMEs or group B. Therefore, the work of consultants should be similarly differentiated. This relationship is shown in the following diagram.

Figure 4.3-1 Schematic Diagram of the Polarity of SME Consulting



For enterprises in group A, consultants who are like extension agents or instructors visit the smaller enterprises and provide initial-stage, general diagnoses and guidance. A large number of these consultants are required. Enterprises in group B face the challenges of emerging the winners in exporting to the international market or in competing with imports in the domestic market. For these enterprises, the consultant required must possess up-to-date sensitivity such as is needed to improve competitiveness, and must have abilities on a higher level than the consultants serving group A. For the latter group, certification therefore is to be based on the satisfaction of relatively advanced requirements.

4.4 Framework for Strengthening the Certification System

(1) Basic Orientation

Specific initiatives recommended for improvement of the existing system of certification, as mentioned in Chapter 2, are as follows.

- 1) New adoption of certification standards for senior SME consultants
- 2) New adoption of certification standards for consultants specializing in one or another industry
- 3) Addition of paper tests and practice tests as the basis of evaluation criteria

The above measures are believed that the existing general consultant standards are effective for increasing the number of supply of consultants. Therefore existing

standards shall continue. As measures to improve the quality of consultants, 1) and 2) above will be valuable. This is schematically shown in Fig. 4.4-1.

(2) Basic Plan

The basic plan for a new set of standards for certification of consultants is depicted in Table 4.4-1. The present system of certification comprises standards for consultants for smaller companies in SMEs or group A; this corresponds to the new “junior” consulting division of the new system proposed in this report. Those currently certified consultants who are not in a category of “SME consultants” will be automatically certified as “assistant technical consultant” in the new system. It is deemed that certification of the junior SME consultant and the “assistant technical consultant” is the minimum requirement for working for Government subsidized programs. It is postulated that CETRO-CRECE junior consultant level ability will be used to determine the passing level.

Within the standards for SME consultants, those incorporated in the test at the senior level will be more rigorous, so that those consultants who can provide advanced levels of support for improvement of international competitiveness can be selected. Applicants who pass at this level would be equivalent to master consultants and upper-grade senior consultants at CETRO-CRECE, or workshop consultants at COMPITE. Those who meet “senior” consultant requirements would be automatically accorded the authority that accompanies “junior”. That is, they would be qualified to work in government subsidized programs. It can also be anticipated that senior consultants will be active more in commercial basis other than Government programs.

Technical consultants will be certified for consultancy work in specialized fields. They would not be called upon to provide generalized diagnoses, guidance and so forth for micro-, small or medium-scale enterprises. They would be at the level of consultants registered by CONACYT. They would be selected through a rigorous test, and there would also be a junior category for those working as assistants to technical consultants. In either case, certified consultants would be qualified for work in governmental development programs.

Figure 4.4-1 Consultant Quality and Quantity

	Objective companies	Specific target	Conditions for certification	Standards	Education
Quantity	Microenterprises	Development of owners and managers	Minimum requirements	General consultant standards	CONSULTE
Quality	SMEs	Improved competitiveness	High-level requirements	Addition of new standards	Adult education

Key point: Introduction of a paper test and field test

Table 4.4-1 Basic Program for New Consultant Qualification Standards

		SME Consultant Standards (Junior Level)	SME Consultant Standards (Senior Level)	Technical Consultant (Specialist)
1. Purpose of Standards		Certification to increase advisors serving microenterprises	Selective grading of SME consultants	Grading of specialized technical consultants
2. Target Services		Primarily for microenterprises in outlying regions	Primarily for SMEs	No restriction based on size of enterprise
3. Major Tasks		General, introductory diagnoses and advice	General diagnoses and guidance, detailed diagnoses and guidance in management techniques, production technology	Concentration on diagnosis of specialized technology and related guidance
4. Sector or Area		All industries, all areas taken together	Testing for two categories, manufacturing, and combined services and commerce. Support for improvement of international competitiveness	19 areas of specialization (cf. precedent, experience of Japan)
5. Method of Testing	Qualification to sit for test	None	None	Assistant to technical consultant status; experience of 4-7 years or longer; no requirement for assistant to technical consultant
	Document review	Weight, 20%; review of school record, work record, experience record	Weight, 10%; evaluation of experience on basis of school and employment records	Weight, 15%; verification of actual experience record
	Paper test	Weight, 50%; covering (1) basics and (2) ethical codes	Weight, 70%; covering (1) basics and ethical codes, (2) common areas; (3) specialization fields	Weight, 70%; covering (1) basics and moral, (2) common areas; (3) specialization fields
	Practice test	Weight, 15%; covering (1) diagnostic ability, (2) suitability as a consultant, (3) ability to interact with clients	Weight, 10%; same as left	None; not appropriate
	Interview	Weight, 15%; covering suitability as a consultant	Weight 10%; same as left	Weight, 15%; covering (1) basics and moral, (2) verification of submitted documents
6. Renewal of Certification		Required at 5-year intervals	Required at 3-year intervals	Required at 3-year intervals
7. Entity to Determine Standards		CONOCER	CONOCER	CONOCER
8. Notes		Consultants other than SME consultants will be certified by technical consultant standards. Persons awarded by general consultant standards are automatically given junior status	Certified junior consultants are waived from the document review and part of the written test for SMEs	Review emphasizes technical area in question. Applicants who have any other certifications or are renewing status are to be waived part of the paper test

4.5 Implementation Plan for Introduction of the New Certification System

(1) Basic Orientation of the Implementation Plan

Additional detailed discussion of the new SME consultant certification system as described above, and plans for its adoption, are provided in this section. The procedure is as follows.

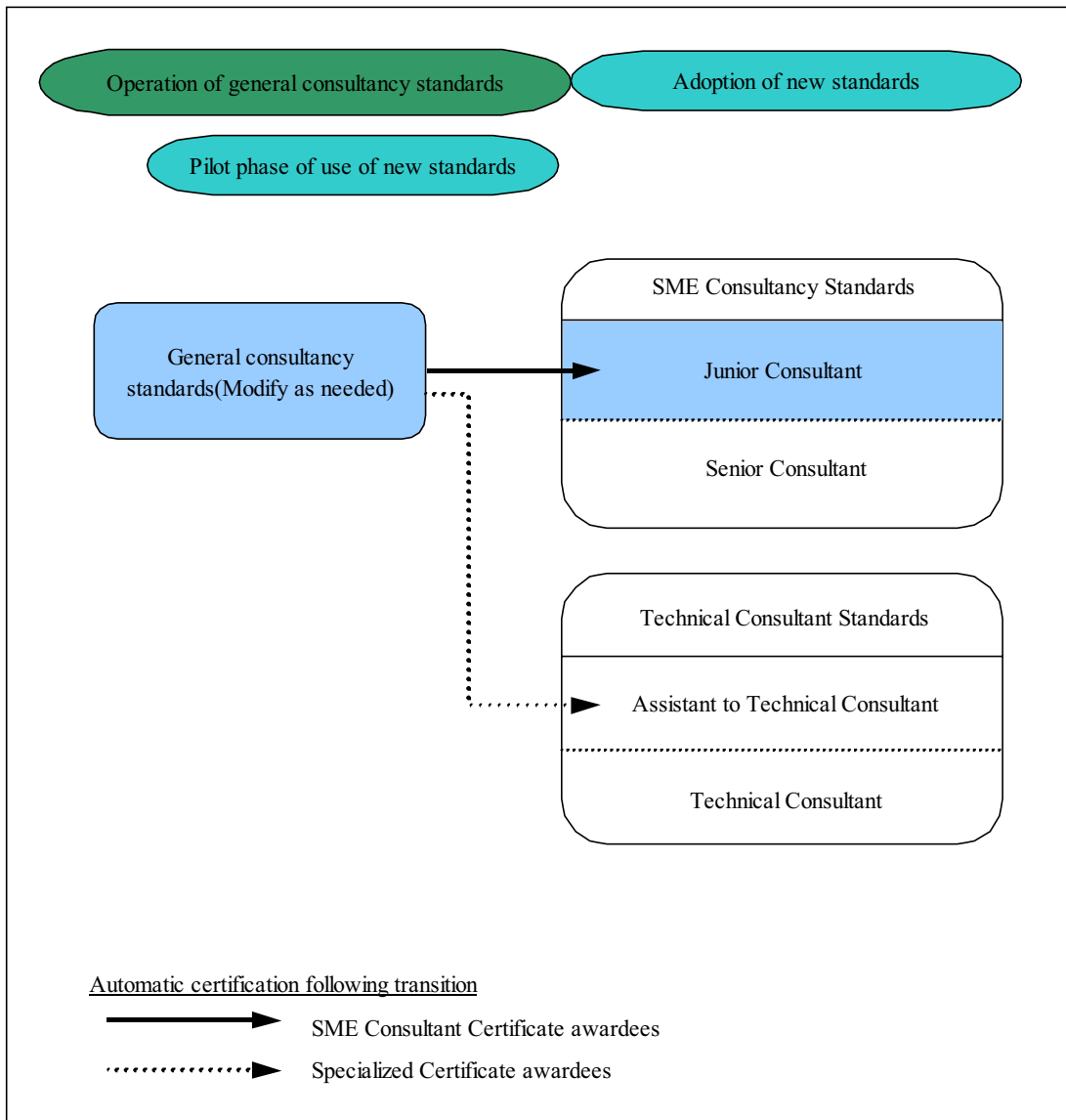
- (1) The existing general consultant standards continue to be in force. If needed, modifications can be made.
- (2) Various preparations start immediately. These preliminary tasks include planning and trying out of an early version of the training course, the paper test, and practice tests.
- (3) When the new system has been prepared and is launched, the existing general consultant system is absorbed into it.

The term “implementation scheme” used in this section refers to activities for introduction of new training and certification system proposed in this report.

The reason why a new system is needed can be said that the new system involves paper tests and practice tests. Preparatory works are needed because the existing system does not provide these tests. To abandon the existing system, that has just become established, however, would be to lose out on all the efforts made until now. For this reason the basic orientation provides for continuation of the existing system. Specifically, there are the following two points.

- (1) An implementation scheme is to be devised using the existing framework of the skill standards system of CONOCER.
- (2) CONOCER is to continue acting as the accreditation body, and the certification agencies and evaluation centers are to be subsidiary to it.

Figure 4.5-1 Framework for New Consultancy Standards

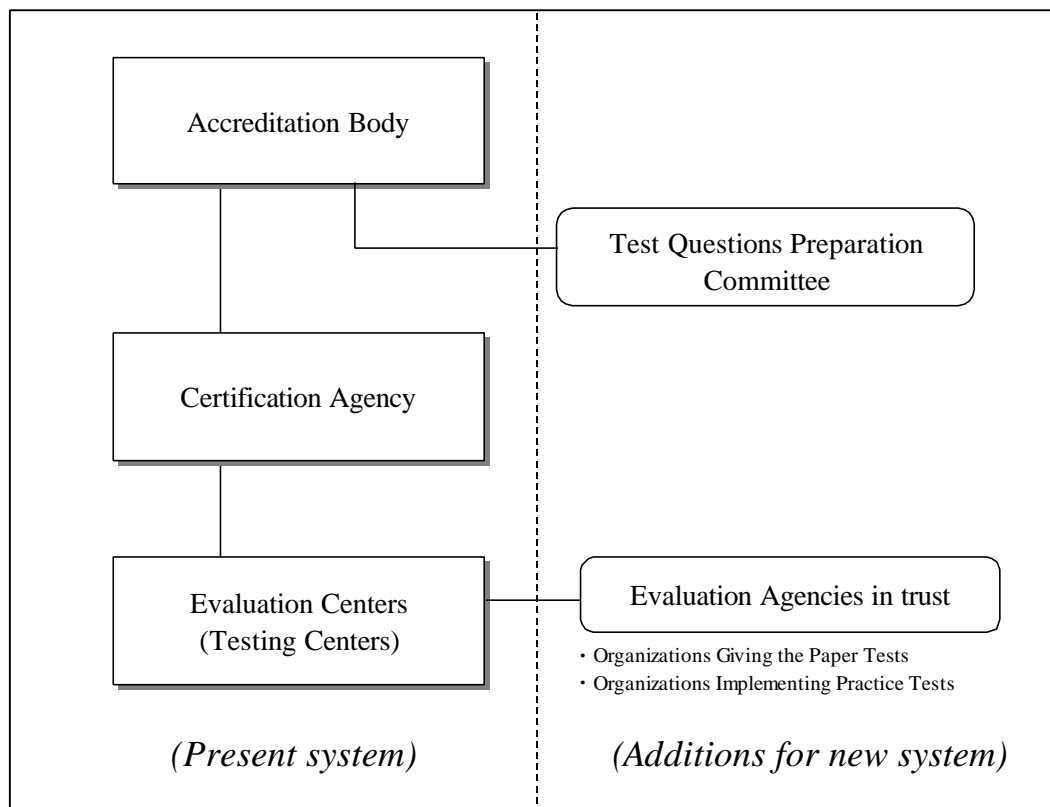


(2) Overview of the New System

Drafting of the new SME consultant standards, as stated above, will be done by CONOCER, the accreditation body. In order to ensure unification and coordination of the testing, the Test Questions Preparation Committee is to be appointed by CONOCER. Objective and standardized screening on a national scale will be made possible by uniform use of the test problems throughout the nation. The accreditation body will as it has been doing continue to provide the supervision and oversight of the testing and certificate award processes. Further, as the existing testing centers do not at this time have the

functions of giving paper or field tests, the testing centers will be required to outsource this to suitable organizations.

Figure 4.5-2 Scheme for the New Certification System



(3) Make-up and Functions of Related Organizations

Table 4.5-1 Administration of Certification Tasks, and Certification Agencies

Certification Task	Institution	
Setting of standards	Accreditation Body: CONOCER	
Certification	Accreditation Body and Certification Agencies	
Preparation of test questions	Test Question Preparation Committee	
Giving paper tests	Testing centers are commissioned by institutions at right	Universities
Giving practice tests		Government-related consulting agencies
Giving of interviews	Evaluation Centers	
Document review		
Overall scoring		

1) Accreditation Body

<Responsible Institution>

CONOCER, as at present, is to be the responsible institution.

<Function>

In addition to the existing functions, CONOCER will appoint the Test Questions Preparation Committee and manage a secretariat.

2) Certification Agencies

<Responsible Institution>

Certification will be done as at present.

<Function>

Regarding development of new evaluation tools, the preparation of the paper tests and drafting of guidelines for the practice tests will be the responsibility of the Test Questions Preparation Committee.

3) Evaluation Centers

<Responsible Institution>

Testing will be done by the existing evaluation centers.

<Function>

Evaluation centers will outsource the paper and practice tests, but will supervise the actual testing. They will undertake the review of submitted documents and interviews as at the present time, and incorporate all the evaluation work into the overall result.

4) Test Questions Preparation Committee

<Committee Membership>

Knowledgeable persons: UNAM, ITESM, IPN, UVM

Government: Ministries of Economy, Labor and Education, CIPI

Consulting-related organizations: CETRO-CRECE, COMPITE, CONAYCT,
NAFIN, BANCOMEX and CNC

Certification agency: SME consultant certification agencies under the new
system

<Function>

- Designation of persons responsible for drafting paper test questions, preparing answers and scoring
- Formulation of paper test implementation procedures
- Designation of entities for giving the paper tests

- Designation of persons responsible for drafting guidelines for practice tests, and standards for evaluating test results
- Formulating implementing rules for practice tests
- Designation of entities to be entrusted with giving practice tests

5) Organizations Giving the Paper Tests

<Responsible Institution>

Universities (UNAM, ITESM, IPN, UVM)

The members are to be designated by the Test Questions Preparation Committee and appointed by the Evaluation Centers.

Scoring is to be done by full-time professors at the universities.

<Function>

- Implementing the paper tests
- Scoring the paper tests
- Reporting paper test results to the Evaluation Centers

6) Organizations Implementing Practice Test

<Responsible Institution>

Governmental consulting-related institutions (CETRO-CRECE, COMPITE, CONACYT)

To be designated by the Test Questions Preparation Committee, and appointed by the Evaluation Centers

Practice tests and scoring are to be done only by senior consultants registered with the Evaluation Centers

<Function>

- Implementation of practice tests
- Scoring of field tests
- Reporting field test results to the Evaluation Center

(4) Relation to Classification and Registration Criteria of Existing Agencies

Adoption of a new unified system for national certification of consultants will not require elimination of the classification or registration standards employed by individual existing agencies like CETRO-CRECE, COMPITE and CONACYT. These agencies will continue to use their consultant classification schemes that correspond to their own programs, and the new system will exist in parallel to them. It is highly likely that the national certification will be partly integrated into the classification system of these specialized agencies.

For example, CETRO-CRECE applies own method for general diagnosis using its own manuals, and offers an internal training program (DECOIN) and introductory program (PROCACE) for outside consultants to enable consultants to acquire proficiency in using the method. Certification as a CRECE consultant can be obtained by means of these programs, which are in accordance with the CRECE manuals. The national consultant certification does not replace that in use of the CRECE method. It will be up to each agency, however, to decide on waiving some of the lecture attendance requirements for their own applicants who already have acquired the national certification as consultants.

There are some agencies that certify consultants on the basis of high-quality screening standards. It can be anticipated that such private certification or classification will be accepted as equivalent to some units under the new national standards.

(5) Relation to the Small Business Counsellor Program of APEC

Consideration has begun of a program for training and certifying Small Business Counsellors on the basis of the APEC report of 1997 on SME policy. The purpose of this is to improve the quality of consultants and expand the supply of their services in the APEC region at large by means of new educational methods such as distance learning. Certification issued in any participating APEC country is to be automatically recognized in the other countries.

Lively discussions were held on the APEC plan, at a workshop meeting in Los Angeles in November 2001. The APEC system would correspond to the Junior Consultant scheme proposed in this report, in that it would establish the minimum educational and training requirements for certification of SME consultants. Each country is free to set its own standards, and in this sense there is no contradiction of the scheme proposed here. Moreover there is no basic difference of it relative to the contents of education that are proposed here. Therefore it would be advisable to integrate the APEC system into the Junior Consultant area of the proposed scheme when the latter is implemented.

(6) Degree of Difficulty of Certification

It is desirable to make the qualification standards for the to-be-established SME Consultant (Senior grade) and the Technical Consultant (Senior grade) to be higher than the existing standards for general consultants, because the new certifications are intended to confirm the quality of consultant capabilities. Conversely, it is desirable to make it

relatively easy for applicants to obtain the status of SME Consultant (Junior grade) and Technical Consultant (Junior grade), which are to replace the existing general consultant designations, in view of the objective of ensuring the existence of a satisfactory number of extension consultants who are able to provide services over wide areas but in general diagnosis. Similarly, regarding Technical Consultant, the standards should be relatively lower for junior grade qualification and higher for senior grade status.

	SME Consultant	Technical Consultant
Junior Level	<ul style="list-style-type: none"> • Ability to diagnose and analyze a company • Possession of broad knowledge of business management • Capable of introductory education to managers 	<ul style="list-style-type: none"> • Possession of technical knowledge in a specific field • Possession of broad knowledge of business management • Capable introductory education of managers
Senior Level	<ul style="list-style-type: none"> • Capable of instructing a company on internal reforms • Possession of profound knowledge of a given field • Capable of guiding consultants 	<ul style="list-style-type: none"> • Capable of providing technical guidance to a company • Possession of specialized knowledge in a specific field • Capable of guiding consultants

Degrees of difficulty are to be set in terms of evaluation according to the following three measures.

The level of difficulty for status certification is to be set according both the combined scores of the paper tests, practice tests, document screening, interview tests, and the pass rate.

Test questions are to be made with consideration given to the pass rate, and so that there is no dispersion in difficulty of tests for this year and another. Pass score will be 60 points in average and those persons who gain less than 40 points in any unit cannot pass the exam.

The pass rate can be set according to the following guide.

SME Consultant Standard	Senior Grade	20 ~ 30%
	Junior Grade	70 ~ 80%
Technical Consultant Standard	Senior Grade	20 ~ 30%
	Junior Grade	70 ~ 80%

4.6 Transition Plan for Adoption of the New System

The system for implementation as taken up in the preceding section is what will be in place normally, following a transition to the new system. This section describes arrangements for implementing the transition to the new system, and the corresponding timetable. The schedule for transition is one year in duration.

4.6.1 Differentiation of Technical Consultant Standards

This report proposes the adoption of new standards for certifying Technical Consultant in different categories of industry or in different sectors. This study, however, was carried out with the major objective of contributing to the improvement of the system for training and certifying system for SME consultants. For this reason, the study and recommendations on standards for technical consultants are confined to an abbreviated explanation of the system used in Japan, as an example for reference purposes. It would be necessary to devote attention to similar systems used in other countries of North America or Europe, or in APEC, for planning a system suitable to Mexico.

For the above reasons, what is presented here is a transition plan to new, proposed system for SME consultants. It is necessary to take up the planning for a technical consultant system separately from that for SME consultants.

4.6.2 Organizational Set-Up for the Transition to the New System

Figure 4.6-1 shows the overall organization of the arrangements for implementing the transition, and Table 4.6-1 does in the form of diagram, the roles of the committees and working groups and the organizations. The explanation below is based on the Figure and the Table.

Four functions are required for the transition to the new system. Five committees or working groups (A-E) are to be established corresponding to these functions, as follows:

- | | |
|-------------------|--|
| <u>Function 1</u> | <u>Overall coordination</u> |
| | A. Steering Committee (for introduction of the new training and certification system) |
| <u>Function 2</u> | <u>Formulation of the certification system</u> |
| | B. CONOCER Working Group |

Figure 4.6-1 Proposed Arrangements for Implementing the Development and Certification System, and Major Implementing Agencies

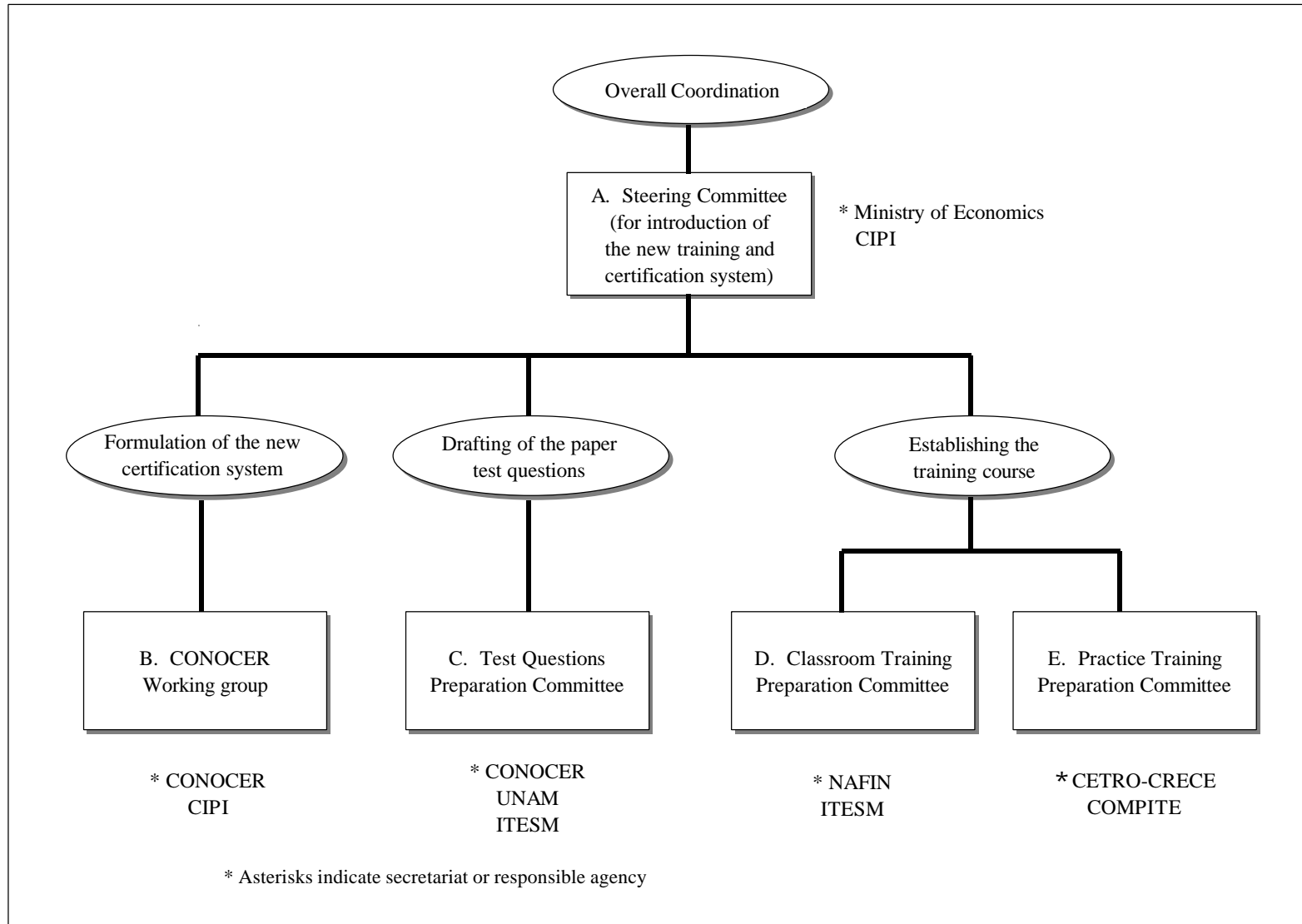


Table 4.6-1 Proposed Roles of Committees and Working Groups, and Participating Agencies

Committees and Working Groups	Activity Undertaken	Participating Agencies
A. Steering Committee (for introduction of the new training and certification system)	<ol style="list-style-type: none"> 1. Establishment and coordination of the following committees and others 2. Approval of the concept of the new training and certification system 3. Ensuring a sustained implementation system 	SE, CIPI, CONOCER, CETRO, COMPITE, CIMO, CONACYT, CNEC, NAFIN, BANCOMEXT, ITESM, ITAM, ULSA, UNAM, IPN, UVM
B. CONOCER Working Group	<ol style="list-style-type: none"> 1. Review of the JICA-proposed concept 2. Review of APEC standards 3. Formulation of the concept of the new certification system 4. Drafting of the new SME consultant standards 	SE, CIPI, CONOCER, CETRO, COMPITE, CIMO, CONACYT, CNEC, industrial associations
C. Test Questions Preparation Committee	<ol style="list-style-type: none"> 1. Review of the JICA-proposed concept 2. Review of APEC standards 3. Formulation of the concept of the new certification system 4. Drafting of the paper test questions (trial use) 5. Validation of the test questions preparation method 	(Knowledgeable persons) UNAM, ITESM, IPN, UVM (Governmental) Ministries of Economy, Labor and Education; CIPI (Consulting organizations) CETRO, COMPITE, CONACYT, CNEC, NAFIN, BANCOMEXT
D. Classroom Training Preparation Committee	<ol style="list-style-type: none"> 1. Review of the JICA-proposed concept 2. Review of APEC standards 3. Formulation of the concepts for the classroom & practice courses 4. Determination of the curricula for the classroom & practice courses (trial use) 5. Preparation of venues and facilities for the classroom & practice courses (for trials) 	(Classroom) ITESM, UNAM, UVM, NAFIN (Practical) CETRO-CRECE, COMPITE, CONACYT, CNEC
E. Practical Training Preparation Committee	<ol style="list-style-type: none"> 6. Selection of instructors for the classroom & practice courses (for trials) 7. Trial implementation of the classroom & practice courses 8. Validation of the classroom & practice curricula 9. Holding national tests 	(National paper test) UNAM, ITESM, IPN, UVM

Function 3 Paper test problem selection

C. Test Questions Preparation Committee

Function 4 Establishing the training course

D. Classroom Training Preparation Committee

E. Practice Training Preparation Committee

The roles and other aspects of the committees and a working group are to be as follows.

A. Steering Committee

The Steering Committee will convene meetings of committees and working groups, and coordinate their activities. The committee will also decide on basic policies and important issues. The members of the Steering Committee established for the present study are to continue as a group to comprise the founding members of the new Steering Committee, and at the first meeting of the Committee will decide on the full complement of Committee members. The Committee is to be chaired by the representative of the Ministry of Economy, and CIPI will be the core participating agency. The Committee will meet according to a schedule or as demanded by a major issue requiring its attention.

B. CONOCER Working Group

This Working Group will formulate the new SME consultants standard and undertake the reform needed of the existing general consultant standards. CONOCER will formulate new standards by the same method as used by working groups when it has prepared the standards for evaluation of worker's skills. CIPI will provide advice on various matters but it is to be CONOCER that has the initiative as implementing body. Among the members of the Working Group are to agencies or organizations most directly concerned, such as consulting-related organizations, and private-sector industrial associations. According to CONOCER, an average of 2,500 man-hours was required to develop a new skill standard. It is anticipated that more than that average man-hours will be required for the new system.

C. Test Questions Preparation Committee

This Committee will determine the questions that are to be used for the paper tests. CONOCER will undertake the overall supervision, being that the tests will be part of the certification system. The specific questions are to be drafted by

appropriate universities such as UNAM and ITESM. Questions will be prepared for two categories, manufacturing and commerce-and-services. There will be some questions common to both. After the new system begins to function, this Committee will continue in existence, as the Test Question Preparation Committee, in order to make adjustments or changes as may be required, and will develop new test questions each year.

D. Classroom Training Preparation Committee

A classroom training course will be created to prepare applicants for the paper tests. There are to be separate curricula for the manufacturing sector and the services and commerce sector. Reference will be made to the APEC training modules in developing the curriculum. Subsequent to this, the site for the training will be determined, instructors will be selected, and course will be given on a trial basis. “Intensive courses” of three weeks’ duration will be given, as recommended in Chapter 5 of this report. It is anticipated that during the transition period two trial courses, for 50 attendees each, will be offered. After completion of the practice training as described below two paper tests will be given at the national level. If the timing works out, COUSULTE students could be permitted to participate in the training course and paper tests as well.

The agency to be at the head of the Classroom Training Preparation Committee is to be NAFIN in view of its extensive experience in the area of training courses, and the major implementing agency will undoubtedly be ITESM and others having a nationwide network of campuses.

Instructors will be selected from among university faculty members for the theoretical part and from among professionals at consulting entities for the practice part. After completion of the transition period, this Preparation Committees will be dissolved, details of the curricula and educational materials will be made public, and universities and others will carry out classroom training courses on a continuing basis.

E. Practice Training Preparation Committee

The Practice Training Preparation Committee will undertake the planning of the practical training and practice tests and prepare curricula for courses in manufacturing, and courses in commerce and services. Training at SME sites, for three weeks’ duration, along the lines of the “Intensive Courses” proposed in

Chapter 5 will be given for trainees who have completed the above classroom courses. The practice training will be combined with the classroom work so as to form a single set, and will be done two times during the transition period. Implementation will be by CETRO-CRECE, with cooperation by COMPITE. Lecturers and instructors will be obtained from the above two consulting institutions but CONACYT and CNEC will also provide cooperation. After the end of the transition period, the preparatory committee will be dissolved, details of the curricula and educational materials will be made public, and universities and consulting institutions and the like will carry out training courses on a continuing basis.

4.6.3 Timetable for the Transition Period

The requisite tasks for accomplishing the transition to the new system are shown in chronological form as a transition period timetable, in Fig. 4.6-2. The duration of this phase is one year and it is planned that preparations for the transition will be completed during 2002. The following explanation is based on this figure.

(1) Step 1: Structuring of the Implementation Arrangements

The four committees and one working group mentioned in the preceding section are taken as being essentially established by about mid-January. The Steering Committee convenes shortly after the start of the new year, confirms the make-up of the Steering Committee, and establishes three committees and a working group. They hold two meetings at the intervals of once in two weeks, and put together the framework for the implementation system.

(2) Step 2: Formulation of the Concept for the New Training and Certification System

Each of the four entities reviews the contents of the JICA proposal with respect to the committee's special area of responsibility, obtains an understanding of the general features of the APEC standards (which are still in the process of formulation), and gives attention to maintaining interchangeability and harmonization. This work is accomplished by the end of January, and the month of February is used for defining the final form of the concept for the new system of training and certification. During February the Steering Committee meets on several occasions in order to achieve a consensus. The concept is formally adopted by the being accepted by the Steering Committee.

(3) Step 3: Preparation for Trial Implementation of the New Training and Certification System

In conjunction with introduction of the new system for training and certification, training programs and paper tests will be held on two occasions each on a trial basis. Results of the trials will be used to finalize the system that is then officially adopted and implemented. Preparations for the trials, on the basis of the results of Step 2, are begun in March and completed by the end of June.

The Test Questions Preparation Committee compiles the test questions during a period of two months' duration, working separately on the tests for the manufacturing category and the services and commerce category. The first national test, on a trial basis, is held in the latter part of August. One month, the month of September, is used to prepare the questions for the second test, which is administered at the end of October. It should be adequate to have one month for work the second time.

From April when the major categories and subcategories of test questions have been determined, work on the curricula for the classroom training and the practice training will begin. This task will require about ten weeks and should be nearly complete by mid-June. Parallel to this, in preparation for the first trials of classroom and practice training, within the duration of one month the training venues, facilities, model companies and other key matters are to be determined and the lecturers and instructors are to be selected. Further, as soon as the final concept is determined in Step 2, that is, from early March, the CONOCER Working Group will start to formulate the new certification standards in Step 4.

(4) Step 4: Training and Certification System Trials

Classroom training (three weeks) practice training (3 weeks) and paper tests (two days) as a consecutive set of activities will be implemented on two occasions, during the period from July through October. It is thought suitable, for example, the first occasion may be devoted to the manufacturing course, and the second to commerce and services. Participants (trainees) are to be about 50 on each occasion and are to be drawn from among individual consultants, the general populace, CONSULTE students, and so on.

The paper test will be given on a national basis, at the end of August and the end of October. In addition to the persons who have taken the trial training programs, members of the general population will be eligible to sit for the test, and it is expected that the test will be given at five locations over the country and be taken by about 500 persons. The

practice test will be given to those who pass the paper test informal operation but during the transition period all the 100 persons who have taken the trial courses will be tested.

Formulation of the new certification standards is to begin in March, with revisions made to reflect the opinions of the related institutions, and to reflect the results of the training courses and tests. Work is to be completed by the end of November.

(5) Step 5: Completion of the New Training and Certification System and its Official Adoption

From October to the early part of December, work is to be done for validation of both the method of preparing test questions, and for classroom training and practice training curricula, in anticipation of proper implementation from early 2003. Then the arrangements for actually implementing the system will be finalized. The Test Questions Preparation Committee will continue with necessary reform, and the Classroom Training Preparation Committee and the Practice Training Preparation Committee will be dissolved once the curricula and materials are made freely available to universities and the private sector in general. Final, steps are to be taken to make the legal and regulatory changes, if any, to enable implementation of the new system, so that it can be officially approved by mid-December. At this point the Steering Committee will have accomplished its functions and will be dissolved.

Figure 4.6-2 Timetable for Reform of the SME Consultant Training and Certification System (Transition Period)

Activity	2002											
	1	2	3	4	5	6	7	8	9	10	11	12
Step 1: Structuring of the Implementation Arrangements												
1.1 Creating the Steering Committee for introduction of the new system	▲											
1.2 Forming the CONCERT Working Group (Committees)	■											
1.3 Appointing the Test Questions Preparation Committee	■											
1.4 Appointing the Classroom Training Preparation Committee	■											
1.5 Appointing the Practical Training Preparation Committee	■											
Step 2: Formulation of the Concept for the New Training and Certification System												
2.1 Review of the concept proposed by JICA	■											
2.2 Review of the APEC standards	■											
2.3 Confirming the concept of the new training and certification system	■											
2.4 Approving the concept of the new training and certification system	■	▲										
Step 3: Preparation for Trial Implementation of the New Training and Certification System												
3.1 Drafting of the paper test questions (trial use)				■								
3.2 Drafting of the curricula for classroom training and practice training				■								
3.3 Preparation of facilities etc. for classroom training and practice training (for trials)				■								
3.4 Selection of lecturers and instructors (for trials)				■								
Step 4: New Training and Certification System Trials												
4.1 Trial classroom training										■		
4.2 Trial practice training										■		
4.3 National paper tests										■		
4.4 Drafting of new SME consultant standards; acquiring consensus										■		
Step 5: Completion of the New Training and Certification System and its Official Adoption												
5.1 Validation of the method of preparing test questions												
5.2 Validation of the curricula for classroom and practice training												
5.3 Confirming readiness of system for implementation												
5.4 Passage of necessary laws and issuance of regulations for the new system, if any												▲

Chapter 5

Program for Improvement of the System for Education and training of SME Consultants

Chapter 5 Program for Improvement of the System for Education and training of SME Consultants

5.1 Basic Direction for Improvement of the Training System

(1) Responding to Requirements for a Quality Assurance and Quality Upgrading

Mexico needs to firmly establish a system that ensures consultant standards for purposes of overall quality assurance of SME consultants. There are many self-styled “consultants,” including some working at low quality levels, in the market for consulting services in Mexico. Necessity exists, for the sake of making effective use of resources invested in consulting, to remove these low-level consultants from work such as in governmental development programs. (Quality Assurance)

Mexico also must work to improve the quality of consulting services. The companies are raising the level of requirements for consultants, especially when companies employ consultants at commercial basis without subsidy. One basic reason that the old NAFIN-ITESM program for training adults has been suspended is that the market had required higher quality services than the course aimed. It is necessary to improve consultant ability for higher quality of consulting services as a built-in system. (Quality Upgrading)

It is therefore proposed that these two requirements be recognized in a hierarchal arrangement in a new system for educating and training SME consultants.

(2) Improvement of Adult Education Programs Reflecting Qualifying Standards for Consultants

The “quality assurance” corresponds to minimum requirements to SME consultants, that is, Junior Consultant in the new SME consultant standards. Introductory training programs to meet the minimum requirements will be done by college courses aiming at acquiring the certification of Junior Consultant. The “quality upgrading” corresponds to requirements for Senior Consultants in the new standards. Training programs will be prepared for adults who already have experiences where universities and consulting related agencies will jointly implement those programs for adults.

5.2 Basic Plan for Improvement of the System

Fig. 5.2-1 indicates the overall scheme, including the relation between training and certification systems, on the assumption that the new for SME consultant standards are adopted as proposed herein. The following is an overview of this.

(1) Education of College Students, and Qualifying for Certification

The career path for a college graduate who has majored in consulting and obtains certification is as indicated in Fig. 5.2-2. Students aspiring to become consultants take consulting-related courses during their last year or final two semesters. This new educational programs and system will be called as the CONSULTE. CONSULTE will be a pilot project for the Mexico's future SME consultant training program which will be held at 100 colleges nationwide. Details of the curriculum are not yet available, but it is intended that those students who meet the relevant college requirements, including those for both classroom and practice work, will be automatically given junior consultant certification upon graduation.

These graduates will also be able to apply for senior status. In such a case they may be waived part of the paper test in general subjects. They would not be qualified to enjoy incentives for Technical Consultant status wherein there are specialized requirements.

(2) Education of Adults, and Qualifying for Certification

Fig. 5.2-3 shows the path taken by adults who seek to obtain consultant certificates by completion of a training program. Adults have three paths to take to become a consultant. One is by self-study. A second is through adult or post-graduate training courses, and a third is through courses at universities. There is no waiver of part of the paper test for adults who have taken training courses prior to seeking certification. For them, however, part of the course requirements for renewal of certification may be waived. There are to be two types of course, the intensive course lasting 1.5 to 2 months consecutively, and an intermittent program or a supplementary course for skill and ability development. All of these are planned and given for the purpose of preparing people who aspire to be consultants by taking the test, and in principle none of the test subjects are waived for these people. That is, the basic thinking is that adults who sit for the test are presumed to have studied on their own, and taken course to supplement any weak areas, either as an intensive or an intermittent course.

Figure 5.2-1 Interrelationships of the Training System and Certification System

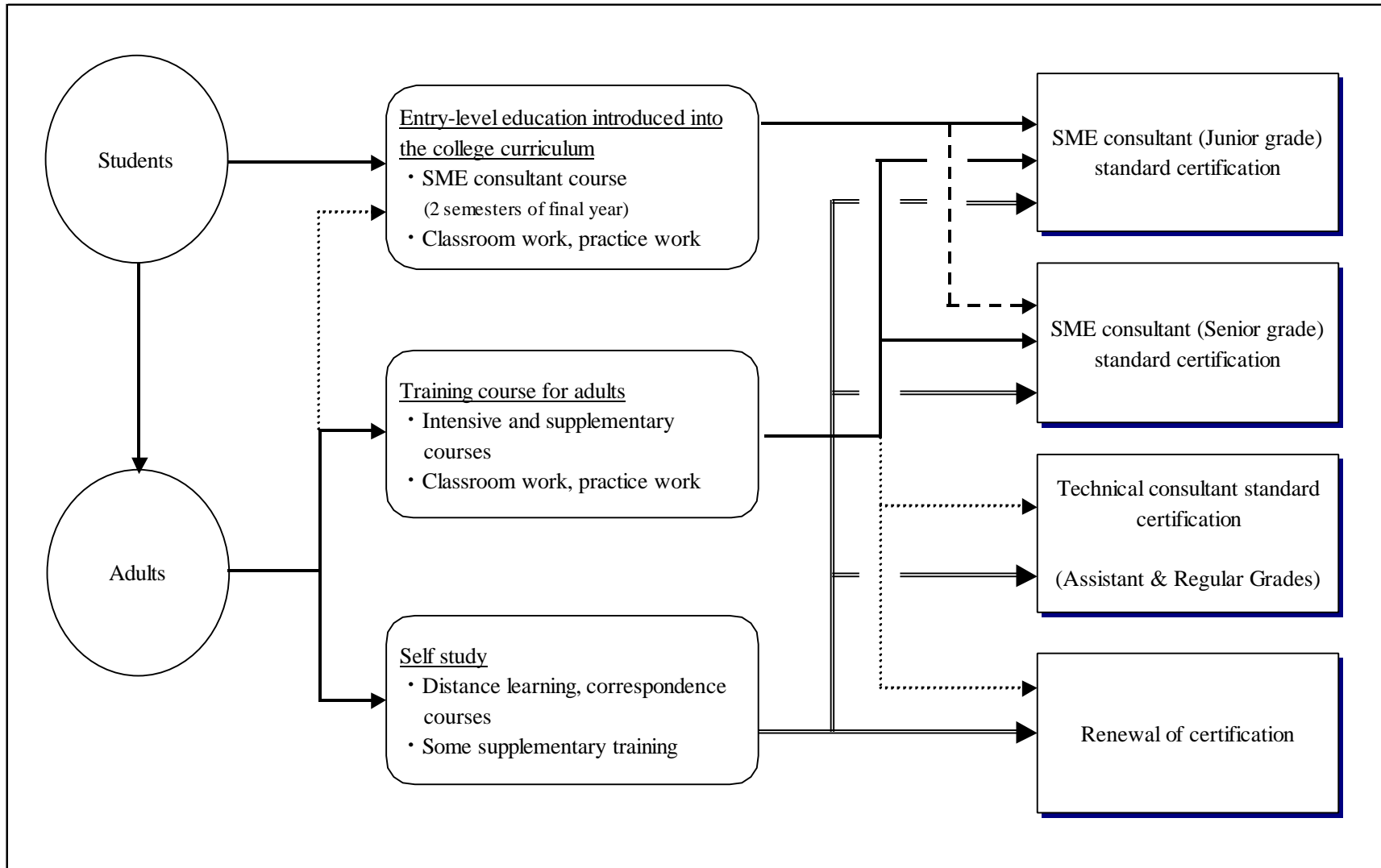
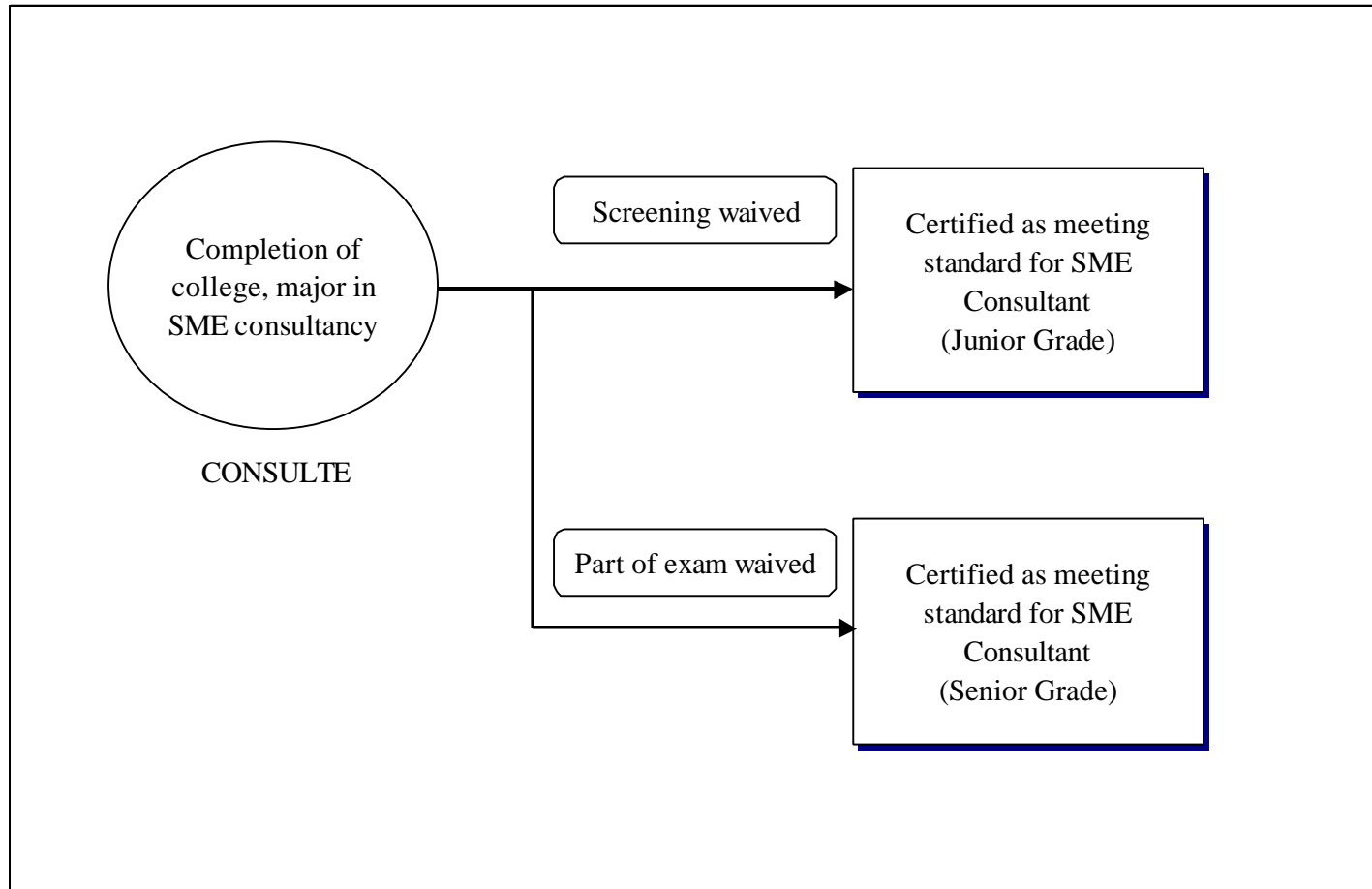


Figure 5.2-2 Career Path for a Student's Becoming a Consultant



(3) Complementary Relationship of College Course and Adult Education

It would be necessary to open the one-year (two-semester) university consulting courses to adults too. Doing so opens a path for adults to automatic certification as junior or senior SME consultants through education of two semesters. It is believed to be appropriate to use the precedent of college courses being given through the cooperation of NAFIN and universities for purposes of educating adults. Further, students majoring in consulting would be permitted to take courses designed for adults, in addition to their own courses. Faculty would thus instruct both college students and adults.

(4) Other Relevant Subjects

1) Technical Consultant Training Courses

It would not be simple to provide candidates of Technical Consultant with training courses because there are various, specialized choices for Technical Consultant qualifying tests. The training course must cover the common topics (basic knowledge) only.

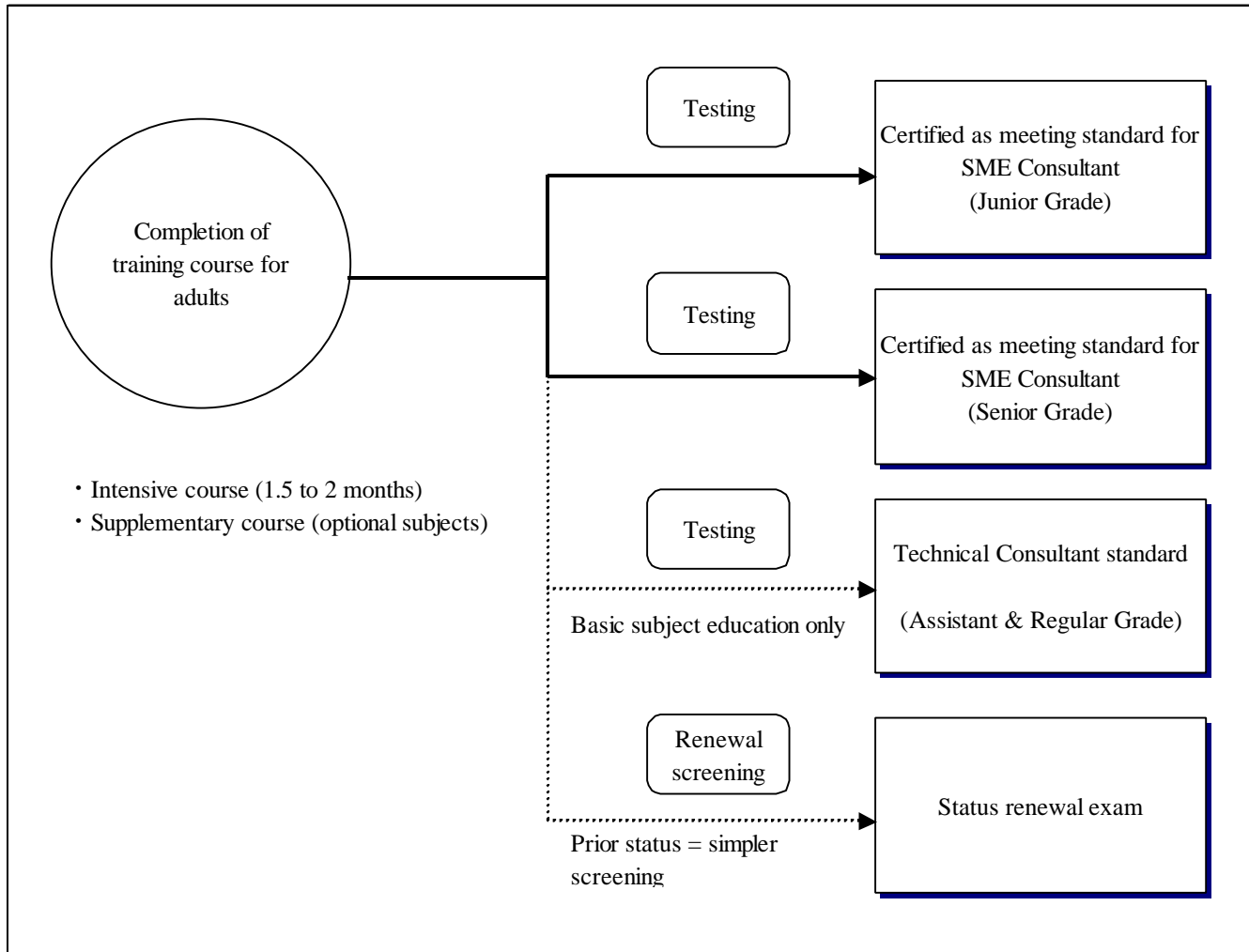
2) Renewal of Certification

In order to keep the certified status of a consultant, consultants are to be required to attend training on “Updating of SME Promotion Policy and Knowledge of Management Methods.” Completion of a suitable adult education course subject would be taken as equivalent to receiving this training. In such a case, a diploma would be sufficient to renew status.

3) Waiving Part of Tests

Several matters deserve consideration in connection with waiving of requirements, as described above. Further attention needs to be given to these matters, such as automatic awarding of consultant status to holders of college diplomas who have majored in consulting work, and waiving part of the test or test given to those persons who have successfully completed an adult education program.

Figure 5.2-3 Career Path for an Adult's Becoming a Consultant



5.3 Implementation Plan for Improvement of the Education and Training System

(1) Overview of the Adult Training Course

1) Objective

There are three objectives of the adult education course:

- a) Enabling participants to obtain the status of SME consultant (senior level)
- b) Offering opportunities for existing consultants to develop their abilities
- c) Offering a venue for the training needed for renewal of consultant certification

2) Target

- a) Adults having prior relevant work experience
- b) Adults doing consulting work

3) Classroom Work

Work done in the classroom will correspond to requirements for senior grade consultants, and (1) provide the necessary basic knowledge and (2) develop ability at diagnostic and guidance work. A choice will be offered between study in the manufacturing sector and study in the commerce and services sector. The courses will comprise the following subjects:

- a) general subjects (including subjects studied for renewal of status),
- b) common subjects and
- c) special subjects

(2) Combined Time Schedule Including Classroom Practice Works

Courses for adults will be (1) intensive courses or (2) supplementary courses.

1) Intensive Courses

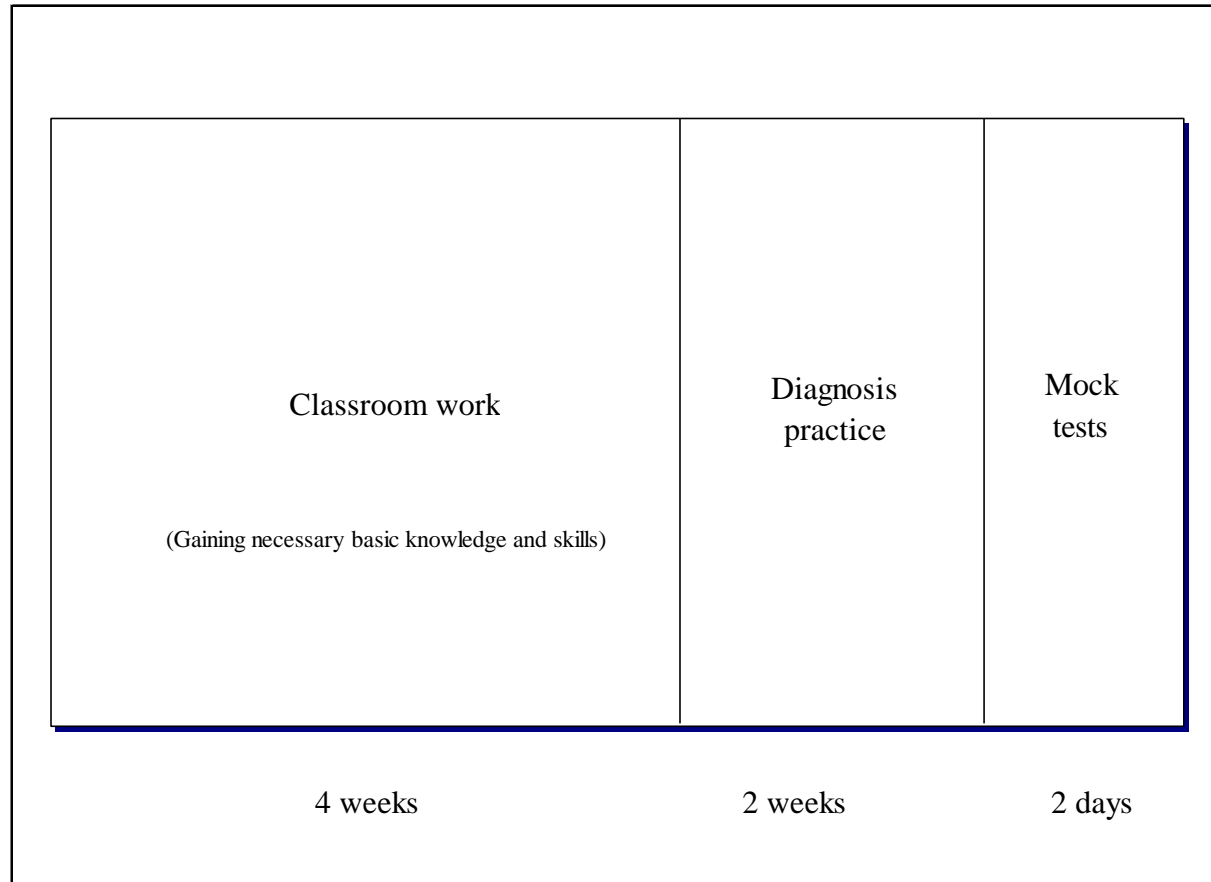
Courses shall be for the duration of 1.5 to 2 months; refer to Fig. 5.3-1.

a) Duration, Period, Times

Classroom work: 8 hours per day, 5 days per week,
4 weeks per course = 160 hours.

Practice work: - For the manufacturing sector course, 2 weeks, for production diagnosis (40 hours) and overall diagnosis (40 hours).

Figure 5.3-1 Scheme for Adult Education Courses (Intensive Courses)



- For commerce and service sector course, two weeks, for marketing diagnosis (40 hours) and overall diagnosis (40 hours)

Mock test: 6 hours on 2 days = 12 hours (paper tests)

b) Content

Conforming to the test items for SME consultant certification (senior grade), in an integrated curriculum

c) Implementing Body and Location

- Implementation by a committee established by the Ministry of Economy
- Courses to be offered at 5 places in the major regions of Mexico, one time a year; frequency to be increased depending on demand

2) Supplementary Courses

All participants will be tested (mock tests) together, but will study independently; refer to Fig. 5.3-2.

a) Duration, Period, Times

Pre-Start mock test: 6 hours; self-scored

Classroom work: Distance learning or correspondence courses (8 hours per unit) as required by each person

Practice work: Overall diagnosis, 40 hours plus sector-wise diagnosis, 40 hours (optional)

Mock tests: 6 hours, taken together by all (paper tests)

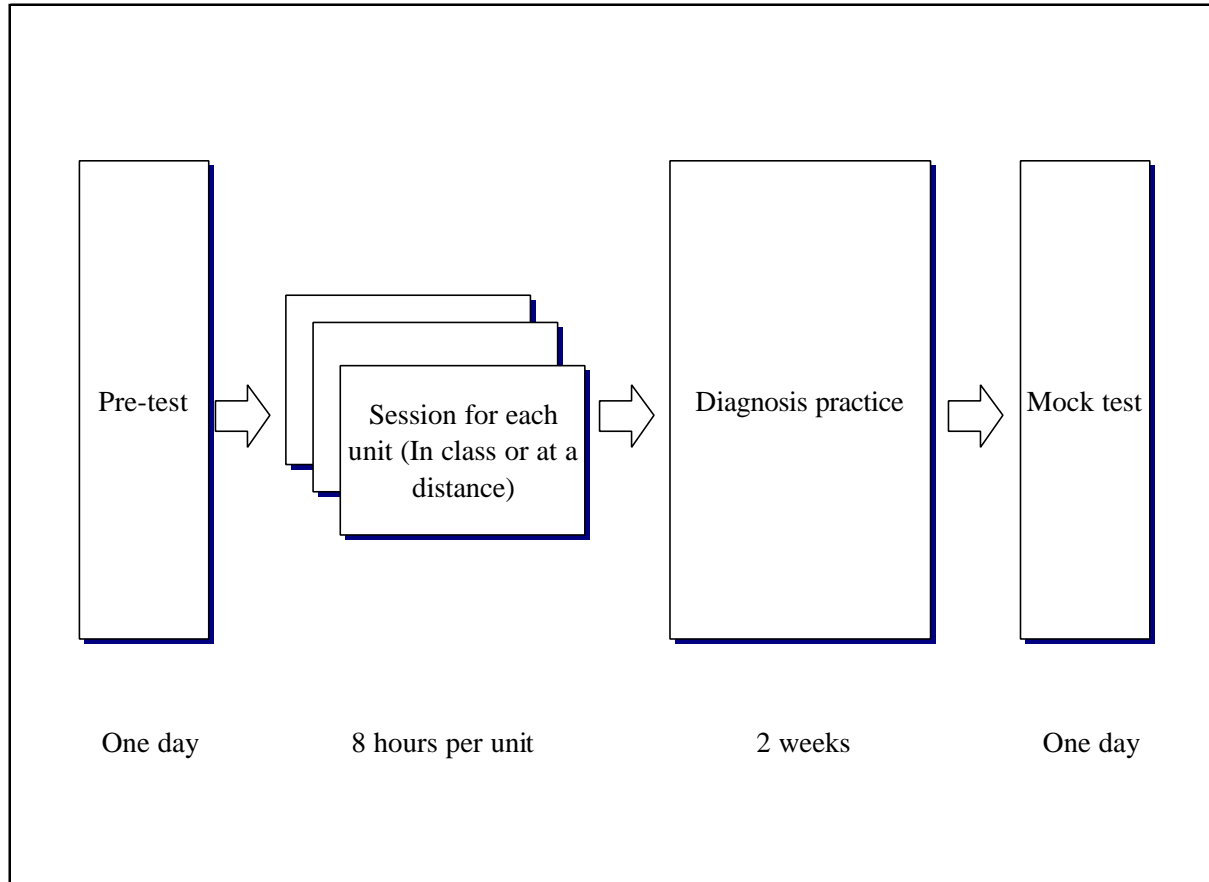
b) Content

Subject items to be uniform; content to vary according to the educational institution providing the training.

c) Implementing Body and Location

- a. Implementation by a committee established by the Ministry of Economy
- b. Mock test questions to be prepared by the registration entity
- c. Mock tests to be offered by universities and state governments, once a year
- d. Classroom and distance learning content to make use of diploma courses at universities
- e. Practice work to be done by universities and consulting agencies

Figure 5.3-2 Adult Education Courses (Supplementary Course)



5.4 Implementing Agencies of the Courses

It is believed necessary to make best use of the experience of the following entities in carrying out the proposed training.

(1) Universities Offering Classroom Work

From the viewpoint of the regional coverage of the courses, it is desirable to work with those universities that have national networks. This would be ITESM and UNAM, both of which have either a campus or research center in almost every state. Also, UVM could be valuable as it has units in 14 locations. At these three universities, subjects required to train consultants are already incorporated into the curricula, in addition to which the schools possess research centers with capabilities for provision of technical development support to corporations on a consultation basis. Among the universities, ITESM and UVM offering courses corresponding to the existing general consultant standards; and UVM offers an improved version of such courses. ITESM and UVM perform evaluation work. These capabilities and experience should be used on behalf of the new system.

NAFIN provided training opportunities on 25 occasions during 1997-99, which produced 130 diplomas. This program is not now in operation. ITESM and other institutions have experience in offering public courses corresponding to the general consultant standards, as well as consultant training for supplier programs and work at developing training programs.

(2) Implementation of Field Work by Governmental Consulting Bodies

The CETRO-CRECE network at present comprises 32 branches and 41 rep offices; in the near future it will have activities at nearly a hundred locations. CRECE's own consultants are stationed at these locations and number, at the master and senior level combined, 97 (as of June 2001) out of a total of 305. COMPITE has some 60 outside consultants assigned to workshops in 32 states.

CRECE has already accumulated experience in more than 1,600 hours of in-house training and lectures for its senior grade consultants who are required to participate in two programs. COMPITE consultants are required to have at least three years experience to give workshops. They also are required to have undergone 200 hours of in-house training and the experience of providing training on ten occasions.

These consulting agencies have internal job requirements as well as experience in training employees so that they meet these requirements and therefore have the ability to take on the function of training course and practice instruction work.