Cooperative Vocational Training

An innovative approach towards skill development

Handbook

Version 1.1

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NAVTTC

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Abbreviations

AMANTECH	Aman Institute for Vocational Training
BTE	Board of Technical Education
CBT	Competency-based Training
CCI	Chamber of Commerce and Industry
CEO	Chief Executive Officer
CVT	Cooperative Vocational Training
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
GoP	Government of Pakistan
GPATI	Germany-Pakistan Training Initiative
GTTC	Government Technical Training Centre
GTTI	Government Technical Training Institute
iACT	Institute for Advancing Careers and Talents
IAGs	Industrial Advisory Groups
IMC	Institute Management Committee
LoI	Letter of Intend
M&E	Monitoring and Evaluation
MoU	Memorandum of Understanding
NAVTTC	National Vocational & Technical Training Commission
NVQF	National Vocational Qualifications Framework
OHS	Occupational Health and Safety
PFMA	Pakistan Footwear Manufacturing Association
TEVTA	Technical Education & Vocational Training Authority
TTB	Trade Testing Board
TVET	Technical Vocational Education and Training

1 Introduction

A country's economic performance, its social cohesion and international recognition highly depends on its human resources. The Government of Pakistan (GoP) recognizes this opportunity and therefore strongly advocates Technical and Vocational Education and Training (TVET) as a mean to promote economic growth and human development. The launch of Pakistan's first national TVET Policy in March 2015 reflects the government's commitment towards providing access to high quality training for young people.

To improve the quality and relevance of TVET in Pakistan, the ongoing reform suggests greater involvement of the private sector. Consequently the TVET Reform Support Programme has supported the development of a pilot scheme, the Cooperative Vocational Training (CVT), in close collaboration with public and private stakeholders. Within this scheme, enterprises, training institutes and TVET authorities share the responsibility for planning and delivering technical and vocational training courses. The CVT scheme addresses the need for demand-oriented training by combining vocational courses in training institutions with on-the-job training in enterprises.

The CVT approach is based on promising TVET models that have proven successful in delivering high quality, labour market oriented and inclusive training. If replicated on a large scale, CVT can contribute to produce an internationally competitive workforce for Pakistan.

This handbook provides useful information on the features of the CVT approach and presents concrete instructions and tools for its implementation. In this way, the handbook describes the training approach of CVT courses, defines the tasks and responsibilities of training institutes and enterprises and sheds light on the assessment procedures. The other chapters explain potential coordination and finance mechanisms, which can be used to provide the foundation for a successful training delivery. The handbook furthermore contains a chapter describing how CVT can be used to integrate innovative subjects, such as green skills, into TVET. In order to support training institutes and enterprises in the implementation of CVT courses, the handbook contains guidelines, templates and checklists, which are hyperlinked in the text.

The TVET Reform Support Programme supports the GoP in improving quality, relevance, equity and access of the TVET sector. The Programme is funded by the European Union, the Embassy of the Kingdom of the Netherlands, the Federal Republic of Germany and the Royal Norwegian Embassy and has been commissioned by the German Federal Ministry for Economic Cooperation and Development (BMZ). The Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH is implementing this programme in close collaboration with the National Vocational and Technical Training Commission (NAVTTC).

2 Cooperative Vocational Training - The Concept


TVET Policy Pakistan

Pakistan's TVET Policy asks for a greater involvement of the private sector in policy-making and implementation to match technical and vocational education with the demands of the labour market. The policy suggests that enterprises need to play a key role in strategy formulation, governance and management, standard setting and the implementation of training programmes. The TVET Policy, therefore, proposes to develop an inclusive framework to ensure an active participation of employers, which creates mutual benefits for all stakeholders while minimizing administrative hurdles.

The CVT scheme takes up this idea and proposes procedures on how to facilitate the cooperation between TVET authorities, training institutes and enterprises in planning and delivering training courses. The aim is to link institutional training in training institutes with on-the-job training in enterprises to ensure that trainees learn the relevant skills required to perform a job. The CVT concept, therefore, promotes the value of shared responsibility between public and private stakeholders and provides the following mechanisms to involve enterprises in the planning and delivery of training courses:

Design of training courses: Enterprises are engaged to define the competency standards for each CVT course, which determine the relevant skills, knowledge and attitude required to perform a job. The course design, the curricula and assessment criteria are derived from these standards. This approach ensures that the training content reflects the needs of the labour market.

Delivery of training courses: Enterprises and training institutes jointly deliver CVT courses. Each curriculum specifies the sequencing of institutional and on-the-job training on a 50/50 basis. In training institutes teachers are responsible for training delivery, whereas in enterprises technical staff as instructors are assigned with this task.

Assessment and certification of training courses: Trainees are jointly tested by accredited assessors representing training institutes and enterprises. The competency standards are the basis for the assessments, which reflect tasks and responsibilities of the respective occupational profile. The graduates receive a national certificate from a government body and a reference letter from the enterprise, they were trained in.

Coordination and management of training courses: The shared responsibility for delivering CVT courses requires coordination between training institutes and enterprises to plan, manage, deliver and monitor cooperative training courses. The CVT concept offers different models for cooperation, in which either the training institute, the employer or an external body is the Lead Agency and facilitates the coordination with TVET authorities.

Financing of training courses: CVT courses are funded by both, training institutes and enterprises, which take part in the programme. The implementing partners need to identify expenses and jointly find ways for funding in a transparent manner.

From an international perspective it is key to engage the private sector in all procedures relevant for providing training courses. Case studies from other countries, in which the cooperative training approach is applied, suggest this mode of training delivery as the most promising way to match vocational training with the demand of the labour market. In this way, CVT provides mutual benefits to enterprises, training institutes and young people:

- **Employers** contribute to the training of young people and ensure that the relevant competencies are taught to perform the respective job profile. In doing so, CVT supports enterprises to train their future workforce while avoiding costs for recruitment and induction of new staff. International experience furthermore shows that the productivity of in-house-trained employees is higher than of externally recruited staff members.
- **TVET institutions** stay in close contact with the corporate sector and update training courses according to the needs of enterprises and latest labor market trends. The close cooperation between teachers in training institutes and instructors in enterprises enables the TVET institutions to keep pace with the fast technological development in today`s knowledge economy.
- **Young people** gain access to vocational training, which reflects the needs of the particular industry and the labour market. The trainees benefit from the periodic rotation between the learning places at the training institutes and enterprises and develop their skills in an actual working environment. Thus, they are better prepared to enter the competitive labour market in Pakistan.

2.1 The Pilot Schemes in Karachi and Lahore

The TVET Reform Support Programme has assisted the development of the concept of CVT in partnership with training institutions and enterprises, which have been involved in the design and implementation of the CVT pilot

courses in Karachi and Lahore. Since 2013, these partner organizations have jointly developed and realized a number of cooperative training courses such as Customer Services and Sales, Logistics and Supply Chain, Retail, Automotive, Electrical, Electronics, Mechatronics, Mechanical, Welding and Fabrication, Mechanical Manufacturing with CNC, and Energy Efficiency. The first cooperative training courses were launched under the **Germany Pakistan Training Initiative (GPATI)**.

The success of the pilot projects has been highly dependent on the active participation of TVET authorities, such as the National Vocational and Technical Training Commission (NAVTTC) and the Technical Education and Vocational Training Authorities of Punjab and Sindh (TEVTA). Nine public and private training institutes, including a university, and 81 national and multinational companies have been involved in the pilot projects. The feedback of these stakeholders has been used to further improve the concept of CVT and has been considered in the development of this handbook.

Pilot Schemes in Karachi and Lahore

City	Trade	Training Institute	Trainees	Enterprises*
Karachi	Customer Services & Sales Assistant	iACT	17	47
	Customer Services & Sales Assistant	S-TEVTA Bufferzone	20	
	Customer Services & Sales Assistant	S-TEVTA Korangi	20	
	Retail Assistant	iACT	14	
	Logistics and Supply Chain Assistant	iACT	63	
	Automotive Technician	AMANTECH	76	
	Electrical Technician	AMANTECH	65	
	Electronics Technician	AMANTECH	65	
	Mechatronics Technician	AMANTECH	54	
	Welder and Fabricator	AMANTECH	59	34
	Machinist	AMANTECH	85	
	Mechanical Manufacturing with CNC	Hunar Foundation	28	
Lahore	Customer Services Assistant	GTTI Township	25	
	Sales Assistant	GTTI Township	25	
	Electrical Technician	GTTI Mughalpura	25	
	Machinist	GTTI Mughalpura	25	
	Welder and Fabricator	ATC Township	25	
	Energy Efficiency Adviser	UET	30	
	Total		721	81

* The number of enterprises might increase, since the marketing campaign for the newly launched courses in 2016 has not been yet completed.

The TVET Reform Support Programme has supported the pilot clusters to design and implement the CVT courses. In addition to providing advisory assistance in a number of areas, the Programme has conducted training measures for teachers and instructors, facilitated coordination mechanisms among the partner organizations as well as supported the assessment procedures. The relevant stakeholders will be continuously consulted to draw lessons from the pilot schemes as a means to further shape the TVET reform process and replicate the model on a larger scale. The aim is to demonstrate that a stronger commitment from the private sector is needed to reform Pakistan's TVET landscape.

Misbah Naz
Graduate of the CVT course Customer Services and Sales Assistant,
who went through the training at the Government Technical Training Institute Township Lahore and CEI Supply Chain (Pvt) Limited-Partner of DB Schenker Network:

"The CVT course provided me not only with a certificate, but supported me to find a job in a multinational enterprise after a phase of unemployment. There is a high demand for well-trained customer service officers in this country. I am more confident now in my skills and my abilities to achieve personal and professional goals."

Amir Munir
COO, CEI Supply Chain (Pvt) Limited-Partner of DB Schenker Network,
who provided on-the-job training opportunities for CVT trainees in Karachi and Lahore:

"Our biggest achievement is that we had an opportunity to contribute towards the skill development of our youth. As an organization we are proud that all of our employees contributed to the successful completion of the on-the-job training during the CVT course. From my point of view, human resource is the most important asset of our country. The private sector has an obligation to contribute towards TVET provision."

Muhammad Zuhaib Shaikh
Manager - Special Projects at AMANTECH, Karachi:

"I believe CVT is going to be a major contributor to the TVET reform in Pakistan as it provides a model on how to engage enterprises into the TVET sector. Our training institute has benefited a lot through the close cooperation with partnering enterprises in Karachi. Their feedback has been essential to further improve our training provision."

3 Design of CVT Courses

Pakistan's TVET Policy emphasizes that TVET courses need to meet the demand of the labour market. The Policy therefore proposes in line with the National Skills Strategy a shift to Competency-Based Training (CBT). The CBT methodology deviates from the traditional approach to education and training, placing a heavy emphasis on what a person can do in the workplace after the completion of the training program. Progression of learners within a CBT program is not time-bound; instead it depends on the person's ability to demonstrate the necessary competence for the job.

National Skills Strategy 2009-2013

The CVT scheme strongly advocates this paradigm shift and has therefore based its courses on the CBT approach. For each of the CVT courses, experts from participating enterprises have developed a definition of the qualification, which describes the responsibilities and tasks of a graduate in an occupation and the related skills, knowledge and attitude required to perform it. The qualifications are classified within the National Vocational Qualifications Framework (NVQF), which recognizes cooperative training as a pathway to gain the qualification.

Pakistan National Vocational Qualification Framework (NVQF)

The **competency standards** of each qualification provide the foundation for the training content of the CVT courses. They describe the knowledge, skills and attitude required in a job, which serve as guidelines for the development of the curricula and assessment packages. In this way, the training content and examinations of CVT courses are subsequently linked with the demands of each occupational profile.

The **curricula** therefore translate the standards into learning outcomes and specify where the different learning modules are conducted. In this regard, the curricula select either the training institute or the enterprise as the place of learning and closely link institutional and on-the-job training with each other. Furthermore, the curricula define trade-specific as well as general subjects, such as communication, computer literacy, English and life skills, as topics for the class-room lessons in the training institutes.

As the curricula, the **assessment packages** reflect the competency standards, which are required to perform the occupation. The packages define exercises,

methods and documentation to collect evidence of a trainee`s performance. In this regard, the assessment packages support the assessors to define whether a candidate is "competent" or "not yet competent" in performing the job-related skills.

In a nutshell, the development of a CVT qualification follows the below procedures:

NAVTTC - Manual on Developing, Registering and Reviewing Qualifications

National qualifications curriculum development process in accordance with NVQF

NAVTTC has endorsed the qualifications for all CVT courses and notified the curricula. The federal apex body, thereby, has levelled all competency units against level descriptors, which define the level of knowledge, skills and responsibility required to perform a task. The average level of all competency units determines the level for the whole qualification, which ranges from 0 (pre-vocational level with limited tasks and a high grade of supervision) to 5 (Diploma level with advanced theoretical knowledge, including analytical interpretation, with management and supervision tasks for other staff). In addition, NAVTTC determines the credit value of each curriculum, in which 1 credit equals 10 hours of learning.

NAVTTC publishes and constantly updates the competency standards and curricula for all national qualifications on their website, including the packages for the following CVT courses:

Competency Standards and Curricula for CVT Courses

Commercial & Technical CVT Qualifications Available Competency Standards and Curricula			
Qualification types & duration	**Name of Qualification**	**NVQF Level**	**Credit Value of Qualification**
Commercial Trades	Customer Services and Sales Assistant	2	160
	Logistics and Supply Chain Assistant	3	160

Technical Trades	Automotive Technician	3	320
	Electrical Technician with Green Skills	2	349
	Electronics Technician	3	320
	Welder and Fabricator	2	320
	Machinist with Green Skills	2	322
	Mechatronics Technician	3	318
	Mechanical Manufacturing Specialized in CNC	3	308
	Energy Efficiency Advisor	5	95

The list of available competency standards and curricula will be constantly updated by NAVTTC, including the assessment packages, which will be developed for all CVT courses over the year 2016. Training providers, chambers of commerce, sectoral associations and non-governmental organizations are entitled to propose the development of new qualifications within the NVQF. NAVTTC itself can prioritize the requests and outsource the development to appropriate bodies. The procedures are defined by NAVTTC.

The International Labour Organization defines a National Qualifications Framework as an instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels. It is a way of structuring existing and new qualifications, which are defined by learning outcomes, i.e. clear statements of what the learner must know or be able to do. The Qualifications Framework indicates the comparability of different qualifications and how one can progress from one level to another, within and across occupations or industrial sectors.

In Pakistan, the NVQF qualifications are being developed in response to labour market demand and national priorities through NAVTTC with relevant Industrial Advisory Groups (IAGs). The qualifications are developed in three steps: skill demand analysis, job analysis, and standardization of competencies. Each competency standard of a particular qualification consists of competency units in terms of performance criteria, which are regarded as the basis for curriculum and assessment packages. A qualification registered within the NVQF is a national qualification, which can be attained by any individual, meeting the defined standards. In this regard, it is not important how learners gain competencies - whether through institutional training, on-the-job training or informal and self-learning.

ILO, An Introductory Guide to National Qualifications Frameworks, 2007

4 Delivery of CVT courses

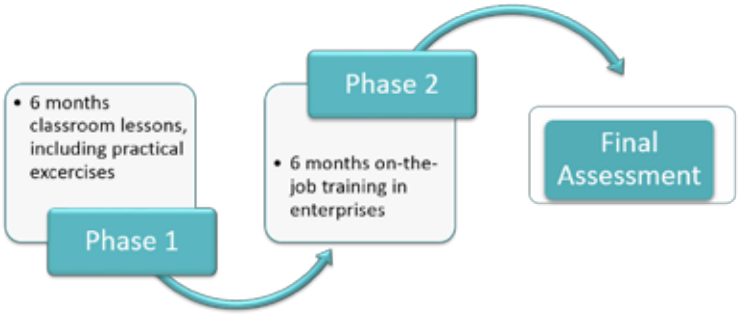
The main purpose of CVT is to provide practice-oriented training, which combines institutional learning with on-the-job training. This is best achieved through a close partnership between training institutes and enterprises. In this regard, each stakeholder needs to take over certain responsibilities to deliver cooperative training on the operational level. Before initiating the CVT course, training institutes and enterprises need to agree on a sequencing of the institutional and on-the-job training. The following chapter outlines models of training sequences and specifies roles and responsibilities of the relevant stakeholders in delivering CVT courses.

4.1 Sequencing of Training Phases

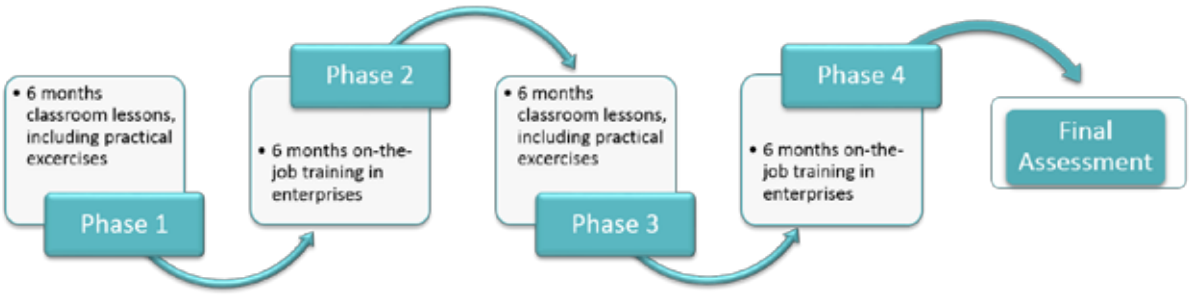
The sequence of institutional and on-the-job training is responsive to the stakeholder's preferences and is defined through consultations among the enterprises and training institutions in the initial planning phase of the programme. Seasonal circumstances and manufacturing cycles must be taken into account when planning a training sequence. Therefore, training phases can be organised in multiple ways - on weekly, monthly or yearly basis. The training programme is concluded by an external assessment to validate that the trainee can apply the competencies acquired during the training in accordance with the set national competency standards for the respective CVT course. Upon successful completion of the CVT course, the trainee is awarded with a nationally recognized certificate. Unnegotiable requirement within a CVT programme, however, is that a trainee spends at least 50% of the training at the enterprise.

The graphics below suggest a selection of possible training sequences.

Sequence of a commercial CVT course with the duration of one year:



Sequence of a technical CVT course with the duration of 2 years:



4.2 Responsibilities of Training Institutes

The main responsibility of training institutes within CVT is to complement on-the-job training phases with theoretical input and practical exercises. The lessons shall support trainees to gain the relevant competencies for the respective trade they are trained in and prepare them for the on-the-job training in enterprises. In the CVT scheme, training institutes need to focus on the following objectives:

- To impart basic and advanced trade-related knowledge, skills and attitudes as defined in the competency standards.
- To impart general subjects, such as computer literacy, English and life skills.
- To prepare trainees for the on-the-job training and teach basic occupational health and safety rules.

In order to achieve these objectives, the training institute needs to meet the following prerequisites, which refer to teaching staff, batch size and equipment:

Checklist: Requirements for training institutes

Teaching staff: Competency standards are taught along units and learning outcomes. This kind of teaching requires the use of modern pedagogical and didactic methods. Teachers shall act as facilitators, clarify the learning objectives with the trainees and engage them in all aspects of acquiring the knowledge, skills and attitude needed for an occupation. Consequently, the job profile of teachers in CVT courses is demanding: It ranges from practical skills and occupational theory required for performing the respective trade to general and occupation-specific skills in pedagogy and didactics.

Batch size: Teaching CVT courses requires focusing on the individual capabilities of trainees in meeting the required learning outcomes. Therefore, the size of CVT batches needs to be limited so that teachers can support

trainees individually to progress throughout the course. The recommended batch size for technical trades shall not exceed 16 trainees, unless the additional corresponding work stations and teachers are available. In commercial courses the batch size can be increased up to 25 trainees, if the necessary classrooms and computer stations are available. However, any batch size shall never be larger than the commitment of on-the-job training places provided by the partnering enterprises.

Equipment: Another requirement refers to the workshop facilities and equipment available at the training institute. The competency standards and curricula define for each CVT course, which machinery, tools and equipment is needed for the training purpose. However, the hardware requirements need to be considered in consultation with the cooperating enterprises. Relevant machinery, tools and equipment may also be available at partnering enterprises and does not have to be installed at the training institute. In the preparatory phase, a corresponding equipment check is recommended to define whether learning units can take place at the training institute or need to be shifted to workshops at partnering enterprises.

Besides these requirements, the training institute needs to appoint an **Institute Coordinator** in the management, who is responsible for the communication with partnering enterprises. The coordinator needs to agree on the following aspects with his or her counterpart in the enterprises: Procedures for selecting the trainees, orientation of trainees before the beginning of the on-the-job training and communication on the learning progress of trainees. The coordinator is usually located inside the project or liaison department of the training institute.

Job Description: Institute Coordinator

4.3 Responsibilities of Enterprises

The company is responsible for delivering the on-the-job training. The training institute, therefore, needs to prepare trainees in advance focusing on the theoretical input and an orientation on the behavior at the working place. The on-the-job training subsequently provides the opportunity to apply skills and knowledge in a working place under the supervision of instructors. Furthermore, the enterprise instructors are responsible to teach certain competencies, which are defined in the curricula of the CVT course.

The main results of the on-the-job training are:

- To expose trainees to various working levels and to actively involve them in the working processes.
- To provide trainees with an insight into the management and organization

of the enterprise.
- To equip trainees with soft skills and knowledge of occupational health and safety standards.

In order to achieve these objectives, the on-the-job training follows a different design than a conventional internship. The CVT regulations prescribe that on-the-job training shall cover at least 50 percent of the training period, which equates to one year for technical courses and six months for commercial courses. Furthermore, the training shall be imparted in a structured manner in line with the curricula. The trainee shall be subsequently integrated in the working processes and shall be guided in his or her work by instructors.

To set up a conducive environment for the training, enterprises need to consider the following requirements before joining the CVT scheme:


Checklist: Requirements for enterprises

Instructors: The management of the enterprises appoints one or more instructors to implement the practical training at different stages during on-the-job training phases. The instructors are usually technical staff working in the production and service units. During the on-the-job training they are responsible to provide guidance, mentoring and supervision to the trainees. Equally to teachers in training institutes, instructors shall consider the competency standards of the CVT course and shall support the trainees in gaining the relevant skills, knowledge and attitude. The curricula specify which learning outcomes need to be taught in the enterprise during the on-the-job training.


Job Description: Instructor

Planning and Documentation: The management of the enterprise is responsible to plan the on-the-job training activities in advance. The rotation plan specifies the time period a trainee spends in a specific department and defines the rotation between the different departments. The plan ensures that the trainee experiences all trade-relevant tasks in the units of the enterprise. Throughout the on-the-job training, the trainee is obliged to document his or her learning activities in a logbook, which is regularly submitted to the instructor for signature. The maintenance of the logbook is important for communicating the learning activities back to the training institute.


Template: Rotation Plan


Log Book

The training inside the enterprise is coordinated by an **Enterprise Coordinator**, usually located in the Human Resource Department. The coordinator appoints the instructors, prepares the rotation plan and checks the documentation of the training. Furthermore, the coordinator serves as a focal point for the communication with the training institute.


Job Description: Enterprise Coordinator

Summary of Responsibilities for Training Delivery

Partner	Responsibilities
Training Institute	• Appoint an Institute Coordinator to coordinate training activities and liaise with Enterprise Coordinator from partnering companies • Conduct theoretical and practical courses in line with curricula • Conduct regular pre- assessments and evaluate trainee's performance • Provide companies with information concerning trainee's progress at institutes • Hold regular meetings with the partner companies to monitor the training delivery process • Register trainees with TTBs for their assessment
Enterprise	• Appoint an Enterprise Coordinator to coordinate training activities and liaise with the Institute Coordinator from the training institute • Appoint Instructors to implement on-the-job training within enterprise • Select trainees in collaboration with the training institute through a pre-defined selection process • Introduce the trainee to all relevant rules and regulations of the enterprise, including occupational health and safety measures. • Impart the on-the-job training in line with curricula and monitor and record progress • Maintain a close liaison with the training institution on trainees progress • Support the examination bodies in final assessment of trainees

5 Assessment and Certification of CVT Courses

The set-up, quality and integrity of the assessment system are crucial to gain recognition for TVET certificates among employers. Trainees enrolled in a CVT scheme are, therefore, assessed against the assessment criteria outlined in the NVQF. This implies the assessment of an individual's performance against defined competency standards, which are required to perform a job.

NAVTTC has defined certain quality criteria, which prescribe that the assessments shall:

Manual on Assessment for NVQF Qualifications

- Require standards to be set and validated by industry and end-user groups
- Rely on assessment packages developed and validated for all NVQF qualifications
- Ensure competence and integrity of the registered assessors who are trained and observe fully the assessor's code of professional practice
- Provide an opportunity to the candidate for appeal against unprofessional or corrupt practice by the assessor; use of incorrect, unapproved or outdated assessment instruments or interference with or interruptions to the assessment process
- Include a moderation system to ensure that the assessment tasks and judgements that are made for any competency are the same as or equivalent to any others that are being administered anywhere in the national system for the same competencies
- Support feedback from relevant stakeholders, enterprises and individuals regarding relevance and validity of competency standards and related assessment packages

The entities responsible to conduct the assessments for CVT courses are the provincial Trade Testing Boards (TTBs), the Boards of Technical Education (BTEs) or, if not available other assessment bodies accredited by NAVTTC. They schedule the assessment dates, determine the venue along with the qualification to be assessed. This information is made available on their websites for the candidates to access. The responsible assessment body supervises the assessments to ensure compliance with NVQF requirements, validity and consistency. They provide accredited assessors, both from the public and private sector, to the assessment panel.

The assessments take place either at the training institute, the premises of enterprises or designated assessment centers. The responsible assessment body facilitates the process and responsible to ensure that the venue is equipped with the required trade-related infrastructure, tools, consumables and material.

In preparation to the final assessment, sessional tests are conducted by teachers throughout the CVT programme. A briefing with the assessment candidates is held by the assessors at least one week prior to the final assessment date to instruct them on the procedure.

It is the training institute's responsibility, normally assigned to the Institute Coordinator, to ensure trainees are registered with the responsible assessment body for an assessment within one month after they joined a CVT course.

Assessments in the competency-based system differ fundamentally from tests. In competency-based assessments an individual's performance is assessed against defined competency standards. Individuals are not compared against other individuals; they do not receive scaled grades, but are graded as 'Competent' or 'Not-yet Competent'. A NVQF assessment, therefore, includes the full range of activities that clarify a candidate's skills, knowledge and attitude. It also includes different methods for examining competencies, such as demonstrations, simulations, presentations, assignments, projects, creations and tests.

If considered competent, the candidate will be awarded with a national certificate verifying the competencies acquired. The CVT regulations furthermore prescribe that graduates receive a reference letter from the enterprise, which provided the on-the-job training. Additional certificates are possible, but need to match with the CBT approach of the CVT courses.

NAVTTC's Manual on Assessment for NVQF features a number of templates on the assessment for further reference (e.g. template SINGLE COMPETENCY STANDARD ASSESSMENT)

Siemens Mechatronic Certification at AMANTECH

The TVET Reform Support Program has facilitated the cooperation between the training institute AMANTECH in Karachi and Siemens AG in the CVT course Mechatronics Technician. Through this collaboration, teachers from AMANTECH have been trained in a certified programme of Siemens in Germany. These teachers are now accredited to deliver the Siemens Mechatronic Certification Programme. The Programme is based on a customized curricula aligned with the company's technology and skills requirement. As a result of the accreditation, AMANTECH is entitled to provide a Siemens Certificate to the graduates of the Mechatronics course besides the National NVQF Certificate.

6 Coordination and Management of CVT Courses

The core criteria to successfully implement CVT are the modalities of cooperation defined between the training institutes and enterprises taking part in the programme. A strong ownership in planning, managing, delivering and monitoring is the backbone of the CVT scheme. In this regard, the CVT scheme differentiates between operational and management tasks.

The operational tasks directly relate to the training delivery and are taken over by the implementing partners, the training institutes and enterprises, in their own responsibility, as described in the previous chapter. Both are responsible to establish the working procedures for the training delivery within their organization. The coordinators in the training institute and the enterprises need to find an arrangement through regular meetings and visits to coordinate the training delivery by sharing information on the status of the training progress. The tasks include, for example, creating linkages between the training phases, consulting each other on the learning progress of trainees, preparing orientation sessions for trainees before the beginning of each training phase and registering the trainees for the final assessment.

Above this operational level, training institutes and enterprises need to agree on a management structure, which allows them to plan, manage and monitor CVT courses. The following tasks need to be taken over by the management level:

- Planning of CVT courses, such as definition of trades, number of trainees, time schedules and sequencing of class-room and on-the-job training phases
- Identification of training institutes and enterprises as implementing partners for the delivery of CVT courses
- Management of contracts with training institutes, enterprises and trainees
- Registration of trainees and maintenance of data and records, such as admissions, assessments and examination results
- Facilitation of coordination between the training institute, enterprises and TVET authorities, such as NAVTTC, Trade Testing Boards and other organizations
- Ensuring accreditation of courses, examinations and certificates
- Supervision, arbitration and monitoring

- Provision of organizational, administrative and technical support
- Provision of insurance for trainees
- Provision of a credible accounting and financial management system

In the CVT scheme training institutes and enterprises can agree on different organizational arrangements to define responsibilities for the management tasks. In this regard, the training institute, the enterprises or an external body can be defined as the Lead Agency for planning, managing and monitoring CVT courses:

Model 1

The management responsibility rests with the training institute: The training institute is the legal entity responsible and mandated to manage the CVT courses, organize the class-room phase, find cooperating companies, place trainees and monitor the training delivery. This model has the advantage that training institutes are already experienced in managing training courses and liaising with TVET authorities.

Model 2

The management responsibility rests with the company or group of company: In this scenario the company has the sole responsibility to recruit the trainees and impart the training. The company pro-actively links-up with a training institute for theoretical training and practical instruction according to the curricula. This company-based approach has the clear advantage that the management of enterprises has the control over all aspects of the training, including the quality and content of the outsourced theoretical and practical instruction by selecting adequate training providers and the negotiation of related contracts.

Model 3

The management responsibility rests with an external body: In this model an external organization owns the programme and becomes the legal entity being responsible for planning, managing and supervising CVT courses. The external body is responsible to oversee the training delivery between training institutes and enterprises. The implementing partners, therefore, need to delegate this authority to the external organization. It is possible that foundations or business membership organizations, such as chambers of commerce or sectoral associations, take over the management tasks of the external body or engage with public agencies into a partnership to deal with the management responsibilities. Both steps require the consent of the provincial Technical Education and Vocational Training Authority (TEVTA),

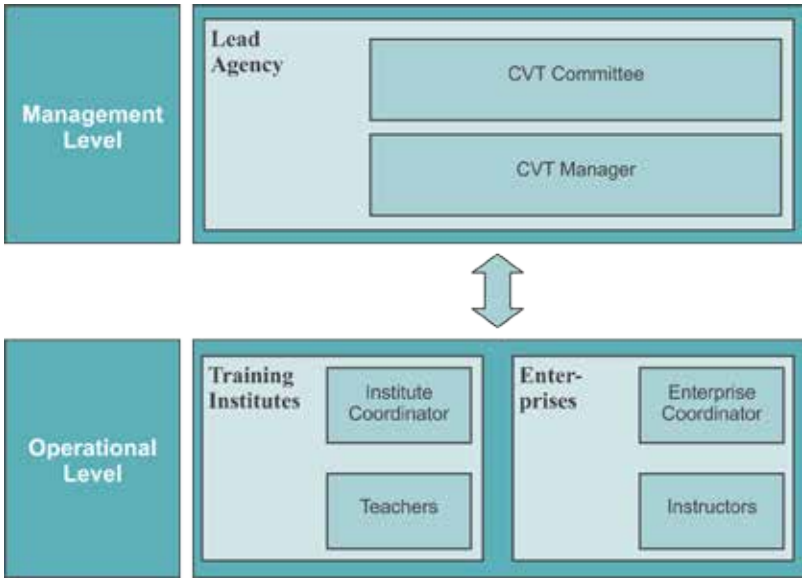
which usually acts as the custodian for the accreditation, assessment and certification procedures.

In all of the models the Lead Agency plays a key role in setting up the CVT courses and defining an arrangement for the cooperation between training institutes, enterprises and TVET authorities. Therefore, the Lead Agency shall establish a CVT Committee and the position of a CVT Manager.

The **CVT Committee** serves as a steering body for the participating partner organizations. The committee consists of elected participants from the training institutes and enterprises. They agree on the strategic direction of the respective CVT scheme by agreeing on the selection of trades, the financial modalities and procedures for supervision and monitoring. In case of conflicts, the CVT Committee serves as a platform for arbitration, which can be approached by training institutes, enterprises and trainees.

The CVT Committee also supervises the **CVT Manager**, a full-time employee at the Lead Agency, who is assigned to take over the management tasks. The position is responsible to identify training institutes and enterprises for delivering training, manage contracts with training partners and trainees, maintain the records of trainees, facilitate the coordination between the implementing partners and TVET authorities and provide technical supports to the involved organizations.

Job Description: CVT Manager



Coordination mechanisms in the CVT pilot schemes

In the beginning of the pilot projects the implementing partners focused on setting up the procedures for the training delivery. Since 2015 the focus has shifted on developing robust coordination mechanisms, which allow a sustainable organizational basis for providing CVT courses om Karachi and Lahore. The partners in Karachi mostly opted for a strong role of training institutes. The training institutes of AMANTECH, iACT, Hunar Foundation and two institutes of the Sindh Technical Education and Vocational Training Authority (STEVTA) have taken over the role as a lead agency.

In Lahore, in contrast, the Punjab Technical Education and Vocational Training Authority (PTEVTA) serves as a platform for the coordination with partnering enterprises. The Lahore Chamber of Commerce and Industries (LCCI) and the Pakistan Footwear Manufacturers Association (PFMA) intend to formalize their involvement as employer-led organizations in the coordination of CVT courses. The idea is to engage into a public-private partnership with PTEVTA and take over certain management tasks to support the coordination of CVT courses. LCCI and PFMA therefore will establish a CVT committee, which will consist of active member companies. The CVT committee will prepare a CVT agenda with proposals on how the respective business organization can be involved in the coordination of CVT courses. The proposals will be discussed in a dialogue with PTEVTA leading to a Memorandum of Understanding, in which both sides agree on separate and mutual responsibilities. The following responsibilities are potential tasks of LCCI and PFMA: Identification and registration of participating enterprises for the delivery of the on-the-job training; planning of the format of the programme, such as the selection of trades, number of trainees, scheduling of training sequences; provision of organizational, administrative and technical support to enterprises, and supporting the assessment and certification procedures. Through this, PTEVTA, will be enabled to focus on the core functions of a public TVET agency, such as the identification and support of training institutes, the delivery of the institutional training and the coordination of accreditation, assessment and certification processes.

7 Financing CVT Courses

Funding is a key element in ensuring the sustainability and continuity of CVT programs. Ownership, commitment and the diversification of financing sources is elementary, while not relying on external funding provision. In this regard, the Lead Agency in consultation with the implementing partners needs to agree on a budget estimate and define ways for financing the CVT courses.

As training costs vary by trade and the scope of the training, this handbook cannot provide exact budget estimates of CVT costs. The list below shows a breakdown of budget lines that should be considered when designing a budget estimate for CVT implementation:

Budget Items
CVT Manager at Lead Agency
Coordination and Communication between Lead Agency, training institute and enterprises
Monitoring System
PR and marketing
Capacity development for implementing agencies
Procurement of additional machinery, equipment and teaching and learning material at training institutes
Consumables for training delivery at training institutes
Institute Coordinator
Teachers
Facilities and training expenses for training delivery at enterises
Enterprise Coordinator
Instructors
Admission and course fees
Monthly stipend for trainees
Fees for assessment and certification

The financing is an issue of joint agreement between the Lead Agency and the implementing partners. They can agree on a self-financing scheme, in which training institutes and enterprises cover their expenses individually and the Lead Agency finds sources for financing coordination and management costs. External funding from public and private entities in Pakistan should also be considered.

In all aspects of budgeting and financing it is necessary that the Lead Agency as well as the implementing partners rely on transparent financial and accounting systems within their field of responsibility.

Sources of financing in the pilot schemes

The implementing partners in the pilot schemes have developed different mechanisms to cover the training delivery and coordination. For example, in Karachi, the lead agencies have been using the instrument of establishing a training fund as a finance mechanism. In this model training institutes and enterprises cover the expenses for delivering the institutional and on-the-job training on their own. The lead agency furthermore identifies the planned expenses for coordination activities, for which it is responsible. The amount will be provided by the partnering enterprises through a training contribution and transferred to the lead agency. The training contribution is used by the lead agency to cover the salary of the CVT manager and expenses related to coordination and communication activities. In addition, it is possible to include the monthly stipend of trainees into the training contribution, either. The amount granted as a stipend can differ between the partnering enterprises depending on their policy.

In Karachi the training fund was used by two training institutes of STEVTA, which act as a lead agency for the CVT course Customer Services and Sales. The Institute Management Committee (IMC), in which representatives of the institute and the private sector participate, defined the amount of the training contribution. 50 percent of the amount is used for coordination activities, the remaining part for the monthly stipends of the trainees. The monthly training contribution equals PKR 10,000. The Hunar Foundation also used a training fund to cover certain expenses for the CVT course Mechanical Engineering with CNC. In contrast to STEVTA, the foundation agreed to provide own and external funds to reduce the monthly training contributions of the partnering enterprises.

8 Legal Requirements for CVT

The CVT programme is implemented under the relevant national and provincial legislation of Pakistan. It is required that the Lead Agency and the implementing partners are formally registered by the responsible government agencies and have been fully operational for at least two years prior to the inception of the programme. Furthermore, the involved actors need to consider the TVET legislation in the following areas:

- NAVTTC approves the competency standards, curricula and assessment packages for the CVT courses. The qualifications need to be leveled and aligned with the NVQF.
- NAVTTC furthermore offers the opportunity for accreditation of TVET courses. The involved training institutes are entitled to approach the apex body, which assesses the following performance areas of the institutes: governance and management, finances, faculty and staff, physical infrastructure, effectiveness of teaching learning process, assessment and evaluation, job market linkage, students support services and continuous quality improvement. Depending on the assessment, training institutes can be awarded as Centers of Excellence for TVET provision.
- The provincial TTB, BTE or other accredited bodies in the provinces act as the responsible assessment and certification awarding bodies for CVT courses. The training institutes are obliged to follow the assessment and certification procedures set by the NAVTTC.

Manual on Developing, Registering and Reviewing Qualifications

Accreditation Manual Technical & Vocational Stream

Manual on Assessment for NVQF Qualifications

The following legislative provisions need to be taken account by the organizations, involved in the CVT scheme:

Agency and legal provisions	Role
National Vocational & Technical Training Commission (NAVTTC): Manual on Developing, Registering and Reviewing Qualifications Accreditation Manual Technical & Vocational Stream	NVQF levels and assessment rules Accreditation of training programmes Notification of CVT competency standards, curricula and assessment packages
Trade Testing Board (TTB) and Board of Technical Education (BTE): Manual on Assessment for NVQF Qualifications	Registration of trainees for final assessment, endorsement and issuance of certificates
Society Act XXI of 1860	Registration of non-profit charitable organizations, foundations and related institutes providing vocational education and training.

Companies Ordinance 1984, Section 42	Registration of not-for profit organizations and institutions providing vocational education and training.
Trade Organisation Ordinance 2007	Registration of autonomous institutions of public interest (trade bodies), such as Chambers of Commerce and Industry, sectoral associations and others

In addition to the legal requirements outlined above, the CVT Programme Agreement and Training Agreement formalize the cooperation between the stakeholders implementing a CVT programme.

The **CVT Programme Agreement** outlines the objective and duration of the cooperation and is negotiated and approved by representatives of the Lead Agency, the training institutes and participating companies. It spells out the management structure, roles and responsibilities and respective rules of business.

Template: CVT Programme Agreement

The **Training Agreement** is developed on the basis of the CVT Programme Agreement and endorsed by the CVT committee. The document is a tri-partied agreement between the training institute, the company and the trainee. It outlines duties and obligations of the contracting bodies, specify the trade and course duration, as well as the sequencing of the training phases.

Template: Training Agreement

CVT as an approach to revise the Apprenticeship Scheme

The Apprenticeship Scheme was introduced in Pakistan in 1962. It imposes obligations on employers of a certain size to provide training, offset by tax and excise concessions. There are many establishments registered to provide apprenticeship training, but in total the system engages only few enterprises in training and the number of apprentices remains as low as 13,000 approximately a year.

The training system behind the Apprenticeship Scheme is based on the notion of cooperative training, which includes on-the-job training and institutional training. However, the Apprenticeship Scheme misses the opportunity to define incentives for enterprises and, instead, forces enterprises to become training providers.

The CVT scheme follows a different approach: The participation of enterprises is voluntary and the procedures allow enterprises to be involved in the design, management, delivery and monitoring of cooperative courses. In 2016, lessons will be drawn from the pilot scheme. This will provide policy recommendations for future revisions of the current apprenticeship scheme.

Apprenticeship Ordinance 1962

9 CVT and Green Skills

The private sector is forced to adapt continuously to a changing market environment of technical innovation, new legal requirements and altering customer preferences. Enterprises therefore invest in the training of their staff and request from the public sector to consider new trends in vocational and technical training. In this regard, CVT provides an approach to link the demand for innovation with TVET provision by involving enterprises into the development and delivery of TVET courses:

- Design of TVET courses: In the CVT scheme the corporate sector is involved in developing the job profile, the competency standards and training content of each course. Thus, enterprises have the possibility to bring in their knowledge about current trends in management, production and service delivery into the development process of the TVET qualification.
- Delivery of training: In the CVT scheme enterprises take part in the training delivery by providing on-the-job training. In this way, instructors are able to acquaint trainees with innovative products and processes, which are already used in the corporate sector. This also refers to modern machinery and equipment, which might have not been yet procured by the training institutes.

The TVET Reform Support Programme has initiated a pilot project to test how the CVT approach works in new innovative fields. The Programme has thereby put a focus on Green Skills, which are demanded in all economic sectors to reduce the environmental impact of production processes and to improve occupational health and safety (OHS) of the workforce. The requirements for companies regarding green and sustainable production change dynamically in Pakistan and other countries as new green technologies and procedures emerge, prices for raw materials and energy increase, and consumer awareness grows.

As a pilot course the qualification "Energy Efficiency Adviser" has been selected, which is a new subject in the TVET landscape of Pakistan. The selection has been justified through an empirical study, which reveals that the improvement of energy efficiency is the most demanded green service in the Pakistani industry. Key reason for this is the direct economic benefit of energy efficiency measures: Energy-intensive industries in Pakistan save up to 10 percent of

their energy costs with no- and low-cost interventions and more than one-fifth, when they implement medium to long-term measures. In contrast, most other green interventions that only provide indirect benefits – for example, the establishment of a waste-water treatment facility, generates high costs but will only benefit the company, if respective legislation is enforced or if the measure allows access to new clients with respective requirements.

Based on the study, the TVET Reform Support Programme initiated the development of the CVT course for Energy Efficiency Advisers following the CBT approach, including the development of a job analysis, competency standards and curriculum. For this purpose, the programme included energy efficiency consultants and highly experienced technical managers from the industry to ensure that the qualification meets the needs of the companies in Pakistan. An international consultant facilitated the process, added technical input and supported to align the course with international standards "ISO 50001 Energy Management System" and "European Standard on Energy Audits: EN16247" to guarantee that the qualification meets international criteria. As a result, NAVTTC grades the Energy Efficiency Adviser training at level 5 of the NVQF, the highest level for vocational training, as it qualifies for high-level technical and managerial positions.

The selection of a training institute proved to be difficult, since energy efficiency is a new field at the vocational-training level and competencies required at the TVET institutes to deliver this course did not exist. Upgrading an existing TVET institute seemed difficult as the CVT course for Energy Efficiency Advisers does not only require skilled trainers on technical subjects but also on management and financial analysis. After extensive research, the University of Engineering and Technology (UET) Lahore has been identified as a suitable training institution for this qualification, as it combines academic standards with experience in vocational training. Five instructors and research professionals of the university received technical training on Energy Auditing and Energy Management System to upgrade their knowledge on these specific subjects.

The Energy Efficiency Adviser course consists of 284 hours of theoretical training at the institute and 664 hours of on-the-job training in the enterprises. Since the participants of the course are already employed in the industry, the institutional training will be conducted in weekend classes at the institute, while the on-the-job training will be conducted during the working hours. Each participating company assigns an Enterprise Coordinator who guides and supervises the trainee during the on-the-job training and coordinates training activities with the institute. During the practical training phase, the trainees are expected to implement an energy-efficiency project in their enterprise – from policy setting and baseline assessment through to action

planning, implementation and the monitoring of results. The implemented energy saving measures will for most companies immediately pay off the investment in form of money and time for the training of their employees.

Universities as an innovative partner for TVET delivery

A training institute for a TVET course, such as the CVT course for Energy Efficiency Advisers, must fulfill several criteria to guarantee a high level of training quality: Teachers with advanced academic knowledge in relevant technical subjects, sound practical experience in relevant technical subjects, flexibility to offer courses according to need of the industry, such as weekend classes, experience with TVET and industry contacts.

The problem in case of the CVT for Energy Efficiency Advisers: No existing TVET institute has the required technical knowledge on Energy Efficiency and Energy Management, while most universities lack the practical knowledge and connection to the industry. The University of Engineering and Technology (UET) with its Al-Khwarizmi Institute of Computer Sciences (KICS) fulfills all the given criteria. KICS conducts applied research and offers academic courses on renewable energies and energy efficiency. As a real innovation on the university level, KICS has introduced vocational training courses on solar installations and programmable logic controllers for industrial applications and, thus, has demonstrated the willingness and ability to adapt teaching contents and didactics to the requirements of a TVET course. Furthermore, KICS has the advantage that many staff members of the faculty work part-time as consultants in private companies and, therefore, bring applied knowledge and industry contacts to the institute.

10 CVT – a Return of Investment?

GTZ (2009) Key Aspects of the Economics of Technical and Vocational Education and Training (TVET)

The CVT scheme proposes, in line with the TVET Policy, procedures on how to facilitate the cooperation between TVET authorities, training institutes and enterprises in planning and delivering training courses. The procedures address the following areas of collaboration: design, delivery, assessment and certification of CVT courses as well as coordination, management and financing. In all these areas it is essential that enterprises are involved to match the training provision with the demands of the labour market.

While promoting CVT, it is essential to discuss modalities on how to involve enterprises in cooperative training and to highlight the benefits for companies. Certainly, economic considerations play a determining role in the decision of companies whether they will join cooperative training courses or not. The cost-benefit ratio is thus one of the crucial influencing factors. Simply said, if the total benefits exceed the total costs, the investment in vocational training is economically rational for companies.

As mentioned above, the company´s benefit is the contribution of the trainee to the company´s productive outcome. However, this benefit is sometimes not evident at the time when the training costs are being incurred. The fact that future benefits must also be taken into account, makes the calculation more complex. Another issue is that the benefits of TVET are difficult to measure or to quantify. The benefits can be classified according to the following dimensions:

Benefits gained through the trainee: This dimension refers to the benefit to the company during the on-the-job training phase. This benefit arises in the form of returns through the productivity of trainees integrated into the operational work. In proportional terms, if the productivity of the trainee is higher, it will reduce the company's net costs.

Benefits gained through the trained employee: This dimension only applies, if the company employs the trainee after the completion of training. In that case, the company may benefit in different ways: the enterprises do not have to bear costs for the recruitment of skilled workers, when employing trainees. Similarly, it can save the costs, which are normally allocated for the initial orientation and instructions. Likewise, it can be assumed that the productivity of trained employees lies above the productivity of externally

recruited professionals and that this might have a motivating impact on co-workers' attitude and productivity.

The same applies for the CVT scheme in Pakistan: If adequately guided, the trainee's contribution to productivity can compensate the allocated costs for instructions and training. Further, the duration of the training programme allows the employer to carefully assess the trainee's work attitude and performance and can be regarded as a probation period. The risk of hiring the 'wrong person' and the resulting costs of dismissal is much lower, as the company knows well the behaviour, performance, and productivity of the trainees from their training in the company.

CVT does not only look at monetary benefits of training but includes aspects of social and individual empowerment. CVT provides trainees with the opportunity to participate in an innovative training model, unique in Pakistan. Upon successful completion of the CVT course, they hold a nationally recognized certificate, which validates their competencies, gives them confidence in their skills and ultimately leads to a motivated work attitude.

The benefits of CVT demonstrate investing in training is worthwhile for public and private stakeholders. A shared commitment in providing TVET courses sets a promising example for a paradigm shift in reforming Pakistan's TVET system.

11 Glossary of CVT Terms

Term	Definition
Competency Standards	Competency standards are performance specifications that identify the knowledge, skills and attitude a person requires performing a job. In competency-based training the competency standards are used to define the learning outcomes of the training content.
Competency-Based Training (CBT)	CBT training places a heavy emphasis on what a person can do in the workplace after the completion of a training program. Progression of learners within a CBT program is not time-bound; instead it depends on the person's ability to demonstrate the necessary competence for the job.
Cooperative Vocational Training (CVT)	CVT is a delivery approach for TVET courses, in which trainees attend an institutional training at a training institute and an on-the-job training at an enterprise. Training institutes and enterprises share the responsibility for planning, delivering and monitoring the course.
CVT Committee	The CVT Committee serves as a steering body for the participating partner organizations. The committee is established by the Lead Agency and consists of elected participants from training institutes and enterprises. They agree on the strategic direction of the respective CVT scheme by agreeing on the selection of trades, the financial modalities and procedures for supervision and monitoring.
CVT Manager	Full-time employee of the Lead Agency in a CVT scheme tasked to plan, manage and monitor the CVT courses in close collaboration with training institutes and enterprises. The CVT Manager reports to the CVT Committee and executes its decision.
CVT Programme Agreement	The document describes the nature and content of the cooperation and is negotiated and approved by the group of CVT partners. Depending on the negotiation panel, several options are possible to formulate the Programme Agreement, e.g. as a Memorandum of Understanding (MoU) or Letter of Intent (LoI).
Enterprise Coordinator	Employee of the enterprise responsible for coordinating the delivery of CVT courses within the enterprise and with the partnering training institute.
Institute Coordinator	Employee of the training institution responsible for coordinating the delivery of CVT courses within the institute and with the partnering enterprise.
Institutional Training	Training phase in a training institute, covering theoretical and practical exercises in the class-room or workshop.
Instructor	Employee of the company imparting the practical training at the different stages of the learning and work process. The instructors are responsible for the daily integration of the trainee in the work process, providing instructions, guidance and supervision.
Lead Agency	Organization taking over the lead in managing and coordinating a CVT scheme. The Lead Agency can be a training institute, an enterprise or an external body. The Lead Agency needs to establish a CVT Committee and employ a CVT Manager.
Logbook	Official document to record daily training activities by the trainee.

Term	Definition
National Vocational Qualifications Framework (NVQF)	A Qualifications Framework is an instrument for the development, classification and recognition of skills, knowledge and competencies along a continuum of agreed levels. The Framework indicates the comparability of different qualifications and how one can progress from one level to another, within and across occupations or industrial sectors. Pakistan`s NVQF was launched in 2015.
On-the-job training	Guided and structured in-company training in a CVT course involving the trainee in trade-related work processes and work routine.
Rotation Plan	The rotation plan specifies the time period a trainee spends in a specific department and defines the rotation between the different departments during the on-the-job training phase.
Trainee	A person receiving basic and advanced training during phases of instruction at training Institutions and on-the-job training phases regulated by a training agreement.
Training agreement	The document is a tri-partied agreement between the training institute, the company and the trainee. It outlines duties and obligations of the contracting bodies, specify the trade and course duration, as well as the sequencing of the training phases.

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Weblinks

This handbook is available at:
http://www.tvetreform.org.pk/cvt-handbook

- Skills for Growth & Development. A Technical and Vocational Education and Training (TVET) Policy for Pakistan
  http://www.tvetreform.org.pk/images/Reports/pdf/TVET%20Policy.pdf
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- Template Trainee Rotation Plan
  http://www.tvetreform.org.pk/cvt-handbook
- Template Log Book
  http://www.tvetreform.org.pk/cvt-handbook
- Job Description Enterprise Coordinator
  http://www.tvetreform.org.pk/images/component/GPATI/PDF/JD_Enterprise%20Coordinator.pdf
- NAVTTC: Manual on Assessment
  http://www.tvetreform.org.pk/images/component/GPATI/PDF/manuals/Final%20Manual%202%20on%20Assessment%20Revised%20Sep%202015.pdf
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