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Strengthening Private Sector Participation in Philipppine Technical and Vocational Education and Training

Specialist Report No. 2:

The Emerging Training Market in the Philippines: the Technical and Vocational Education and Training Sector

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CONTENTS

Section 1. Background and Justification

1. Current processes of restructuring pose new challenges to education, training and employment systems in preparing new entrants and upgrading and retraining workers to meet new requirements. There is a greater need for a flexible response to changing technological and employment requirements in order to improve competitiveness; the capability of rapidly adapting, modifying and upgrading the skills of the workforce is one of its necessities.

2. Thus there has been a stronger emphasis on demand-based training and on decentralizing the management of vocational education and training, on cost-effectiveness of training, and a gradual withdrawal of the public sector in its combined role as financier, administrator and provider of training. This is the essence of the World Bank Policy Paper on Vocational and Technical Education and Training.

3. The essential role for the state is seen as providing good quality universal basic education, whereas further training should be financed from diversified sources, including contributions from employers, trainees and employed workers. Key questions of concern to both policy makers and skill users are:

> What new skills workers need in order to improve their chances of finding productive employment;
>
> What skills enterprises require in order to increase their competitiveness;
>
> What resources governments should devote to education and training, to achieve efficiency and equity goals.
>
> What implications do global economic and technological developments have for international competition and for the skill requirements in countries wishing to achieve NIC status.

4. The UNIDO mission evaluating Industrial Human Resources Development assistance in 1992 noted that the Philippine Government was making a phased withdrawal from many direct training functions, limiting future interventions to assisting industry to raise skill standards in accordance with its own identified needs. The devolution process referred to coincides with another equally significant devolution process from central to local government, as provide for in the 1992 Local Government Code.

5. The Medium-Term Philippine Development Plan 1987-1992 perceived as the major challenge for vocational training that of addressing manpower requirements for employment-oriented and rural-based development. This was reiterated by the ILO Sectoral Review Report 'Employment and Manpower in the Philippines' (1990):

> " The policies and plans for manpower development throughout the 1990s will be influenced by two major issues. On the supply side, there will be a surge of approximately 7.5 million out-of-school youth who will enter the labour market during the current decade to compete for jobs with the existing ranks of the unemployed and underemployed.... During the same period, the Government's intention to raise the Philippines to the status of Newly Industrialised Country, together with plans to increase productivity in both the manufacturing and agricultural sectors, will create a demand for much higher levels of technological skills and knowledge at all levels of employment ranging from operators to craftsmen, technicians, supervisors and managers".

6. The Congressional Commission on Education (EDCOM), set up in 1989 to review and assess Philippine education, considered it imperative that the sector on education should work in synergy with other sectors, that efficiency in resource utilization and effective coordination with relevant NGOs be

acquired, and that education and manpower training be integrated for policy-making and educational programme development.

7. Among the far reaching recommendations of EDCOM were:

* to make it possible for private industry, workers, teachers, parents and Local Government to plan, deliver and finance education and training;

* to plan and support public and private education together;

* to give government support for higher education only to priority courses and programmes and to poor but deserving students;

* to emphasise basic education as part of the public domain;

* to enlarge and enrich technical/vocational education;

* to restructure the Department of Education in order to ensure that programme focus is clear, resources are allocated rationally, and plans are realistic and attainable.

8. The EDCOM recommendations have been accepted as the basic agenda for reform and hence constitute important outlines for policy and practice to be considered in our study. They have brought together three agencies, NMYC, DECS/BTVE and the DOLE Office for Apprenticeship in the Technical Education and Skills Development Authority. The history of NMYC and DECS/BTVE will be briefly reviewed. Aspects related to the transfer of the Office of Apprenticeship from the Department of Labour (DOLE) through NMYC to TESDA have been reviewed separately.[1]

9. **The National Manpower and Youth Council (NMYC)** started to focus more consciously on industry in the early 1990s. NMYC's Basic Training Policy Reform (1991) consisted of (a) improving linkages between formal and non-formal TEVT, (b) improving the quality of training, (c) enhancing employers' role in training and cost-sharing and (d) improving vocational guidance and information. The existing Self-Help Programme authorized the NMYC to augment its existing resources by various activities, such as trade testing, paid use of training equipment and facilities, consultancy and technical services, and repair and maintenance services. The scheme paved the way for production activities within NMYC training centres with industry or private clients as partners.

10. Based on the Action for Enterprise initiative (1991-1994), NMYC programme planning followed guidelines of cost recovery on all skills training programmes above the basic skills level, and in training support activities as far as possible. Sources for costs recovery at NMYC included trainee fees, production and repair, an income generating trade testing and certification programme, programmes of skill upgrading improving the capacity utilization of centres leading to additional incomes to meet recurrent expenditures for instructor salaries.

11. NMYC has in the past established Advanced Training Centres (ATCs) in electronics and telecommunications (with JICA assistance), construction, electro-mechanics, business equipment and computers, and land transport. It also operates Specialized Training Centre (STCs) in garments, foot-wear & leather goods, metals, and hotel & restaurant, and now the Marine Technology Training Centre opened in 1995. The Advanced Training Centres are industry-specific and offer a range of services in addition to regular training.

12. **The Bureau of Technical and Vocational Education (BTVE)**, the second agency transferrred to

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1 A working paper on Apprenticeship and the Dual Training System describes the actual legislative framework for Apprenticeship, current utilization of the scheme, procedures for approval, implementation and monitoring applied by TESDA and describes the major changes under the new proposed apprenticeship law.

TESDA, is concerned with schools under the administration of the Department of Education, Culture and Sports (DECS), where a mechanism to effect closer links between industry manpower requirements and schools providing technical education, called Technical Advisory Committees (TAC) was set up. TACs are mainly concerned with curriculum review, entrepreneurship building, value and attitude formation, technology information, on-the-job training (OJT), programme monitoring and evaluation and trade testing. In 1992, there were some 62 operational TACs nationwide.

13. In Technician Education Institutes (TEIs), Entrepeneurship Training Centres (ETCs), cover trades and courses where production possibilities exist. DECS/BTVE also piloted Competency-Based Vocational Education (CBVE). CBVE aims at self-paced training on competencies based on industry specific standards(trade skill standards/skill tests).

14. In the pre-TESDA phase DECS and NMYC agreed upon the following fields for cooperation in an MOA:

(a) technical information system
(b) apprenticeship or enterprise based training
(c) accreditation or credits
(d) trainer training
(e) manpower and labour market information
(f) training materials development
(g) job placement through the enterprised based scheme.

15. The following activities were jointly implemented;

(a) development and management of training and upgrading programmes for technical teachers and trainers
(b) development and production of technical trainee skills upgrading programmes for graduates of TVET institutes
(c) development of occupational skill standards measuring instruments and certification schemes
(d) establishment and sharing of a pool of experts and creation of joint committees to implement joint programmes.

Other Agencies

16. Other government Departments also operate manpower training programmes for industry, such as the Department of Trade and Industry (DTI), the Department of Science and Technology (DOST) and the National Industrial Manpower Training Council (NIMTC). In most cases these programmes combine training with development, testing, common production facilities and consultancy services to industrial clients. The National Industrial Manpower Training Council (NIMTC) is an umbrella organization to coordinate the Cottage Industry Technology Centre, the Construction Manpower Development Foundation and the Construction Manpower Development Centre (DTI). DTI also operates sector-specific and regional industrial training centres in fields such as Electronics, Furniture, Printing and Packaging, the Garment Industry Training Programme and the First Cavite Industrial Centre Programme.

17. DOST is responsible for the Metals Industry Research and Development Centre (MIRDC) focusing on technology commercialization, consultancy and industrial training in support of the local metals and allied industries. It also operates heat treatment common service facilities. Other DOST provisions are the Philippine Textile Research Institute and the Industrial Technology Development Institute.

18. Even though there is overlap between these programmes and those of NMYC/BTVE (TESDA), there are no new initiatives to bring these activities under TESDA. The only other major shift has been the transfer of responsibility of apprenticeship (from DOLE to NMYC) and dual vocational training from DOLE to DECS/BTVE. These are currently both within TESDA.

Donor support to education and training

19. The education and training reform has been supported through loan programmes from the World Bank - VTP I and VTP II. Starting in the 80s, VTP I was to strengthen NMYC's capacity for management and implementation of industrial training with a corresponding emphasis on trade testing and certification.[2] The thrust of VTP II, launched in 1992, was towards need-based training and a gradual shift of government from its combined role of policy maker, implementer and financier of training to a stronger emphasis of its role in policy making, quality monitoring and improvement of training delivered by various parties.

20. Major components are:

* Strengthening capabilities in policy formulation, planning and management;

* Improvement of training quality and cost recovery by strengthening training support services and developing mechanisms towards equitable cost sharing and training cost recovery;

* Training capacity development by upgrading ex-NMYC training centres, providing incentives for the private sector to assume greater role in skill development, and improving the apprenticeship programme.

Through VTP II the range of clientele was broadened in schemes such as the Training Contract Scheme (Private Industries, Industry Boards and Industry Associations) and the Training Assistance Contract (private and public Vocational Technical Institutes and Schools and VTIs).

21. A similar emphasis is noticed in the ADB project on upgrading of teachers, curricula and facilities of 21 TEIs and the linked Philippine-Australian Technical and Vocational Education Project to upgrade eight TEIs and to strengthen BTVE's management capacity. One of the components of this programme comprises Competency Based Vocational Education (CBVE), involving modularised curriculum redesign and teacher upgrading. CBVE is perceived as important in order to open up interchange between non-formal training and formal technical education and between education and training and work as ideally it would enable multiple entry and exit from school into work and vice versa.

22. External support also concentrated on efforts to combine institutional and in-plant training through improving the existing apprenticeship scheme and implementing a Philippine adaptation of the dual training system. Support has been given by the Hanns Seidel Foundation (with EU funding) to DECS and the South East Asian Science Foundation Inc. (SEASFI) to establish dual vocational training programmes combining in-plant training with part-time attendance at a vocational school, creating a direct link between training capacity and the demand for skilled labour.

23. A multi-bilateral ILO/Germany Apprenticeship Project was designed to provide TA in re-drafting the apprenticeship provisions of the Philippine Labour Code, to assist in the design of MIS and to assist the private sector in the preparation of curriculum models.

24. Other projects aim at the technology development and corresponding manpower development requirement for industries aiming to extend their technology base, such as the DOST/World Bank supported Engineering and Science project to strengthen capacity to plan and coordinate science and technology manpower development. Under the loan a new HRD master plan will be developed for DOST including plans for training technicians and technologists for industry.

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2 Project Completion Report, Philippines Vocational Training Project (Loan 2200-PH), September 18, 1992, Report No. 11163.

25. Finally, some projects directly work with the private sector to reach small-scale enterprises for training and technology support. One of these is the BMB/USAID Private Sector Development Training Programme. Swisscontact is piloting some innovative schemes in partnership with different regional TESDA Offices, Metashape and the Meralco Foundation. The Metashape project offers technical skills assistance to small scale metal enterprises in five regions. A range of interventions is offered varying from the promotion association formation between enterpreneurs, advisory services, training, fellowships and organizational development.

26. The Philippine Medium Term Development Plan 1993-1998 concentrates on human development and the twin strategies of people empowerment and global competitiveness. It stresses global competitiveness, the need to link market agents and to hasten the transmission of development from industrial centres to other regions. Guiding principles for the strategy are decentralization and private sector-led development. The chapter on Human Development and Human Resources indicates an inadequate budget allocation for social services and mechanisms for planning, monitoring and evaluating social development programmes. These aspects may hinder a smooth achievement of the ambitious annual target to generate an average of 1.1 million jobs during the plan period. According to the Plan post-secondary enrolment is to increase from 531,739 students in 1994 to 781,638 students in 1998. The number of persons to be given TEVT should increase from 939,000 in 1994 to 1.2 million in 1998. The focus of education and manpower development is to be on meeting the changing demand for basic, middle-level and higher-level knowledge and skills, and it recommends strategies such as manpower delivery through a user-led strategy in both basic and advanced skills levels and strengthened linkages between education and training institutions and industry.

Section 2. The Framework

2.1 Introduction

27. This section will discuss the opportunities and constraints which the new legal framework of the TESDA Act (Republic Act No. 7796) and other relevant legislation provide to (1) the development of complementary partnerships between public and private sector institutions in technical education and skills development and training systems and (2) future patterns of more equal participation of industry groups, trade associations, employers and workers in the development and implementation of skills development programmes.

28. The Implementation Review , Aide Memoire, of the Second Vocationl Training Project (VTP II) CR.2392-PH sets out a possible scenario for devolution of TESDA's training implementation to local government and direct beneficiaries and users of developed skills, as follows:

> "[TESDA's] role as Direct Implementor of training for employable skills, on the other hand, should gradually be reduced. The design and delivery of the service package will evolve from standardized types to more client-based, custom-packaged training. TESDA should transfer training technologies and programmes, provide common service facilities and make manpower development resources available to its partners (local government units, NGOs, POs and private establishments. In the next five years, TESDA should witness the full devolution of its skills development function."

29. This study will:

(1) examine the policy and legislative framework related to TESDA's policy thrust;

(2) identify components and initiatives in support of restructuring public and private sector provision;

(3) identify and examine different scenarios which substantiate this devolution process, and specify

essential roles for both the private sector and TESDA;

(4) obtain insight into new organisational modes catering for component parts of skill acquisition and their utilization.

2.2 Key definitions

30. The TESDA Act in Rule X 'Definition of Terms' provides the operational definitions of key concepts which will be used in the study.

"Skills Development" means the process through which learners and workers are systematically provided with learning opportunities to acquire or upgrade, or both, their ability, knowledge and behavior pattern required as qualifications for a job or range of jobs in a given occupational area.

"Technical Education" refers to the education process designed at post-secondary and lower tertiary levels, officially recognized as non-degree programmes aimed at preparing technicians, para-professionals and other categories of middle-level workers by providing them with a broad range of general education, theoretical, scientific and technological studies, and related job skills training.

"Dual System/Training" refers to a delivery system of quality technical and vocational education which requires training to be carried out alternatively in two venues:In school and in the production plant. In-school training provides the trainee the theoretical foundation, basic training, guidance and human formation, while in-plant training develops his skills and proficiency in actual working conditions as it continues to incalculate personal discipline and work values.

However, in the literature the following complementary definitions are also found:

Vocational training refers to deliberately organized measures to bring about learning as preparation for work tasks in designated occupations. As such it implicitly aims to improve productivity of labour. Traditionally, the term applies to preparation for crafts and skilled industrial work.

VET is usually considered to cover courses and qualifications obtained at skilled worker, technician and higher technician level.[3]

VET includes all skill transfers, formal and informal, involved in the enhancement of a society's productive activities. Some of these transfers take place in the family, some take place in formal institutions including schools, and most take place at remunerative workplaces.[4]

VET: an array of structures, tracks and programmes to provide citizens with the knowledge, skills and competencies necessary to perform specific occupations at certain level.[5]

31. Certification refers to the institutional procedures established to assess, knowledge, skills and competencies achieved by following a course, through experience or a combination of both and to make the appropriate awards attesting to the above.

32. The above definitions have captured all components of VET of relevance to the study: increased productivity and employment opportunities, both institutional and in-plant training, combined with qualifications testing and certification to acknowledge mastery of competencies to certain standards.

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3 John Lauglo, Vocational Training; analysis of policies and modes. Casestudies of Sweden, Germany and Japan, IIEP, Paris, 1993.

4 Martin Carnoy, Efficiency and equity in vocational education and training policies. In:International Labour Review, Volume 133,Number 2, 1994, page 221-240.

5 Jean Gordon, Jean-Pierre Jallade and David Parkes, Structures of Vocational Education and Training (VET) and the match between education and work: an international comparison. Synthesis Report. OSA Publication, European Institute of Education and Social Policy, Paris, July 1994.

2.3 Linkages for public-private liaison

33. In this report reference will be made to a set of examples indicating good practice or innovative approaches in public-private liaison illuminating roles, products and markets emerging from these new partnerships. They can include the following links:

- between public TVET institutions and private TVET institutions
- between public non-formal training and private and public formal TVET institutions
- between public TVET institutions and enterprises and intermediary organisations (including firms, Industry Associations and Industry Boards)
- between private TVET institutions and enterprise and intermediary organisations
- tripartite relationships involving both public and private TVET institutions and enterprises and intermediary organisations
- resource sharing between TVET institutions (use of workshops, staff) both public and private, formal and non-formal
- resource sharing between local government and the private sector in TVET implementation.

2.4 Legislative Framework[6]

2.4.1 TESDA Act

34. The Technical Education and Skills Development Act of 1994 (Republic Act No. 7796) highlights the main components of the mandate of TESDA relevant to the study.[7]

> Section 2 of the Act declares "the policy of the State to provide ... technical education and skills development in support of the development of high quality Filipino middle-level manpower" and Section 5 creates TESDA "to implement the policy declared in this Act".

35. This implies that the formal and non-formal education and vocational training provision up to technician level both institutional, private and public and in-company constitute part of the TESDA constituency.

36. In terms of course provision it would imply that both education from upper secondary up to the non-degree component of tertiary education would be included. The idea was that if non-degree courses would yield better employment opportunities than more than the actual 500.000 among the 2.7 million enrolments in tertiary education might opt for the professional rather than the academic stream.

> Section 21 stipulates the formulation and implementation of a (sic) Comprehensive Development Plan for Middle-Level manpower. The comprehensive plan shall provide for a reformed industry-based training programme including apprenticeship, dual training system and other similar schemes. The Section further indicates that all government and non-government agencies receiving financial and technical assistance from the government shall be required to formulate their respective annual agency technical education and skills development plan in line with the national technical education and skills development plan. TESDA is to manage and monitor the programme and evaluate skills development programmes by participating agencies based on criteria to assess their efficiency and effectiveness and the consistency with the quantitative and qualitative objectives of the National Technical Education and Skills Development Plan.

37. The plan will be both a product of and subject to adequate monitoring and evaluation and will be backed by policy research in order to enable it to become a basis for resource allocation.

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6 In preparing this paragraph ample reference was made to: Paolo Johann C. Perez, Documentary Review of the Legal framework within which enterprises operate in the Philippines with reference to Human Resources Development and training.

7 The authors benefited in preparing notes on the legal framework from comments and discussions with Mr. Rony Diaz, Member of the Expert Panel to the Sector Study.

In Section 23 TESDA is required to concentrate on design and administration of training programmes aimed at building the capacity of public and private institutions to provide quality and cost-effective technical education and skills development including teacher's trainors' training, skills training for entepreneur development and technology development and value development as an integral component of all skills training programmes.

38. In this a key role is envisaged for the National Institute for Technical and Vocational Education and Training (NITVET).

Under Section 24 TESDA's direct training function is to be devolved to Local Governments. It has to formulate, implement and finance a specific plan to develop the capability of local government units to assume ultimate responsibility for effectively providing community-based technical education and skills development opportunities;subject to retraining of TESDA personnel affected.

39. A masterplan has been developed for devolving courses and institutions to local government or to find feasible modes for privatisation. Permanent staff of RMTC have been maintained at 15, for PMTCs at 6. The process will be phased with no transfer of staff taking place in the first year, but instead a concentration on staff development to meet the requirements of new roles under the new administrative framework. The process has to be completed by the end of the fifth year, when evaluation of the implementation of this masterplan is planned.

In Section 28 TESDA's direct training implementation role is restricted to the design and implementation of an effective and efficient delivery system for quality TVET opportunities particularly in disadvantaged sectors, with the capability to take on higher value-added gainful activities and to share equitably in productivity gains.

Section 32 of the Act requires TESDA to organise a scheme of scholarship grants "responsive too the technical education and skills development needs of the different regions in the country".

Under Section 25 all Skills Training Schemes provided for in this Act shall be coordinated with the Authority. For this purpose, existing technical education and skills training programmes in the Government and in the private sector, and specifically those wholly or partly financed with government funds, shall be reported to the Authority which shall assess and evaluate such programmes to ensure their efficiency and effectiveness.

As well as giving authority to TESDA to coordinate and monitor all skills training schemes, the Act also, in Section 8, provides authority to the TESDA Board to restructure the entire sub-sector consisting of all institutions involved in the promotion and development of middle-level manpower through upgrading, merger and/or phase-out following a user-led strategy.

40. TESDA has the authority to monitor all public, private TVET and enterprise-based training. TESDA has not used so far this legal instrument which would enable a comprehensive technical education and skill development data base of accredited courses and institutions to be set up and monitored and evaluated, as a basis for budgetary interventions. This could enhance accountability and effectiveness of resources allocated directly or indirectly through public funding.

41. A significant number of modes for skill acquisition is presently not recorded or accredited. A great number of small, entirely private training centres is thought to exist, but in addition, this lack of information and accreditation applies to enterprise training and to a lesser degree to NGO and LGU based training. Even access to data on middle-level training provisions by public agencies is difficult to come by. Limited information is available from DOLE, which coordinates the Inter-Agency Employment Committee and reports on a quarterly basis on manpower development modes.

The Act, in Section 22, strongly emphasizes TESDA's regulatory role in setting and monitoring standards as a device for quality improvement and control. The TESDA Board is granted authority to approve trade skills standards and trade tests as established and conducted by private industries and to establish and administer a system of accreditation of both public and private institutions. TESDA is to develop and establish a national system of skills

standardization, testing and certification in the country.

42. TESDA indicates that accreditation of public and private vocational and technical education is proceeding well, with 19 general areas for course accreditation having been developed so far. Technical Advisory Committees at all levels play a role, culminating in Expert Committees with firm representatives, performing a DACUM analysis.

43. Minimum requirements as well as optimal conditions have been established. TESDA is involved in course accreditation while the Federation of Accredited Institutions such as such the Technical Vocational Education Assessment Association of the Philippines (TVEAAP) have determined 12 areas for institutional accreditation. In-company training has so far not been within the accreditation realm. Yet given the need to enhance mobility of labour both standard setting and subsequently forms of accreditation should be applied as well.

44. Encouragement of the increased utilization of the dual system as fostered by the Act is somewhat restricted for many reasons among these that so far only four course areas have been established for which accreditation can take place.

> In Section 24 the Act is clear on TESDAs role in providing assistance to Employers and Organizations engaged in skills training and to Industry Boards.

45. A project proposed by the Metal Industry Association of the Philippines (MIAP) to co-manage the TESDA Metal Specialized Training Centre is one of the models for partnership between public TVET establishment and private establishments.

> The Act, in Section 27, provides for incentive schemes to encourage government and private industries and institutions to provide high quality technical education and skills development opportunities. A TESDA Development Fund is to be launched (Section 31), the income of which shall be utilized exclusively in awarding of grants and providing assistance to training institutions, industries, local government units for upgrading their capabilities and develop and implement training and training related activities (operational in 1998).

2.4.2 Dual System Training Act of 1994 (Republic Act No. 7686)

46. The dual training system was "institutionalized in the Philippines" by the Dual Training System Act of 1994 and is in this sense only two years old[8]. However it is old enough to have started life before the creation of TESDA, and was launched by the BTVE of DECS. Since the system is new, and given the change from BTVE to TESDA as the system developer, there are a natural uncertainty and fluidity in the details. It is intended to review the system as a whole after it has been running for five years.

47. The Act defines the system as:

> An instructional delivery system of technical and vocational education and training that combines in-plant training and in-school training based on a training plan collaboratively designed and implemented by an accredited dual system educational institution/training centre and accredited dual system agricultural, industrial and business establishments with prior notice and advice to the local government unit concerned. Under this system, the said establishments and the educational institution share the responsibility of providing the trainee with the best possible job qualifications, the former essentially through practical training and the latter by securing an adequate level of specific, general and occupation-related theoretical instruction. The word "dual" refers to the two parties providing instruction: the concept "system" means

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[8] The text draws upon a much more detailed descriptive account of the Dual System Training Act and its operational implications prepared by the University of Amsterdam Consortium Consultant on Enterprise Studies.

that the two instructing parties do not operate independently of one another, but rather coordinate their efforts.

48. The role of TESDA is (Section 7) to "plan, set standards, coordinate, monitor, and allocate resources in support of the implementation of the System". As will become clear in this section the principal danger to the current success of the system lies in inadequate monitoring.

49. The Act sets out in separate quite detailed sections the respective obligations of establishments, trainees and institutions. The practice, and one or two of the individual points, could well be adopted in the new apprenticeship law. The Act is supplemented by Rules and Regulations dated 2 June 1994; they still refer to BTVE and subsidiary organisations from the pre-TESDA era.

50. Another section defines the status of the trainee: "not an employee ... but rather a trainee of both the Accredited Dual System Educational Institution and the agricultural, industrial and business establishments ..." This divided responsibility appears on the face of it to open up many opportunities for disagreement.

51. In the current pilot phase the procedure includes accreditation of programmes, not foreseen in the Act but on the face of it a good addition to the quality control mechanism, in parallel with accreditation of educational or training institutions. However the Rules and Regulations are less than clear on the starting point of the procedure.

> Rule VIII, Section 2: The cooperation between educational institutions and establishments shall develop specific Dual System courses, including programme standards, sequencing, delivery and evaluation Systems, before applying for accreditation.
>
> Rule IX, Section 1: Educational institutions shall first qualify for accreditation for a specific Dual System course by the [BTVE] before it forges partnerships with establishments.
>
> Rule IX, Section 6: Educational institutions interested to participate in the Dual System shall prepare a training curricula; in accordance with the approved training regulations, in collaboration with the establishments and register with the [BTVE]. Provided, that the applicable National Competency Framework shall be considered.

52. Four dual training courses have been accredited at present being implemented by 5 distinct institutions:

-PBMIT: Mechanical Technology
-Dualtech: Electromechanics Technology
-Manila Technician Institute: Furniture & Cabinet-Making
-Rizal Polytechnic Institute: Furniture & Cabinet-Making
-Punlaan School: Food & Beverage Services

53. One way of accommodating the constraints envisaged by TESDA is to apply for support through the Hanns Seidel Foundation for proposals currently awaiting accreditation. Another development relates to a memorandum of understanding signed in October 1994 between GTZ (Germany) and TESDA for the introduction of the Dual Training System in the Apprenticeship Programme.

2.4.3 Other relevant Acts

54. Other relevant acts which could provide incentives for training institutions to establish partnerships with private establishments include the Productivity Incentives Act (RA 69-71), the Magna Carta for Small Scale Enterprises, and the Local Government Code.

Productivity Incentives Act

55. In the Productivity Incentives Act, one of the components relates to Manpower Training, making cost-sharing of such training possible (including training materials, consumables, instructor salary, opportunity costs of training, training fees and depreciation of training equipment).

56. Trainees obtain grants, while business enterprises can receive a special deduction from gross income (See Revenue Memorandum Circular No.102-90). Skills given priority in the programme include electronics, machine shop, automotive and garments.

Local Government Code

57. The emphasis is on decentralization of government from the province to the barangay through granting autonomous administration (particularly, the authority to levy local taxes and carry out resource allocation). This enables the local government units to pursue programmes addressing the needs of their specific constituencies.

58. Education and training at local government level may consist of direct implementation, policy formulation and coordination, infrastructure development or simple financial grants or assistance.

59. In cases where the effective coverage of programmes extends beyond the locality, local government units may cooperate, coordinate or consolidate their efforts and resources for the purpose through Memoranda of Agreement (SEC 33). The Regional Development Councils are venues and examples of such collaborations. Local government is confined to the provincial level and yet common agenda points may be drawn region-wide. The code also allows cooperation with people's Organizations (POs) and NGOs in the delivery of training.

Magna Carta for SMEs

60. The Magna Carta for Small and Medium-Scale Enterprises provides incentives and assistance that may be implemented by line agencies like DTI and TESDA. Initiatives such as the METASHAPE project come under this heading.

2.5 VTP II and Private-Public Partnerships

61. The main components of VTP II relevant to the process of changing private-public partnerships are the following:

* improving training quality and cost recovery by developing mechanisms for equitable cost-sharing and training cost recovery;

* developing training capacity through provision of incentives for the private sector to assume greater role in skill development.

2.5.1 National Skills Certification Programme

62. A nation-wide certification programme is to be set up, based on the results of the Impact Study on the National Skills Certification Programme (NSCP), which is currently being implemented by a consortium with involvement of the Korean Koma and the UK National Council for Vocational Qualifications.

63. Qualifications and certification play a key role in bridging the gap between education and work. Moreover a qualifications system has to provide for both current competencies and be flexible in terms of future requirements. Up to now TESDA has given its approval to set trade standards and issue trade certificates for 266 skills. Many of the existing standards are not related to areas currently seen as critical.

64. In VTP II, 25 Trade Skills Standards and related trade test materials are to be developed and revised. There is an emphasis now on strong industrial involvement in developing such standards and certification systems under the auspices of TESDA.

65. TESDA's emphasis is on establishing, equipping and properly staffing public trade testing centres and on developing a system of guidelines for accreditation of Trade Testing Centres and Trade Testing Officers. Upgrading of RMTCs and PMTCs to meet first and second class standards respectively is underway. Trade testing centres are required, but in general there seems to be a lack of funds for equipment procurement (certainly for first class tests) and recruitment of competent personnel.

66. Still, according to TESDA, private enterprises should give more priority to training, considering it an investment instead of an added cost and perceiving advantages in enhancing labour mobility through standard setting and testing. Within the Industrial Capability Programme, selected Industry Boards/Associations will focus on the full implementation of respective Trade Standards and Test Development Standard Programmes.

67. Another aspect of accreditation being emphasized is trainers' accreditation and a subsequent license scheme. A manual on trainer certification is planned. Finally, a national framework for standards in curriculum development and training materials is being established.

2.5.2 TAC and TCS

68. The Training Assistance Contract (TAC), one of the incentive schemes within the framework of VTP II, is intended to strengthen the capacity of private technical institutions to deliver high-quality cost-effective training. The scheme is managed by TESDA through the Philippine Association of Private Technical Institutions (PAPTI) and PAPTI membership is one of the conditions of eligibility for TAC funding.

69. A large proportion of the private TVET schools are PAPTI member. However, 50% of Roman Catholic institutions belong to the Catholic Education Association of the Philippines (CAAP), although some are also PAPTI members. The PAPTI chair is with the Don Bosco Centre for Research and Training. Apart from PAPTI membership giving access to TAC funding and PAPTI having been instrumental in the launching of a Survey of Private Technical and Vocational Institutions its operational activities seem to be limited.

70. TAC provision covers both skills upgrading programmes and trainer training programmes. Achievement records and constraints have not been made systematically available for the purpose of this study. One of the important side-effects of TAC is an increased degree of organisation of the private training sector.

71. The Training Contract Scheme (TCS) was started by NMYC in 1982 under VTP I. Its mode of operation is an agreement between TESDA and a firm sponsoring training, whereby the firm is reimbursed for part of its training costs, provided that the trainees pass a trade skills test. The initial focus of the programme was on small and medium industries in eleven priority sub-sectors. In 1989 trainer training and technical training were added.[9]

72. According to the Year-End Report 1994 of the NMYC Office of Industry Manpower and Incentives, the TCS for 1994 was redesigned as a "service window" for the ICBP. The submission of Industry Capacity Building Programmes became the basis for training subsidy available for the year in review until 1997. The TCS was also expanded with training incentive vouchers for small enterprises covering up to 50% of training costs in joint group training facilities.

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9 Information originating from Impact Evaluation Study of the Training Contract Scheme; A preliminary report, prepared by Evaluation Division NMYC with the consultancy services of the International Contact Business System Inc. (undated).

Section 3. Scope and Methodology of the training institutions survey

3.1 Scope of the survey

73. The project document, as it concerns the Survey of Training Institutions refers to "an analysis of the existing private and public training institutions and the way they function".

74. The first set of questions focuses on institutional capacity as a whole, as well as the provisions for TVET for the manufacturing sector in terms of enrolment, completion and level of courses, staffing and target groups for training[10].

75. The second set of questions highlights the process of product diversification and subsequent diversification of funding/revenues. What new roles are training institutions assuming or willing to assume?

76. The third set of questions deals with the dynamics and possible gap between supply of trainees and demand from industry, institution-industry liaison and approaches towards higher external efficiency.

77. The fourth set of questions relates to the degree to which training institutions have established liaisons with industry and make use of provisions to strengthen their equipment base and staffing to meet requirements of the manufacturing sector.

3.2 Research Methodology

78. A survey was carried out among a sample of training institutions, complemented by case studies among a selection of training institutions perceived as examples of good and innovative practice. These case studies concentrated on the different linkages for public-private liaison referred to in paragraph 2.3 (33) including various forms of dual training[11]. They were carried out in order to obtain better insight into opportunities and constraints in those forms of training in which the private sector plays a relatively important role.

79. A questionnaire was used for the institution as a whole and for the TVET component of training provision within the institution, while a second questionnaire concentrated on collecting trade-sector specific information in the training provision.

80. A number of choices were made for the purpose of this study. Activities related to training up to technician level, in line with the TESDA Act (Sec. 2,3,4), were included[12]. The survey was confined

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10 Data on allocation and expenditures were gathered for and analyzed by the team member responsible for the report on finance and cost-sharing.

11 Case studies were prepared by Dr. Dan Rola and Mr. Arnolfo Morfe on:

- -Dualtech Training Center (DTC)
- -Marikina Institute of Science and Technology (MIST)
- -Quezon City Polytechnic (QCP)
- -Pablo Bourbon Memorial Institute of Technology (PBMIT)
- -Centre for Industrial Technology and Enterprises(CITE), CEBU
- -Don Bosco Institute of Technology, CEBU
- -Dual Vocational Training Institute of Business Center Davao Foundation
- -Regional Manpower Training Center, Davao
- -TESDA National Center, Taguig.

12 This covers:

(1) Training provided by TESDA, other central government agencies and local authorities to out-of-school youth, unemployed adults, and employed workers, foremen, supervisors and (potential) entrepreneurs. This training may be basic (job-entry/operator), advanced (craftsmen, semi-/skilled workers) or upgrading in nature.

(2) Provisions under TESDA/Office for Formal TVET and by private accredited TEVT institutions for students at:
- -Secondary Level
- -Evening opportunity trade classes

to the four regions chosen in the study overall, and to the industries selected. This meant that the choice of training institutions was limited to institutions providing training in the specific trade sectors covered by the study in the regions selected. Both private and public training institutions were covered; the private ones limited to those registered with TESDA.

3.2.1 Sampling frame and response[13]

81. The institutions comprising the population for the study included both public and private institutions, providing formal and non-formal TVET activities. Its size was traced from the following documents.

82. The TESDA 1994 Manpower Factbook reveals the following data for FY 92/93:

* For private formal TVET the total numbers were 781 private institutions and 337 public ones offering post-secondary non-degree courses. (Table 8.2). These 1118 schools had an enrolment of 438,576 students, of whom 14% in public institutions and 86% in private institutions.(Table 8.6).

No details were provided, however, on the degree to which the schools provide TVET specifically for the manufacturing sector. The TESDA background report on TVET (Doctor 1995) provides some insight in that respect: of 322 schools which the author mentions, 147 are trade-technical, and of 89 SUCs, 25 are technical.

83. For public non-formal TVET, NMYC data reveal the following:

* In 1993 Member Agencies of the then NMYC graduated a total of 451,363 trainees from their own or assisted programmes. NMYC had 141,872 graduates (31.43%), DECS 86,379 (19%), DTI 28,719 (6%), the Dept. of Local Government 38,728 (9%), and the Dept. of Science and Technology 12,926 (3%). The remaining 142,739 (31.6%) graduated through other agencies.

84. From this range our survey concentrated on three categories of institution:

* Public institutions catering for non-formal TVET
* Public institutions catering for formal TVET
* Private accredited institutions catering for formal TVET often combined with short non-formal training courses.

In practice these categories could include:

* TESDA non-formal training: RMTCs, PMTC, NISD, Taguig Centre;
* TESDA formal TVET: SATs, TEIs and SUCs delivering trade technical related programmes at secondary and post-secondary non-degree level;
* DTI/NMITC specialized training centres and their branches in the respective regions;
* DOST/MIRDC and TTCs if operational in the survey regions;
* Departments of Local Government providing basic industry-related skills training, in their own training venues or those of TESDA at provincial level (PMTC);
* Major or innovative private institutions such as MERALCO Foundation, Don Bosco Institutes of Technology and Dualtechs;
* A sample of accredited private institutions identified from TESDA data, catering for formal and non-formal TVET.

-Post-secondary non-degree level, intended toprepare semi-skilled, skilled workers or technicians in such fields as agriculture, trade and industry, fishery, business and commerce. This provision is catered for in SATs, TEI and SUCs.
-Technician education programmes
-Dual provisions will be considered in this category as and when producing graduates with a certificate in line with the TVET system.

13 The team acknowledges the value of the Background Studies published by TESDA in its Sector Studies Series by R.M. Doctor, Technical and Vocational Education and Training in the Formal Sector both Public and Private and The role of Private Technical and Vocational Education and Training Institutions in the Philippines in establishing the sampling frame.

85. Although TESDA is theoretically responsible for coordination of all middle level manpower training, this is not yet the case in practice. It therefore proved extremely difficult to trace TVET training implemented and/or financed by agencies beyond TESDA's scope, including by local governments. Therefore within the survey, no non-formal training institutions affiliated to other departments were included.

86. Institutions catering for both non-degree courses and degree courses had difficulty in choosing between TESDA and CHED as their primary affiliation, due to the current transition period. Illustrative were the institutions which rated themselves as affiliated to local government, which had formerly been NMYC Satelite institutions.

87. The private training institutions covered were limited to those accredited by TESDA, and training centres providing dual training. All institutions were chosen on the basis of their provision of manufacturing-related training. Only a small part of private training provision was found to offer this type of training. For the selection of industry sub-sectors, see Specialist Report No.5.

88. The choices of sub-sector and region further narrowed down the population of TVET institutions. Institutions with as sole relevant provision courses on electronic data processing, tailoring and dressmaking were eliminated from the population. This substantially decreased the operational population of private institutions, where data/word processing training and tailoring accounts for more than 85% of the provisions. Based on data provided by the OIC Regional Office TESDA, Central Visayas, Cebu (Region VII) an approximate research research population was compiled. For the other regions NMYC TOPS data and other sources were used[14].

89. The table below indicates the sample coverage in the four regions and shows public and private provision.

Region	public sample	pop.	private sample	pop.	total sample	total popul.
NCR	8	14	12	25	20	39
CALABAR-ZON	8	16	12	25	20	41
Reg. VII	8	8	12	18	20	26
Reg. XI	5	5	11	13	16	18
Total	29	43	47	81	76	124

90. A sample of 76 institutions (61%) of the overall population of training institutions involved in middle level manpower development for the manufacturing sector was drawn out for the survey. 67% of the public institutions in those 4 regions (excluding those which could not be traced) were included in the sample. All relevant public institutions in Regions XI and VII were to be covered, and in the other regions the coverage was at least 50%. 58% of the relevant private institutions were covered.

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14 -Directory of Public Tech-Voc institutions, BTVE, 1994.
-Educational Institutions Survey Report. Prepared for MERALCO Foundation Inc. by the Center for Asian Research and Development Foundation, 1994.
- A Vision for formal Technical and Vocational Education in TESDA, BTVE; Appendix C, Number of Technical-Vocational Institutions by Type of School 1993-1994.
- Directory of Private Technical and Vocational Education Institutions in the Philippines, BTVE, 1994.
- National Manpower and Youth Council, Directory of Training Institutions, Vol. II, NMYC, 1991.

91. In preparing for the data-collection, the sample of 76 institutions was approached by introductory letters from the Director-General TESDA and (to private institutions) from PAPTI. In the first instance 85% of those approached were prepared to cooperate. A number of substitutions were made, bringing the response rate to 97% achieved. The actual survey response is indicated in the following tables:

	Number	Percent
Public/TESDA	21	28.4
Public/non-TESDA	10	13.5
Private	43	58.1
Total	74	100.0

Type

	Number	Percent
Training centre	20	27.0
TEVT school	45	60.8
SUCs/Univ/Col	9	12.2
Total	74	100.0

3.3 Methodological considerations

92. In preparing for the survey a strong participative sub-team approach was opted for combining resources of the University of Amsterdam Consortium with the expertise of a national consultant and expertise and resources from TESDA's Policy Research Division. This implies a capacity- building process in the study from start to finish.

93. Although consultations were maintained throughout the whole research cycle, the full participation of TESDA staff in data-processing, data analysis and reporting could not be maintained. The preparation for data-collection was done by the full sub-team. The data-collection, interview training and data-entry was commissioned to local consultants with assistance of the national consultant. Data were entered in the Philippines under the guidance of the team leader of the University of Amsterdam Consortium.

94. A number of difficulties were encountered in collecting data. (1) There was a clear difference between concepts and their meaning as used by TVET policy-makers and practitioners. As a consequence some questions which seemed to be simple proved to have several possible interpretations. (2) The institutions were inclined to grade their programme provisions more highly than was actually the case (as became clear from the programme data). For instance, some private universities and colleges were not willing to be considered vocational and technical schools.

95. Academic institutions also offering non-degree courses stuck to their CHED affiliation rather than responding in their TESDA TVET post-secondary non-degree capacity. Another example was that institutions tended to rate their programmes as technician courses rather than courses for operators or semi-skilled workers.

Section 4. An Overview of the TVET Sub-Sector

4.1 Introduction

96. An overview is presented of private and public sector TVET institutions, the institutional framework, input, processes, outputs and factors enhancing effectiveness, including different forms of linkages to industry. The first section deals with the differences between private and public sector institutions as a whole, in the second section sub-sectoral patterns of training provision are discussed.

4.2 TVET provisions in the survey regions

97. A wide range of TVET institutions is covered in the survey, both public and private in NCR, Calabarzon, Region VII and Region XI.

Public and Private institutions in the survey regions

REGIONS	PUBLIC	PRIVATE	TOTAL
NCR	11	10	21
CLB	8	12	20
VII	7	10	17
XI	5	11	16
TOTAL	31	43	74

98. They differ in terms of level, size and scope of provision. The following results indicate some of the intricacies and complexities of the TVET sub-sector.
(1) A substantial number of degree-granting institutions including two state universities, private universities, three Colleges of Arts and Trades (CATs) in Calabarzon and three public Science and Technology Institutes provide TVET.

(2) Among the public institutions, there are three Schools of Arts and Trades (SATs) and 6 Technician Education Institutions (TEIs). These TEIs have received upgrading of their physical infrastructure and staff through several donor-assisted projects, including ADB loans and Australian technical assistance.

(3) Comprehensive programme offerings, including TVET and within the TVET provision, programmes and courses relating to the manufacturing sector are offered in some 10 large institutions, enrolling at least 1,0000 students every semester. The De LaSalle University campus in Cavite is part of a large network of schools in Calabarzon. There are seven other sizeable institutions, including PBMIT in Batangas, RTPI in Rizal, Cavite and Laguna Colleges for Arts and Trades (CATs). In Region XI, there are two large institutions, the University of Southeastern Philippines and the University of Mindanao, but in Region VII there are no universities involved in TVET. These institutions offer both degree programmes and non-degree ones. This is important when considering enrolment data for institutions as a whole.

(4) In addition to regular vocational schools, there are three secondary institutions (both are in Region VII) which offer post-secondary non-degree vocational courses.

(5) There are 20 vocational schools or institutions among those covered by the study, 19 private and one public, offering only vocational or technical programmes. Among these are model institutions for technician and short courses such as the Meralco Foundation Institute and Don Bosco. Some of these institutions focus on dual vocational training; these include dualtech centres and the dual vocational training institute of the Business Center Davao Foundation Inc. In this category we find institutions

which have been involved in pilot testing of models and some innovative forms of cooperation. They include dualtech consultancy support to PBMIT, MERALCO Foundation Institute links with CITE in CEBU and attempts by Meralco to transfer its model under lower recurrent cost conditions to other locations, including Xavier University and Don Bosco Cebu.

(6) NITVET, Taguig, Regional Manpower Training Centres (RMTCs) and Provincial Manpower Training Centres (PMTCs) under TESDA as well as Satelite Training Centres formerly under TESDA, now under the Local Government, were also covered.

99. Some of these institutions are models to be carefully considered in terms of their replicability in order to enhance the effectiveness of the system as a whole. **We have to distinguish models from system-wide patterns which may be significantly different from these models.**

100. Tertiary institutions have diversified through offering both academic and vocational non-degree programmes as well as TVET provisions for middle-level manpower. Through this diversification tertiary education tries to get access to different budgetary resources. This diversification process at tertiary level is in marked contrast to the apparent lack of service development and revenue generation in many vocational schools and training centres.

4.3 Institutional framework

101. Forty-three institutions in our survey (58%) are private, 31 are public. Of the private ones 10 are sectarian, 33 non-sectarian. Given the occupational areas covered the sample is reasonably representative as far as private provision is concerned. The private TVET population was restricted to those having courses accredited by TESDA. Of the public institutions, 37 are TESDA related and 6 claim affiliation to local government.

102. The majority of institutions in the sample are formal- system providers. Including 45 vocational schools and colleges (69%) and five chartered SUCs and four private universities/colleges (coded as SUC), a total of 73% of the TVET provision covered in the four regions is education system-based. There are 20 training centres in the survey. Out of 74 institutions, 24 (32%) provide both formal TESDA accredited programmes and non-formal training programmes, while 30 only have formal offerings.

103. Findings on capacity of TVET and its utilization relate to the sub-sectoral provision rather than to the TVET capacity of the institution as a whole. This is to yield better insight into training for the manufacturing sector, having particular requirements of its own in terms of workshops, specialized staff and possibilities for school-industry liaison. (These findings originate from Part II of the questionnaire and cover one sub-sector per institution.)

Type of institution by sector

Type institution	metals	automotive	electronics	textiles	tot
Public/TESDA	5	7	6	3	21
Public/non-TESDA	3	2		5	10
Private	10	13	17	3	43
Total	18	22	23	11	74

Range of provisions

104. Even though the survey concentrates on one sub-sector for each institution, these institutions may provide training in several industry sub-sectors. In private sector institutions there is a tendency to concentrate on one or two industry sub-sectors, as was found in more than 50% of the institutions. This has advantages in terms of focusing investment. Public institutions have found this more difficult to achieve, given an almost political requirement to have comprehensive provisions. **A key question is whether this pattern can be changed by allowing market considerations to be applied in determining industry sub-sectoral course coverage of TVET in both public and private institutions.**

105. In almost 50% of the institutions, metal trades are among the sub-sectors covered.

Sectors covered by TVET institutions

	Frequency	Percent
Metals and engineering	3	4.1
Automotive	5	6.8
Electronics	5	6.8
Textile and Garments	4	5.5
M and E	6	8.2
M and A and E	14	19.2
M and A and E and G	6	8.2
M and A and G	1	1.4
M and A	4	5.5
A and E and G	7	9.6
A and E	17	23.3
M and E and G	1	1.4
Total	73	100.0

Source: Field Survey Training Institutions, VTP II.

4.4 Capacity Utilization

106. Data on capacity have been collected on the degree to which centres' physical infrastructure, technology base and staff are utilized, in order to analyze whether investments and recurrent expenditures are used efficiently. Twenty-five institutions utilize their facilities on a one-shift basis. Eighteen institutions use their facilities for 3 shifts. Slightly more than half schools/centres (39) run on a five-day basis; 33 are open 6 days a week. The majority of schools/centres (42) are operational during 10 to 11 months per year, and another 26 institutions (35%) are operational for the whole year.

107. The number of courses offered varies from 12 schools/centres which offer less than 4 courses to 34 offering 13 or more courses. The intake capacity of these courses varies strongly, and different criteria are applied by institutions to establish their intake capacity. 18 centres/schools have an intake capacity of 15 students or fewer per course, 24 can accommodate 16 to 29 students and 13 can accommodate 45 or more students. Most centres/schools can take 1 or 2 batches per course per year (57), while in 5 institutions five or more batches can be programmed for.

Inputs

108. Permanent staffing of the institutions as a whole and the TVET part of it was as follows:

	INSTITUTION	TVET
Managerial	660	239
Teachers	4763	1343

109. In terms of staffing of industry sub-sector courses (either metal, electronics, automotive or garments) the 74 institutions employ 109 permanent (programme) managers and 394 teachers/instructors. There are four large institutions claiming to have more than 20 teachers/instructors permanently assigned within a sub-sector. However in 64% of the institutions there are 3 or fewer teachers permanently assigned to teaching/training pertaining to the sub-sector under consideration.

110. Of those 394 teachers/instructors, 52 have a third class trade skill certificate (in 27 institutions), 70 have a second class certificate and a total of 30 teachers or instructors have a first class skill certificate (in only 10 training institutions). In most vocational schools, teachers have passed the professional board examination (didactic rather than skills qualifications). This is the case in 42 schools. It is clear that the quality and qualifications of teacher and instructors in training for the manufacturing sub-sector have to be improved. Passing certified higher level skill tests and licensing of such qualified people are an essential component of a quality drive in TVET.

111. Apart from adequate staff, the technology base of the existing training institutions was traced. Questions on the availability of a list of key conventional and equipment related to new technology for each industry sub-sector were asked. All but one garment and textile programmes had industrial sewing machines varying from fewer than seven in three institutions to between 30 and 35 in two institutions. None of the 11 garment and textile training provisions had any of the three new technology items listed.

112. In metal trades, two institutions provide courses without having the use of key conventional equipment necessary such as lathes, milling machines and grinding machines. All other institutions have such machines but the student-machine ratio differs widely, leading to huge differences in the degree to which students can get hands-on experience with these machines during the institutional component of training. About half the institutions (56%) have one or more of the six new technology equipment items referred to. CNC stations are hardly available: seven are found in NCR and one in Region VII.

113. A comparable situation exists in the automotive workshops. Two institutions do not have basic conventional equipment. Twelve training institutions (55%) have some new technology equipment. Also here strong regional discrepancies are found with new technology equipment significantly more available in NCR and Calabarzon than in Regions VII and XI. Four institutions have all the items of new technology equipment and three have only one item.

114. Most institutions are very well equipped with conventional equipment in the electronics programmes. There are some institutions of excellence which have sets of handtools for each student and sufficient equipment in work stations for adequate hands-on experience. As far as new technology equipment is concerned, the pattern observed is also somewhat better than in the other sub-sectors. Eighteen institutions (78%) have workshops with new technology equipment. Eleven institutions have three or more of the items listed. Regional discrepancies are less strong in the electronics programmes. However, some items, such as microprocessors and simulators, are available in NCR only.

115. At the moment, there is no system of accreditation through which minimum standards for equipment of TVET institutions are set and monitored. Based on the findings of the survey of training institutions only, it is difficult to assess whether the existing equipment is at present in line with the requirements of local industry or whether there is a gap which should be filled. **A key issue here is to develop a strategy for creating a nation-wide, region-specific technology base in middle-level training programmes, taking both conventional and new technological requirements into consideration.**

116. The institutions enrolled a total of 209,951 students. Enrolment of students in TVET courses amounted to 64,009 (30% of enrolent in all programmes). Enrolment is influenced by the differing size and character of the institutions, course/school capacity and number of courses provided, and whether the institutions are comprehensive (general and TVET) or TVET-specific institutions.

117. In the sector-specific courses, a total of 12,445 students enrolled in the school/course year 94/95. That is 19.4 % of the total TVET enrollment. Of the people enrolled, 2,329 were women (18.7%). Women are thus strongly under-represented in manufacturing-related TVET in the survey regions. High school graduates are the largest target group served by the training providers, with an enrolment of 9,435 (76%), and out-of school youth is the second most important category served with 1,827 enrollees. High school students are a third category, with 1011 enrolled. Employed adults (339), unemployed adults (460) and apprentices (146) are hardly represented.

118. Most institutions (51, 69%) concentrate on courses for one target group only. Ten institutions recruit from from three or four target groups. There is little indication that TVET institutions aim at diversification of target groups. From the survey the degree to which TVET institutions reach out to companies for training and upgrading of their workers seems to be negligible. Almost as many centres/schools (40, 54%) offer pre-technician training as technician training (34). Institutions preferred to rate their programmes as 'technician training' even though looking at the duration of the course, it was clear they were pre-technician courses. As the survey was based on actual responses and corresponding rating it may possibly have led to a more positive picture of the status of technician training than reality warrants.

119. The TVET institutions in the survey hardly cater for technical teacher/trainer upgrading, nor for short specialized courses. Only 1,095 enrolments are reported in short specialized courses and in this category, NCR is dominantly overrepresented.

120. Given this heavy emphasis on either technician or pre-technician training or both, 64 institutions concentrated on one course level only, seven on two and only two institutions covered four types of course. Again, little diversification in terms of level of training could be observed.

4.5 Processes of change in institutions

121. This section will deal with processes of change in the institutions, as they adjust to new market requirements and challenges, and the limitations imposed by decreases in traditional sources of core funding. Given the high investments required in establishing and maintaining an adequate technology base in comparison with general education, there is a need for an optimal capacity utilization of training institutions both for regular education and training, and for additional revenue-earning services if efficiency and cost-effectiveness ar eto be maintained. High capacity utilization of the centre will in turn entail large investments to cover depreciation and obsolescence.

122. Finance can only be assured if the return on the investments is high enough to cover at least the additional expenditure incurred. One way of meeting this internal contradiction is to combine regular training (cost-generating) with other services such as contract training, consultancy and other types of service. Model centres, such as Meralco, have both short specialized courses, technician courses, as well as fee-earning seminars. Similar processes of diversification can be found in other institutions such as Don Bosco and Dualtech.

123. The questions posed in the survey at institutional level on trends in pre-technician, technician, teacher training and short specialized courses over the last three years indicated mainly increased and stable demand. This is not surprising given the strong emphasis on regular courses at pre-technician and technician level. However, the bias against reporting negatively about trends should be kept in mind here.

124. The question posed on changes in demand for the following levels of courses revealed no major shifts. Most institutions (29) referred to an increased demand for technician training, followed by basic operator courses (23) and upgrading craftsmen courses (15). The other categories were hardly referred to, which is consistent with their lesser presence in the surveyed institutions. Forty institutions also indicated an increased demand from high school graduates for their courses.

125. Priorities for the future are similar to existing mandates, although 13 institutions see either training of foremen or entrepreneurial development as their first priority for the future, compared to institutions preferring technician training (34 institutions). Eight institutions see employed workers as their first priority for the future, and 10 as their second priority. Still, in terms of target group and level of courses in general, most institutions indicate a maintenance of the status quo rather than discoveries of new markets.

Curricula revised and courses stopped in the last five years

126. Insight was also obtained into the number of major curricular revisions and old courses stopped in the last five years. The results also confirmed that the training provision for manufacturing is quite static. In some 75% of the institutions, no course was stopped or curriculum revised during the last five years. This means that the course offering has remained stable in periods of technological change and modified trainee market conditions.

NUMBER COURSES/CURRICULA	No. Institutions COURSES STOPPED	No. Institutions CURRICULA REVISED
0	56 (75.7%)	54 (73.0%)
1	10 (13.5%)	13 (17.6%)
2 or 3	8 (10.8%)	7 (9.5%)
TOTAL	74 (100%)	74 (100%)

Source: Field Survey Training Institutions, VTP II.

127. Nonetheless in 10% of the institutions, two or three curricular revisions have taken place in the last five years. Courses referred to several times as being discontinued include garment-making, refrigeration and airconditioning. Specialized courses referred to include precision grinding and marine electronics.

128. Even though course planning is increasingly seen as an institution-based process, in 30% of the institutions it is still viewed as the responsibility of the central government. It is also striking that very few institutions perceive the local government as playing a key role in this respect.

129. In some cases reference is made to factors such as equipment update, computerization and the adoption of a tri-semester programme as the source for the curriculum revision. The courses mentioned include tool design and machine-tool technician, computer courses, auto electrical wiring, high speed sewing and industrial electricity.

Responsibility for course planning			
	Value	Frequency	Percent
Institution	1.00	47	63.5
Province	2.00	1	1.4
Municipality	3.00	4	5.4
National Government	4.00	22	29.7
Total		74	100.0

Source: Field Survey Training Institutions, VTP II.

130. However there are many public schools such as MIST where a TAC (Technical Advisory Committee) is operational. TAC regularly meets with representatives of companies to discuss curricula and course offerings vis-à-vis requirements of industry. In 18 schools (24%) Industry Associations in particular are involved in one way or another in processes of curriculum design or revision.

Responsibility for Curriculum Development			
	Value	Frequency	Percent
Institution	1.00	45	60.8
Municipality	3.00	4	5.4
National Government	4.00	25	33.8
Total		74	100.0

Source: Field Survey Training Institutions, VTP II.

Composition of training product groups of TVET institutions

131. The training product group in institutions consists of regular training (R), contract training (C) and dual training (D) or any combination of these. 55% of the TVET institutions only concentrate on regular training. The nnnumber of institutions which have entered the contract training market is still only 18 (24%, including one focusing only on contract training within this product group).

132. There is a growing interest in dual training among institutions (27%). In more than half the cases (13 out of 20), dual training was referred to as a new provision. This is the only significant novelty embarked upon by training institutions.

TRAINING PRODUCTS	NUMBER
ONLY REGULAR TRAINING	41
REGULAR AND CONTRACT TR	8
REGULAR AND DUAL TRAINING	11
ALL THREE	9
TOTAL	69

Source: Field Survey Training Institutions, VTP II.

133. Only 13 TVET institutions indicated that they are involved in consultancy services. Consultancy services may be seen as recognition of expertise to be mobilised by third parties. This is obviously not a frequent phenomenon in the sector.

134. Another activity considered by many institutions as part of their product range is 'production and repair'. Even though no insight could be obtained in the share of this product group in the overall budget of the institutions, or into the use of revenues obtained for recurrent cost recovery or topping up of salaries, its frequency (45 institutions, 61%) still warrants some attention. Most of these institutions were involved in repair only (23) and only five concentrated on production. Don Bosco and Meralco (tool and die shop) are examples of institutions who, based on their status, have obtained some share in the market for production and repair.

135. Most institutions thus stick to regular education and training as their first programme priority (45 institutions, 61%), while 14 institutions perceive dual training as the first priority to concentrate on.

4.6 Effectiveness of training

136. The main criteria to measure effectiveness of training are: (a) whether it leads to employment, and (b) whether it contributes to productivity. The following measures can be used:
* high graduation-placement ratio;
* increase in value added by employed graduates by ensuring match between qualification and certification and required job competencies (standards and skill tests).

137. This paragraph deals with measures to improve the match between TVET and employment in industry, gives data on the output of the TVET sector and the wastage of scarce resources for middle-level manpower through drop-outs, and gives some indications of factors enhancing placement.

138. In many cases both public and private training institutions use public and user funds inefficiently, so that firms have to supplement and reinforce training efforts made by these training institutions. This occurs when vocational training graduates require further generic training before they are considered competent enough for job-specific training.

139. Assimilation into the real production environment may be accelerated and enhanced by combining school-based and in-plant pre-employment training. Dual vocational training, which is receiving more and more interest from training institutions, companies and external donor agencies, tries to match services, criteria and expectations between cooperating schools and companies.

140. The survey explored patterns of cooperation between schools and industry which might improve the effectiveness of pre-employment training. At the institutional level, the types of school-industry partnership were examined, such as formal representation in the school board and/or an advisory committee with industry representation. Twenty schools (30%) had industry representatives on their

Boards and in 33 schools an Advisory Committee with industrial representation is operational. Such committees often liaise with Industry Boards/Associations in curriculum design and revision, and play a key role in linking schools with companies for OJT places. 24 schools (32%) indicate that their liaison with industry strongly focuses on this.

141. There are several government programmes and schemes aiming at strengthening the liaison between training and employment. The survey tried to assess whether institutions are aware of such programmes.

* 32 institutions (43%) are aware of the TAC scheme;
* 21 institutions (28%) claim that they are informed about the Productivity Incentive Act;
* 31 institutions (42%) are aware of the Dual Training Act.

These results imply that definite improvements can be made in promoting knowledge of existing schemes among training institutions; particularly concerning the Productivity Incentive Act.

Output and wastage

142. In the industry sub-sector specific courses on which data were collected, a total of 7,050 students graduated in schoolyear 94/95 (course year 1994), of whom 1,380 were women (20%). In the same period, 1,088 students dropped out before graduation, of whom 269 were women. The drop-out of women compared to men was higher. However, the range of programmes followed by women was much smaller than that followed by men. (31 of the 74 sub-sectoral programmes had women enrolled compared to men's enrollment in 71 programmes).

143. In 44 training institutions (59%) there was no change in instructor staff. In contrast the turnover of instructors involved a replacement of more than 25% of staff in two institutions and between 6% and 14% in five institutions. In 23 institutions the annual turnover of staff was above zero but less than 6%. From a market mechanism point of view staff turnover may be seen as dynamic in terms of strength of provision given differential prices paid for highly skilled instructors in different markets.

Reason for staff departure, by number of schools

	Number	Percent
Transfer to other schools	3	4.1
Transfer from public to private schools	1	1.4
Transfer to private companies	15	20.3
Migration	6	8.1
Other reasons	5	6.8
No departures	44	59.5
Total	74	100.0

Source: Field Survey Training Institutions, VTP II.

144. Only 1 instructor has been transferred from a public to a private school. The number of instructors moving to private sector companies in other sectorsd is substantial but it is not known whether they continue as instructors orleave th profession. Migration plays a role to a lesser extent. Private schools and training institutions (11 institutions, 26%) are mostly affected by instructor turnover to private companies. This applies far less to public institutions(4,13%). It is a pattern mainly occurring in NCR (8 institutions, 38%). In Region VII and XI only two institutions are faced with loss of instructors due to recruitment by companies and four institutions in Calabarzon. Institutions being faced with turnover of instructors include those known for their high-quality provision such as Don Bosco, Dualtech, Meralco Foundation Institute and PBMIT.

145. It is surprising that given the planned transfer of staff to local government employment and their consequent insecurity, departures from TESDA RMTCs and PMTCs to private companies are not apparent.

146.It is clear that market forces impinge on high quality instructors employed by solid institutions. However, those institutions are trying hard to maintain their quality status despite the differences in salary levels between the private sector companies and themselves. They have to invest heavily in recruitment of staff to maintain their staff capacity.

Course effectiveness/placement

147. The survey did not yield data as to actual placment of students. Insight into actual placement can be obtained from the survey of graduates of TVET institutions. It did try to unveil factors detrimental to post-training placement of students in industry. Among the factors referred to are:

* Inadequate equipment: 27 institutions (36%);
* Insufficient practice and OJT: 25 institutions.

148. Many institutions perceive on-the-job training as an important channel for placement of graduates. If the claims of some dual vocational training centres is correct that almost all their graduates are placed and if the integrated approach of in-school and in-company training does lead to a better match between skill requirements of industry and skill development with an institutional training component, then well designed and monitored OJT components could enhance post-course employment of graduates.

149. Most respondents indicate that their courses have an OJT component in one way or another. This applies to 66 institutions (89%). A total of 1,601 students completed OJT in 94/95 in one sub-sector in 29 institutions. This is 22% of all graduates covered by the survey. This figure indicates how substantial the OJT component in Philippine TVET is. The average number of OJT completers in the 29 institutions is 55 but the number of OJT students varies from 1 to 400 OJT placements.

150. Seventy percent of the institutions indicate that they cooperate with industry in one way or another. Twenty institutions indicate that they do not have any partnership yet. OJT is often part of broader education-industry partnerships covering:

-Industry sponsorship of trainees. This applies to 28 institutions (38%). Industry has sponsored a total of 1,607 students. It became clear that industry sponsorship of trainees covers allowances during OJT or the in-plant period at dual vocational training centres rather than bursaries or fellowships granted by industry.

-Donations by industry covering equipment, tools, software and manuals. 26 institutions (35%) received donations, three of which getting comprehensive support covering all categories of item. 19 institutions (26%) have received donations of tools and/or equipment.

4.7 Skill Standards, Testing and Certification

151. One of the concerns which TESDA, through the former NMYC, has pursued is the development of national skills standards and certification. This has been implemented through regional offices and centres accredited to conduct testing. The coverage in terms of the number of skills is limited.

152. The reach in terms of geographical scope for trade testing as well as the availability of trade test centres capable of executing first class tests is also restricted.

153. In the survey, questions were asked as to the awareness of trade skill standards, the availability of trade skills standards, the awareness of the existence of trade test centres and knowledge about the location of trade test centres. Most institutions (60, 81%) were aware of the existence of trade test centres and 56 knew the location of at least one such centre. However, fewer institutions (42, 57%) had copies of trade skill standards, which are essential as a source for curriculum revision.

154. Even though the reach of trade skill standards and testing is limited, several employment agencies (especially those involved in recruitment of OCWs) have adopted testing as evidence of skill level and thus of employability. Indeed the existing demand for trade tests consists mainly of individuals and those desiring to obtain employment abroad.

155. The use of testing by schools and companies has been somewhat limited due to the following:

* Companies have broader job descriptions for individual job positions than the occupational titles used for testing.
* In addition, companies are interested in the tests for their internal recruitment and classification scheme rather than in the certification component.
* Schools restrict themselves mostly to issuing their own certificates. A trade certificate has to be obtained by the graduates on their own initiative. Since courses are often broader in terms of (claimed) skills content, the skills standard certification may focus on only one aspect, so that several tests would be needed. Schools restrict themselves to accreditation of success in their own courses and programmes.

156. The school/college certificate a graduate holds is not necessarily an indication of mastery of certain minimum skills within an occupational area (e.g. being a mechanic or a service technician). Qualifications and defined competency requirements do not necessarily need to match. 157.The national trade standards adopted have gone through validation processes with industry participation. This is a vital process and basically industry has been given and taken the lead. Its significance, however, could be enhanced if standards and certificates were to be integrated in distinct professional markets and recognized by professional circles. This is true for example with licenses issued by the Professional Regulation Commission. The license for mechanical engineers is protected by the professional group.

158. Such professional groups are, however, not operational in vocational or occupational skills categories. Hence, certificates are institution-based rather than profession-based. The value of the certificates depend on the credibility of the issuing institution rather than being granted by trade groups or based on minimum standards defined by such trade groups.

159. TESDA provided the following data on persons tested and certified through its own testing mechanism from 1993-1995; the number of people being tested dropped in 1994 and 1995, and the percentage of people certified has dropped to around half of the people tested.

Persons tested, certified and rate of certification 1993-1995

Numbers/Years	1993	1994	1995
Tested	81840	44423	49686
Certified	54226	21737	24414
Rate	66.3%	48.9%	49.1%

Source: TESDA, 1996. Prepared for TVET Sector Study Team.

160. Looking at the type of persons tested and certified (TESDA graduates and non-TESDA graduates) in NCR, Regions IV, VII and XI) the following pattern emerges:

TESDA and Non-TESDA graduates tested and certified in 1994

REGION	TESDA	GRADS	NON-TES-DA	GRADS	TOT
	TEST	CERT	TEST	CERT	TEST
NCR	2465	1272	3747	1813	4278
IV	2973	975	1646	668	3641
VII	219	175	323	211	542
XI	761	398	2799	1224	3560
TOTAL	6418	2820	8515	3916	15937

Source: TESDA, 1996. (prepared for TVET Sector Study Team)

161. From the above table it can be seen that 15,937 graduates from TVET institutions in the survey regions went through skill testing in 1994, of whom 6,736 passed (42.2%).

162. In the survey a question was asked whether students or graduates were sent for trade testing. This was the case in 33 institutions (45%). In 17 cases TESDA/NMYC centres have been the accredited centres to which graduates are sent for testing. In 15 cases other testing centres have been utilized. In most institutions (16) between 1 and 24 graduates have been sent for trade testing but in eight institutions (11%), more than one hundred people have been tested. The total number of graduates in the survey tested in 94/95 was 1,908.

Number of graduates of survey institutions tested

Region	Public	Private	Total
NCR	764	150	914
IV	308	45	353
VII	313	60	373
XI	60	208	268
Total	1445	463	1908

Source: Field Survey Training Institutions, VTP II.

In contrast to the TESDA data, the survey data indicate a higher number of TESDA graduates tested (76%) than of graduates of private schools.

Section 5. Public-private and sub-sectoral dimensions of TVET in the Philippines.

5.1 Introduction

163. In the previous chapter a general overview of the TVET sector in the Philippines was presented. Now we proceed with the public-private dimensions of TVET in the Philippines to further substantiate our recommendations with regard to increasing quality and cost-effective private sector participation in technical education and vocational training. We will highlight sub-sectoral provision related to metals and engineering, automotive, electronics and textile and garments to assess further in which sub-sector(s) measures to enhance the role of training for industrial competitiveness should be concentrated, and to provide data relevant to the need and potential for advanced training centres.

Type of institution by sector

Institution	Metals	Automotive	Electronics	Garments	Tot
Public/TESDA	5	7	6	3	21
Public/non-TESDA	3	2		5	10
Private	10	13	17	3	43
	18	22	23	11	74

164. It was noted earlier that the sub-sectoral data incorporated in this section are based on sampling concentrated on data-collection on one sub-sector for each institution. Obviously within these institutions the sub-sectoral coverage is much broader. In almost 50% of the institutions surveyed metal training is given; in around two-thirds automotive and electronics and in 26% training in textiles and garments.

165. The training provision as a whole in the survey displays some regional discrepancies. The table below shows the high proportion of training institutions offering training in electronics and automotive in all regions. Metal training is only programmed in 25% of the training institutions in Region XI in contrast to NCR where two-thirds of the training institutions cater for metal training.

TRAINING PROVISION BY REGION AND SUB-SECTOR					
REGION	METAL	AUTOMOTI-VE	ELECTRO-NICS	TEXTILE GARMENT	TOTAL
NCR	14(67%)	12(57%)	17(81%)	8(38%)	21(100%)
CLB	11(55%)	16(80%)	16(80%)	2(10%)	20(100%)
VII	7(41%)	12(71%)	12(71%)	4(24%)	17(100%)
XI	4(25%)	12(75%)	11(69%)	3(19%)	16(100%)
TOTAL	36(49%)	54(70%)	56(76%)	17(23%)	74 (100%)

166. The table above reveals in the four regions the large fabric of TVET pertaining to the four sub-sectors, with high capital investment, replacement and maintenance requirements and huge recurrent costs for salaries irrespective of an adequate capacity utilization. On average institutions cater for training provision in more than two sub-sectors.

167. Even concentrating on one sub-sector per institution we still find that around 40% of training provision in the four survey regions in automotive and electronics, 50% in metal trades and 65% in textile and garments is covered by the survey.

Region by Sub-sector

Region	Metals/engineering	Automotive	Electronics	Garments	Total
NCR	5	5	7	4	21
CalaBarzon	6	6	6	2	20
Reg. VII	4	6	5	2	17
REg. XI	3	5	5	3	16

In region XI a full picture could be obtained as to the sub-sectoral training provision in textile-garment and 3 out of 4 metal-related training provisions were covered.

5.2 Enrolment, graduation and drop-outs

168. In the last training period (SY 1994-95 or CY 1994) total enrolment in one sub-sector in each of the 74 training institutions surveyed amounted to 12,445 (average 168 per institution). On average private institutions enrolled more trainees (177) than public ones (156).

ENROLMENT BY PUBLIC-PRIVATE AND SUB-SECTOR					
PUB/PRIV	METAL	AUTOMO-TIVE	ELECTR	TEXTILE GARMENTS	TOTAL
PUBLIC	1161	761	1740	1172	4834
PRIVATE	1227	1122	5023	239	7611
TOTAL	2388	1883	6763	1411	12445

169. The highest average enrolment by sub-sector is in electronics (294 per institution), the lowest in automotive (86). Average enrolment in public institutions is higher compared with private training institutions for training in the metal trades and for textile and garments and lower for electronics and automotive.

170. In terms of the gender component enrolment reflects traditional patterns. The share of females in the overall enrolment is 19%. By sub-sector, however, we see that 59% of the enrolled females are in garment-related courses, which are almost exclusively female (98%); while metal and automotive are almost exclusively male.

ENROLMENT BY SEX AND SUB-SECTOR					
	METAL	AUTOMO-TIVE	ELECTR	TEXTILE GARMENT	TOTAL
MALE	2340	1881	5865	30	10116
FEMALE	48	2	898	1381	2329
TOTAL	2388	1883	6763	1411	12445

171. Sub-sectoral throughput is reflected in data on graduates. Enrolment data cannot be compared with data on graduates as enrolment reflects both initial enrolment and follow-up enrolment in courses with a duration of more than one year. Data on graduates as reflected in the tables relate to a broad spectrum of courses including short courses and longer technician courses. Even though courses are accredited, graduation reflects a wide spectrum of competencies and gaps in competencies. Acquisition of competencies is based on the curriculum, instructor competencies, the physical infrastructure of training institutions including availability of key equipment in sufficient quantities, budgetary allocations for consumables enabling hands-on training and the degree to which an OJT component is integrated in the curriculum.

172. Given all these variables and the lack of training standards as a basis for certification, graduation in itself is not a valid indicator of employability, or of requirement for further on-the-job training if employed.

GRADUATES BY PUBLIC-PRIVATE AND SUB-SECTOR					
PUB/PRIV	METAL	AUTOMO-TIVE	ELECTRO-NICS	TEXTILE GARMENT	TOTAL
PUBLIC	1162	547	337	969	3015
PRIVATE	581	847	2427	181	4036
TOTAL	1743	1394	2764	1150	7051

173. In 1994/95 7,051 people graduated in the sub-sectors selected in the 74 institutions, an average of 95 graduates per institution. In line with the pattern observed for enrolments the average number of graduates of public institutions in metal trades is significantly higher compared to private institutions (145 versus 58). This large difference may be attributed to the following factors:
-TESDA (former NMYC) training institutions catering for shorter metal-related courses, leading to higher graduate figures.

-Investment requirements for metal training in terms of development costs for physical infrastructure, equipment and in terms of recurrent costs for consumables are too high for market-oriented private sector investments in training and subsequently would require high fees for full cost-recovery. If costs of training and investment costs for training would jeopardize a stronger private sector involvement in metal related training, then the public sector might selectively intervene. This is already the case in plans for transferring TESDA (former NMYC) training centres to either the private sector or LGUs. For metal training reference may be made to the MIAP initiative to co-manage the Taguig Metal Specialized Training Centre with TESDA for tool and die making training, production and extension services, and to initiatives of the MERALCO Foundation Institute towards assessing the feasibility of their involvement in the CEBU RMTC.

174. So far both public and private sector training provision in automotive skills has concentrated on automotive servicing and repair. It has excluded production of spare-parts and aspects related to fabrication and assembly. For this a link has to be established with advanced metal training for metal fabrication and tool and die making. As this linkage between automotive training and advanced metal training provisions is presently not available the role of this sub-sector in enhancing industrial competitiveness will remain restricted.

175. The private sector base for high quality training for the metal trades is restricted and mainly concentrates on the 6 Don Bosco Institutions of Technology.

176. Equally market-forces may have contributed to a significantly higher average number of electronic graduates in private training institutions compared to public training provision (142 versus 56 graduates). Here we notice the quantitatively and qualitatively strong provision of electronics training by the Meralco Foundation Institute and its affiliates and by the Dualtech providers.

177. The following two tables provide information on the output of institutions by sub-sector. Almost all sub-sectoral training providers catered for males (71) but only one- third of the institutions refers to a female output of graduates. Eighteen institutions reported an output of more than 100 male graduates. There are very few institutions in the metal sub-sector catering for less than 16 male graduates. In the automotive and electronic sub-sector we see more of such institutions, while the output of male graduates in textile and garments is always below 16.

Sub-Sector by Number of Male Graduates						
Sector	<16	16-49	50-99	100-199	200 >	TOTAL
MET	2	7	2	4	3	18
AUTOM	6	6	6	3	1	22
ELECTR	6	8	2	5	2	23
TEXT	8	-	-	-	-	8
Total	22	21	10	12	6	71

178. Of the 25 institutions reporting female graduates 10 (40%) are in the garment and textile sub-sector. Participation of females in metal and especially automotive training is low, but it is not clear whether this results from institutional policies or reflects social biases concerning appropriate training and employment for females.

Sub-sector by number of female graduates				
Sector	1-9	10-74	75 >	Total
METAL	3	1	-	5
AUTOMOTIVE	2			2
ELECTRONIC	7	2		9
TEXT/GARM	1	5	4	10
TOTAL	13	8	4	25

179. Costs of TVET in general are high given development and recurrent costs patterns and in general require both institutional investments (public and private) and user investments through user fees and opportunity costs. The phenomena of drop-out reflects inadequate use of scarce public, private and user investments in training. However the sub-sectoral pattern of drop-out is far from gloomy.

180. In the table we have related actual number of drop-outs to the number of graduates to which the number of drop-outs has been added as the basis for an adapted version of the drop-out rate. We cannot calculate actual drop-out rates as batch-specific data on enrolment, drop-outs and graduation are not available.

DROP-OUTS BY PUBLIC-PRIVATE AND SUB-SECTOR					
PUB/PRIV	METAL	AUTOMO-TIVE	ELECTRO-NICS	TEXTILE GARMENTS	TOTAL
PUBLIC	30(3%)	69(11%)	107(24%)	198(17%)	404(12%)
PRIVATE	66(10%)	158(16%)	401(14%)	57(24%)	682(14%)
TOTAL	96 (5%)	227(14%)	508(16%)	255(18%)	1092(13%

181. We did not find a significant difference in drop-out rates between public and private sector institutions. In the metal sub-sector there are relatively fewer drop-outs, while textile and garments has a more than average proportion of drop-outs. Private metal training institutions have higher drop-out rates than public ones, while public sector electronic training has a higher drop-out rate than private sector electronic provision. Patterns of drop-outs could not be further analyzed.

5.3 Capacity and level of courses

182. 43% of the course provision has a duration of longer than one year. These long courses are a general pattern in electronics training (78%), while most courses in textile and garments are of a short duration (55% shorter than 6 months).

Sub-sectoral training by course duration in months

Duration	< 6 months	7-12 months	13 - 24 months	> 24 months	total
Metals/eng.	6	6	2	4	18
Automotive	5	11	4	2	22
Electronics	2	3	13	5	23
Garments	6	3	2		11

183. Most training institutions (77%) deliver training for one or two batches per year. Only in automotive and electronics institutions report on five or more batches of trainees to be enrolled annually.

184. Increasing the number of batches and hence the intake of sub-sectoral courses would yield lower unit costs of training by better utilizing physical infrastructure and staff. Within dual training provision such as in dualtech, capacity utilization is increased by intake of students for the initial school-based period while other batches attend for the in-plant period. The week-end is used to cater for the in-school component during the in-plant period.

Sub-Sectoral courses by number of batches per year

Batches/year	1 or 2	3 or 4	5 and more	total
Metals/eng.	14	4		18
Automotive	18	3	1	22
Electronics	16	3	4	23
Garments	9	2		11

185. 46% of the sub-sectoral training provision is rated by institutions as technician training. A somewhat higher proportion of private training institutions provides training at technician level. There seems to be some ambiguity in the concept of technician training. Technician training should be based on training standards linked to a 'technician qualification' which should be accredited in order to ensure minimum quality requirements. This is not the case at present.

COURSE LEVEL BY PUBLIC-PRIVATE			
LEVEL	PUBLIC	PRIVATE	TOTAL
TECHNICIAN	13	21	34
PRETECHNICIAN	18	22	40
TOTAL	31	43	74

186. The larger part (83%) of training in electronics is at technician level, while the majority of metal engineering and automotive training is at pre-technician level.

Course level by Sub-sector					
Level	METAL	AUTOMOTIVE	ELECTRONICS	TEXTILE GARMENTS	TOTAL
TECHNICIAN	7	6	19	2	34
PRETECH-NICIAN	11	16	4	9	40
TOTAL	18	22	23	11	74

5.4 Sub-sectoral dynamics

187. Electronics seems to be the most dynamic sub-sector in terms of changes in course provision (courses stopped) and in major curricular revisions introduced during the last five years. Still, the general pattern is a static one.

Sub-sector by number of courses stopped

No. of courses stopped	none	one course	2 or 3 courses	total
Metals/eng.	13	3	2	18
Automotive	18	1	3	22
Electronics	17	4	2	23
Garments	8	2	1	11

Sub-sector by number of curricula revised

No. of currivula revised	none	one curriculum	2 or 3 curricula	total
Metals/eng.	14	2	2	18
Automotive	16	3	3	22
Electronics	16	6	1	23
Garments	8	2	1	11

5.5 Sub-sectoral technology base

188. Of the institutions which provided information on their equipment base, four public institutions (17%) and six private institutions (17%) did not have the use of any equipment classified under 'new technology'.

Availability of new technology equipment by type of institution and sub-sector								
Type	METAL		AUTOMOTIVE		ELECTRONIC		TOTAL	
PUB/Priv	YES	NO	YES	NO	YES	NO	YES	NO
PUB	4	3	9	1	6	-	19	4
PRIV	6	2	11	1	12	3	29	6
TOT	10	5	20	2	18	3	48	10

189. The institutional training technology base for textile and garments only covers conventional equipment. None of the institutions surveyed availed of the following:

-Computer-aided grading and marker making
-Computerized cutting
-Specialized machines such as bartack machines, collar attaching machines and buttonhole machines.

Number of Metal New technology machines available in Public and Private Institutions			
EQUIPMENT	Public	Private	Total
CNC	7	1	8
EDM	-	-	-
Wire-Cutter	1	2	3
CAD-CAM	-	19	19
CMM	-	3	3
MTE	2	14	16
Total	10	39	49

190. In the metal engineering sub-sector operations on key new technology equipment are not part of the training syllabus as in most institutions these are not available. In general the technology base of private institutions is somewhat better than public ones. Only two institutions have CNC lathes and milling machine; one is a public institution with seven machines and the other is a private institution with one machine. CAD/CAM equipment and software and coordinate measuring machines are only available in private institutions. EDM programmable machines are not available at all.

NUMBER OF AUTOMOTIVE NEW TECHNOLOGY EQUIPMENT AVAILABLE IN PUBLIC-PRIVATE INSTITUTIONS			
EQUIPMENT	PUBLIC	PRIVATE	TOTAL
DDSM	4	7	11
MS ANALYZER	2	8	10
ECC	3	25	28
RAC System	2	10	12
Total	11	50	61

191. The new technology base for the automotive sub-sector provides a similar picture. Larger investments of private institutions compared to public ones in new technology equipment such as Digital Diagnostic Sensors and Meters (DDSM), Multi-Scope (MC) Analyzers, Electronic Control Components (ECC) and Ref-Aircon Systems. But any standardization with regard to new technology items in the equipment lists of training centres is lacking.

192. The new technology base for the sub-sectoral provision in electronics is further developed and spread compared to metal engineering and automotive. Still here, the picture is far from general (pertaining to all institutions covered in the survey) being influenced by model technology bases in institutions such as the MERALCO Foundation Institute and Dualtech.

ELECTRONIC NEW TECHNOLOGY EQUIPMENT BY PUBLIC-PRIVATE			
EQUIPMENT	PUBLIC	PRIVATE	TOTAL
Oscilloscope	15	99	114
Logic Probe	10	44	54
MicroProcessor	46	134	180
Simulators	51	114	165
SSIG	1	30	31
IC Components	4	332	336
INS Microscope	50	13	63
Die eqpt	10	8	18
Total	184	774	961

Section 6. Innovative Initiatives

6.1 Introduction

193. The survey, case studies, interviews and study of documents revealed a number of interesting initiatives such as:

* cost reduction by means of (for example) curriculum change and improved workshop layout
* negotiations between private and public training institutions for the lease of whole or part of premises to increase their training capacity;
* negotiations between Industry Associations to use TESDA/NMYC training premises as common facilities for their industry, to be utilized for upgrading training, production and prototype development.

6.2. Industry Associations and SMEs

194. In the case studies, reference was also made to MIAP's plan to co-manage with TESDA the Metal Specialized Training Centre to develop it further into a Metal-Working Upgrading and Training Centre concentrating on tool and die making. In the meantime a proposal routed to DOLE within the framework of the GATT safety network for establishing such a Centre has been approved. It is hoped that the new Centre will build upon the existing MEST centre at TESDA, adding components such as heat treatment rather than duplicating physical infrastructure and capital intensive equipment.

195. We also took note of the strong emphasis on SMEs given its employment generation effect and actual growth patterns. This is being reflected at national level through the Magna Carta on SMEs and several initiatives by DTI trying to cater for manpower development components of SMEs. At APEC level, the Philippines is to host the APEC Centre for Technology Exchange and Training for Small and Medium Scale Enterprises (ACTETSME). The initiative of SWISSCONTACT in cooperation with TESDA to assist small entrepreneurs to organize in associations and to provide training and common facilities might be one for TESDA to implement on a wider basis.

6.3. Dual Vocational Training

196. Different approaches to dual vocational training with in-school parts both in private and public TVET institutions, some accredited, some having requested accreditation, some with major external funding have been noticed.

197. The Dualtech Training Centre has piloted a dual vocational training programme approved by DECS. This pilot was implemented with consultancy support by the Meralco Foundation, some conceptual inputs from Don Bosco-Canlubang and sponsorship and technical assistance by the Hanns Seidel Foundation. Based on the pilot dual vocational training patterned on the German system but adjusted to Philippine conditions was adopted.

198. PBMIT, one of the TEIs which was upgraded through ADB loan assistance, became a pilot project to assess the feasibility of introducing dual vocational training within the public technical education system.

199. CITE in Cebu has a similar line of origin as Dualtech but has developed an approach to dual vocational technician training with a higher emphasis on the in-school component and shorter duration of the in-plant part. The longer in-school period of CITE is to maintain the theoretical standards of technician courses.

200. Don Bosco Cebu has applied to TESDA for accreditation of their dual vocational training on furniture making established in cooperation with the Cebu Association of Furniture-making Industry.

201. The Dual Vocational Training Institute of Business Centre Davao Foundation, with German support, is piloting dual vocational training, strongly linked to and initiated by employers associations, and with characteristics aproaching thos of apprenticeship.

202. Constraints in expansion of dual vocational training are the following :

* lack of public seed funding (limited to P.1m annually from the general appropriation fund, of which 40% for operational costs);
* lack of accredited courses, restricting both expansion and broadening within institutions willing to offer more courses;
* lack of external support to cover additional development and recurrent expenditure when implementing dual training. Additional costs relate to equipment, consumables and topping up of teacher salaries.

Specific characteristics of Dual Vocational training

203. Curriculum development

Traditional institutions, as was indicated by the survey results, usually draw their curricula from available nationally approved curricular outlines. Dual vocational training in designing their curricula follow a more institutional approach. They analyze training needs of partner companies and jointly design and validate relevant job profiles based on which training specifications and curricula can be designed.

204. Standards and Certification

Partner companies usually administer entrance skill tests on prospective trainees before they get admitted. During training continuous assessment of trainees is done to assess whether they have mastered competencies of the different works stations as a basis to proceed further. In traditional VET there is an emphasis on examinations followed by post-school trade testing.

205. Training Delivery

Through dual training, practical training is extended by the in-plant training component. In Dualtech, the in-plant training component comprises a total of 2560 hours compared to 1860 hours in-school (close to the 60/40 ratio prescribed in the Rules and Regulations). Of the in-school period, 70% is spent on workshop and laboratory exercises and 30% in theoretical instruction, giving a total of 3862 hours practice or work-related activities (87%). A traditional TVET two-year programme may have a total of four semesters in-school and 3 months in OJT. Of the total of about 1920 hours in-school, around 60% or 1152 hours will be lectures and 768 hours will be for practice. Combined with the OJT period of 480 hours, the practical period will amount to 1248 hours (52%).

206. Physical Infrastructure

Establishment of a training centre and procurement and maintenance of equipment as well as cost of consumable materials requires substantial investment which bears on the cost of training. Given the emphasis on practice in dual training there is a strong requirement for having adequate machine and handtool student ratios in order to maximize hands-on experience. In some dual training centre institutions the handtool-set to student ratio is 1 to 1, similar to industrial practice where the worker is responsible for his own handtools. Equipment-student ratio may average at 1 to 4. For a programme with an intake capacity of 25 students, this implies six pieces of major equipment such as lathes, milling machines, welding sets etc.

207. Capacity Utilization

A dual training provider can increase capacity utilization because of the alternating periods in-school and in-plant. Schools can moreover operate on a year-round basis to match company practice.

208. Programme diversification

Through the built-in contact with industry partners, opportunities are emerging for diversification of services. For a well-equipped centre, the cost of depreciation and maintenance alone requires other means of cost-recovery besides the regular course programme.

209. Staffing

Apart from teachers, managers and support personnel, dual training requires industrial coordinators and guidance counsellors as well as marketing staff. Industrial experience of teachers is required either through previous work experience or industrial attachment.

210. Training management

Courses run under the dual training systemnot only involve the implementation of a curriculum following a cycle of recruitment, scheduling, enrolment, graduation and placement monitoring but also involve career orientation, recruitment of training partners, finalization of training agreements, industrial coordination, training needs analysis and training plan design. Appropriate management of training requires continuous training and retraining. Most of the managerial priorities revolve around planning including programme development and marketing, financial planning, monitoring and reporting. The majority of managerial activities directly involves interaction with the industry sector.

211. Training cost and revenues

Regular public training institutions get the bulk of their budget allocation from national budget appropriation complemented by student charges and in some cases by income-generating services. Private institutions on the other hand recover their costs mainly from tuition fees, sometimes complemented by revenue from consultancy services, production and repair, and other services. For traditional schools the bulk of expenditure (some 70%) goes on salaries. In most cases both private and public, dual training has benefited from external support for physical infratructure development and rehabilitation, procurement of equipment and tools and in certain cases contributions for consumables and other recurrent cost components. Students pay fees for their in-school period but the bulk of the overall cost-recovery comes from dues collected from partner companies. Further diversification of revenues is attempted through programmes such as short-term skills training programmes and upgrading training courses. The salary component of the recurrent costs in dual vocational training is lower (around 50%) than in traditional schools even though the former pay on average higher salaries. This is caused within a higher overall budget by the higher costs of consumables and maintenance of equipment and the cost of the student allowance.

212. Monitoring

Programme monitoring is being done by TESDA (formerly DECS/BTVE) mainly through submission of reports. No systematic approach or procedures are available for monitoring the in-plant training component and the school-industry liaison. The industrial officer gathers feedback about the effectiveness of the in-plant component and the subsequent placement. Industrial coordinators visit the companies regularly, while the company assigns a trainer to guide and monitor the performance of students in-plant. When the Rules and Regulations established under the Dual Training System Act come to be revised the role of TESDA in monitoring standards in both the company and the school should be strengthened.

6.4 Revisiting public-private linkages

213. In the study we have come across some examples of linkages between public and private training institutions. Mainly these cover consultancy and advisory services provided by 'model' private institutions to public training institutions. This is for example the case with consultancy services provided to PBMIT as a pilot for implementation of dual training in public sector institutions. This type of linkage is not yet occurring frequently partly because of lack of effective demand from public training institutions, which lack financial resources. The following linkages are occurring more frequently:

- linkage between public training administration and private training institutions. Private training institutions are on the demand side for schemes like the TAC. They have been involved in several consultancy assignments among others related to curriculum design and standard setting in the framework of competency-based vocational education
- private-private training institution linkages. Attempts have been made to transfer high quality training models to other private training institutions under lower recurrent cost conditions.

214. As part of the the gradual withdrawal of TESDA from its role as direct implementer of training and the devolution of TESDA regional and provincial training centres to LGUs, or alternatively privatization or private sector involvement in co-management, various developments could be noticed. Private training institutions show a keen interest in leasing TESDA training centres in order to make use of the equipment and to exploit new catchment areas for trainees.

215. Public SATs do use TESDA non-formal training centre resources (especially workshops) in order to improve their equipment base and provide students with better hands-on training. This pattern of resource sharing as a basis for more efficient use of available capacity could be pursued in a more systematic way.

216. The dual training system provides a built-in linkage between especially private training institutions and enterprises. Such a liaison of a more informal character has been found widespread in organising OJT and in enterprise participation in Technical Advisory Committees (TACs) in public schools and in school boards of private schools.

217. Reference has already been made to MIAP's attempts, with GATT safety network and other funding, to transform the TESDA NITVET Metal Specialized Training Centre into a Metalwork Upgrading and Training Centre to assist the Philippine metalworking industry with:[15]
-the conduct of skills upgrading programmes for machinists, heat treatment, tool and die makers
-technology assistance packages in areas of product design, process and manufacturing engineering and manufacturing managament
-design of tools, dies and moulds
-limited production of parts and components for machines as well as tools and dies
-hands-on demonstration off the use of up-to-date metalworking machines and facilities
-common service facilities.

Negotiations were also in progress in Cebu on co-management of metal and automotive workshops by TESDA and the metal industry and automotive industry associations.

218. A combination of the use of TESDA non-formal training centres by associations of small-scale enterprises for upgrading training and use of common facilities is noticed in the Swisscontact-TESDA Metashape project. Small enterprises generally have little connection with the regular industry associations and lack access to capital equipment, training and technology services. An effective combination of training, technology advisory services and use of common facilities requires resources both human and in terms of physical infrastructure to play such a role effectively. An assessment could be made of critical common facilities (such as heat treatment/foundry) required to boost small enterprises' technology base and capacity.

219. TESDA Board Resolution No. 95-3 approved the proposal to make Quezon City Polytechnic (QCP) a pilot institution and part of the TESDA network to demonstrate the capability of Local Governments to assume training responsibilities. The process is to be monitored and studied for which a proposal has been approved by the TESDA Board. QCP was established in 1994 through the efforts of the Quezon City Government and with the cooperation of industry.[16]

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15 See GATT Training proposal: Establishment of a Metalworking upgrading and training center by MIAP-Metro Manila Educational and Technological Foundation, Inc.(METFI).

16 For further details see the case study on QCP by Dr. Dan Rola.

Section 7. Conclusions and Recommendations

7.1 Conclusions

220. In general, no significant new developments can be observed in the target group served by TVET institutions. The emphasis remains on high school graduates and out-of-school youth.

221. The survey revealed the characteristics of a TVET sub-sector which is largely:
* inward-looking rather than market-oriented;
* concentrates on a restricted range of regular training provision to its traditional constituency rather than reaching out to new target groups;
* is generally staffed by 'unlicensed trainers' without proper skill test certificates;
* works with outdated equipment not meeting the requirements of new technological development and changes in work organisation;
* shows strong regional differences, with a heavy emphasis on the centre (NCR), while the focus of industrial development may be changing to other regions.

However, there is a significant number of forward-looking institutions (dual training institutions and upgraded TEIs) which can point the way towards some of the required changes.

222. One of the major issues is how the inertia in the sector can be overcome in order to achieve the dynamic training sector required to support the nation's drive towards NIC status. There is a strong need to concentrate on increasing capacity utilization in cost-effective centres on the one hand, and creating a mortuary for outdated centres, if and when they cannot meet the new quality criteria for accreditation to be developed.

223. A second focus can be to increase sharing of resources between vocational schools and vocational training centres in order to enhance capacity utilization and thus yield a higher return on investments in TVET. This can include joint workshops and shared use of new technology equipment. A detailed inventory of TVET provision should be made on which to base partnerships between schools and training centres, in and beyond the direct TESDA constituency, to share resources on a lease or user subscription basis.

224. There is a need to identify requirements for new training competencies for instructors' upgrading, curriculum development and management of TVET centres.

225. The quality and qualifications of teachers and instructors in training institutions providing courses in support of the manufacturing sector has to be improved.

226. Given the instructor competency crisis, the problem of instructor turnover does not seem to be as widespread as might be anticipated. It is, however, seriously affecting the high quality institutions.

227. A strategy has to be developed for creating a nation-wide, region-specific technology base for TVET, taking into consideration both conventional and new technological requirements.

228. It was noticed that a large proportion of institutions claimed insufficient practice and OJT as one of the main factors detrimental to course effectiveness and placement of graduates in employment. Although OJT is perceived as important, students completed OJT in less than half of the institutions in 1994/95. OJT can be a central point for strengthening school-industry partnerships.

229. Well-known institutions seem to have no difficulty in finding places for OJT or partners for their dual vocational training programmes. Dual vocational training is perceived as one of the new challenges many schools would like to embark on. However, there is little insight into the implications of doing so and there is some indication of weaknesses in the in-plant training component, which needs accreditation in itself.

230. According to the institutions, some 45% sent their graduates for trade testing. This seems to be quite high, certainly when compared with the low number of instructors with trade test certificates.

7.3 Recommendations

231. These recommendations, given the fact that they may directly impinge on existing roles and on patterns of resource allocation, are general in character. They should be further elaborated, assessed in terms of feasibility, and costed. If they meet the interest of the different stakeholders involved, short formulation studies could be launched to translate some recommendations into more operational terms.

ISSUE 1: Strengthening TESDA's capacity for Monitoring, Evaluation and Research

Findings

232. TESDA is faced with the challenge of having to coordinate, monitor, and assess budgetary resource allocation for the National Middle Level Manpower Skills Development Programme. Moreover there is a need to strengthen the capacity of TESDA to monitor such programmes and schemes both administratively and substantively, and their capacity to assess the qualitative effect and impact they have. TESDA has the authority, but seems to lack resources to carry out these functions.
A key issue is **how to strengthen the capacity of TESDA to meet this challenge.**

Recommendations

233. Identify and formulate appropriate rules and regulations, and the competencies required and available at the different levels of the organisation for implementation of TESDA's new combined role of administrative, quality and impact monitoring of complex nation-wide middle level manpower development plans and incentive schemes.

234. Formulate a capacity building programme covering technical assistance components, a small number of fellowships for training abroad and a programme of on-the-job training, focusing on the implementation of a pilot monitoring programme and on policy research related to such programmes.

235. Establish a competency profile for TESDA's Policy Research Division and other divisions within the Planning Office, as well as other Offices involved in monitoring as a basis for a staff development plan.

236. Link capacity building to pilot implementation on a regional basis. This could relate for example to TESDA's involvement in nation-wide TVET mapping (analogous to school mapping) including details on the equipment base, curricula and teacher qualifications.

ISSUE 2: Improving Quality

237. A key determinant of competitiveness is improvement and maintenance of the quality of training provisions; this implies setting standards for maintenance and proper certification in order to be able to check on such maintenance. This would enhance equivalence and foster lateral mobility from formal to non-formal TEVT, from enterprise-based to institution-based training and from work into education and training and vice versa. Proper procedures for accreditation are vital in this respect.

Findings

238. The study found that a major quality drive is needed to bring to TVET provisions the attitude of competitiveness and affinity with market dynamics which are essential for survival. The TVET sector is however attempting to improve effectiveness of training provision through greater emphasis on OJT and a strong interest in dual vocational training.

239. The interest in dual vocational training has been stimulated by pilot implementation in both private institutions (Dualtech and CITE) and public ones (PBMIT). However the results of these pilots have not been codified as outline requirements for staff numbers and competencies, physical infrastructure, equipment, recurrent costs of training and the initial development cost of effective transition to dual vocational training.

Recommendations

240. Improve accreditation and strictly monitor the compliance with minimum standards for TVET institutions, covering physical infrastructure and equipment, curriculum (including skill levels required), and minimum mastery levels of instructors and TVET teachers.

241. Link school certificates to the National Skill Certification Programme and make trade tests a compulsory component of TVET qualifications.

242. Commission a study and development project on dual vocational training to assess the possibility of broader implementation. The study should produce a manual on dual vocational training implementation, including details of management, physical infrastructure, implications for recurrent costing, teacher upgrading which can serve as a model for new institutions.

243. Develop TAC and TCS in complementary competitive schemes to provide support for partnership between training institutions and enterprises providing earmarked subventions to specific components of dual vocational training and other forms of school-industry cooperation.

244. Identify bilateral interest in support of a pilot project on dual vocational training, following the model of production-based training in the areas of metalwork or furniture making. Some bilateral donors such as DANIDA and GTZ have extensive experience in those fields. Formulate a project proposal e.g. on production-based training in furniture making incorporating a market opportunity study both for the training market and the furniture market.

ISSUE 3: Scenarios for transition from supply-driven to market-led TVET

245. How to translate the drive for quality and cost-effectiveness into strategies which enhance the application of market forces. Does application of market forces imply that it is generally justifiable to bet on strong institutions and to create a mortuary for weak ones ?

Findings

246. There is strong backing for public-private partnership and a stronger emphasis on applying market forces to educational services in the national policy framework. This is reflected in the Medium-term Philippine Development Plan; it is embedded in the TESDA Act; and further outlined by the LEDAC Taskforce on the Privatization of Educational Services and incorporated as a basis for the Organizational Study of NMYC.

247. Although a general pattern of inertia was encountered in the TVET sector, the survey also found striving, dynamic TVET institutions (both private and public), which might become models for further dissemination at a more system-wide level.

Recommendations

248. These are highly complex and sensitive issues on which further work is required, in terms of assessing feasibility and subsequent proposal development. However the team feels that some scenarios should be outlined which if followed can be piloted for a period of five years.

249. The model to be elaborated and costed will include the following:
1. Cooperation between TESDA and training institutions selected through a tender instrument to run previous TESDA training centres either:

-on a co-management basis
-on a co-shift basis (to ensure higher utilization of centres)
-on a product diversification basis.

2. Such cooperation could be vested:

- on a profit-sharing basis
- on a lease of premises basis
- on a cost-recovery basis
- applying a kind of voucher system, or payment per graduate
- or with a per graduate government subsidy.

250. There are several options which should be further explored:
-Combined use of RMTCs and/or PMTCs for training and as a common facility for small-scale industries
-RMTCs/PMTCs to be used as a common hands-on training resource base for vocational schools
-Involvement of Industry Boards
-Local Governments assuming responsibility in cooperation with local industry.

251. After five years, the different strategies could be further assessed based on which final options can be made for:
-full privatisation
-different modes of public sector participation.
