

Dual TVET Guidebook

Guidelines and Strategies towards Planning and Implementation of Dual TVET Programmes In Kenya



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Introduction

What is Dual Training?

The Dual Technical and Vocational Education and Training (Dual TVET) system is a training methodology that combines theoretical and practical training. It is called "Dual" because the training takes place in two (2) locations - the TVET institution and the company. It is anchored on the Competency-Based Education and Training (CBET) approach and aims to strengthen collaboration between schools / Technical and Vocational Education and Training institutions (TVETs) and companies in the private sector.

The model was piloted in Kenya by the Ministry of Education (MoE) from February 2020 to December 2022 with support from the German government's Ministry of Economic Cooperation and Development (BMZ).

Dual TVET has proven to be an effective training approach that equips trainees with the necessary skills to readily join the labour market hence addressing the high unemployment rates amongst the youth in Kenya. The Kenyan government acknowledges the effectiveness of Dual TVET in meeting industry demands and providing relevant competencies required in the job market by the industry.

Training companies in Dual TVET offers compelling value. It reduces recruitment and training costs and provides a skilled and customised workforce for participating companies. They can develop a reliable talent pipeline by designing training programs based on their industry. TVETs and industry can collaborate to share knowledge and influence industry standards. Engaging in Dual TVET contributes to economic growth and skill development.

This guideline provides an overview of each activity within the context of Dual TVET delivery. It evaluates lessons learnt from the pilot phase and guides readers through every step of the Dual TVET cycle, from pre- to post-training. The guideline is based on international best practices in dual TVET training implementation and aims at enhancing understanding and providing guidance around this effective training approach.

Benefits of Dual TVET

For trainees, it promotes employable skills, workplace competencies, informed career choices, career management, motivation, and self-confidence. Customized training allows partnering to access and address skill gaps while lowering on-job training costs. This enhances employee retention, productivity, and self-development, resulting in new business opportunities and an enhanced corporate reputation.

Dual TVET programs benefit training institutions with increased enrolment, program relevance, effectiveness, institutional reputation, and staff development, along with improved collaboration with the industry.

Society benefits from a skilled workforce that responds to labour market needs, promotes youth employment and cost-sharing between training institutions, industry, and the government.

Dual training offers a great value to Training companies in Dual training. It reduces recruitment and training costs, and it provides a skilled and customized workforce for participating companies. They can develop a reliable talent pipeline by designing training programs based on their industry. TVETs and industry can collaborate to share knowledge and influence industry standards. Engaging in Dual TVET contributes to economic growth and skill development.

In summary, the Dual TVET program provides valuable benefits to trainees, partnering companies, training institutions and the society at large.



Overview of Dual TVET Implementation Process

In general, the step-by-step Dual TVET framework is organised into three phases and ten (10) sequential key steps, as shown in figure 1 below. The steps are; Pre training, During training and Post training

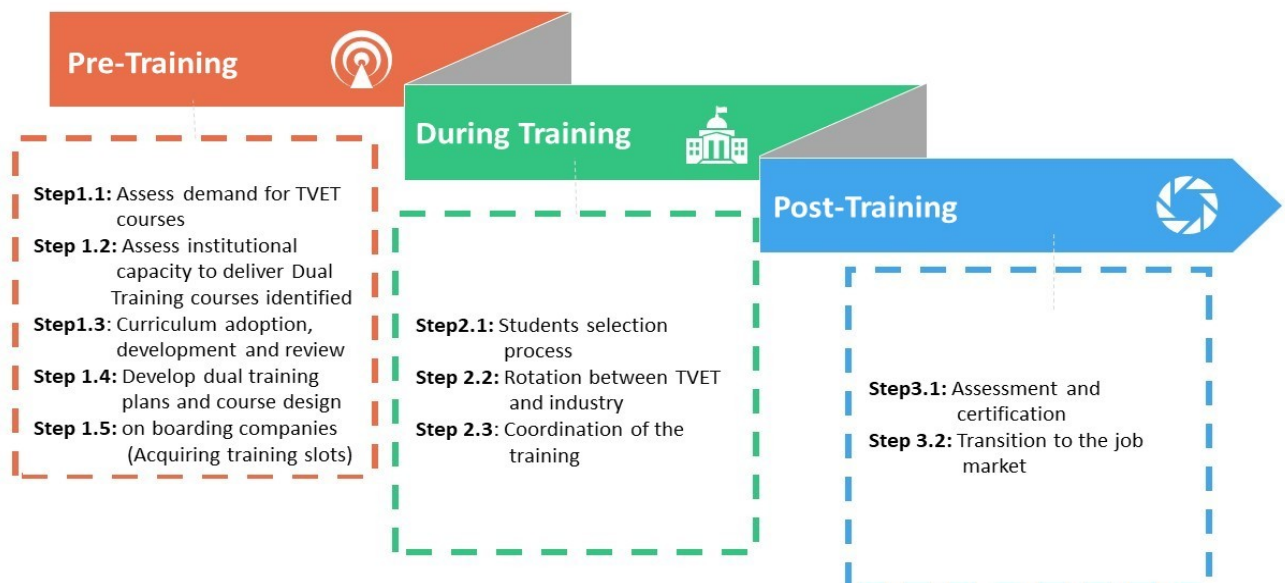


Figure 1: Step-by-step instructions for TVET preparation for Training courses.



Step One: Pre-Training

In order to prepare for dual training, Technical and Vocational Education and Training Institutions (TVETs) must conduct a market analysis in their local area or utilise readily available data on labour market information in their specific region to determine which courses are in demand before assessing their resources and capabilities. After that, the institutions will be required to establish or develop a suitable curriculum, engage industry partners, and implement the program.

The pre-training section of the Dual Training guidebook outlines a series of steps for laying the foundation for successful Dual Training implementation. Technical and Vocational Education and Training (TVET) courses are assessed, institutional capacity for delivery of these courses is evaluated, curriculum development is adopted or developed, dual training plans are designed, and companies are onboarded to provide training slots for trainees. Here are the details of the process:



Step 1.1: Assess Demand for TVET courses

Dual training programs rely on actual labour market demand. The objective of this step is to conduct a thorough research to determine whether there is a demand for TVET courses in the targeted industry or area. To determine which skills and occupations are in high demand, surveys, interviews, and data collection methods are used. Training programs are aligned with labour market needs by considering factors such as industry growth, technological advancements, and changes in job requirements. To form a dual training class, 15 to 30 training slots should be acquired (one slot per trainee) before the training begins.

To find out if there is sufficient demand from the industry in the catchment area to provide training slots for dual training, it is advisable to identify suitable companies and then:

- Directly contact companies (individually) to acquire training slots **Please use the communication guide in Appendix 2** to find guidance and arguments for dual training).
- Conduct a round table/awareness meeting of several companies and BMOs **Please see Appendix 3** for guidance on these meetings).



Step 1.2: Assess Institutional Capacity to Deliver Dual Training Courses

After assessing demand for TVET courses, the next step is to evaluate the capacity of TVET institutions to deliver Dual Training courses. The assessment includes determining whether there are qualified instructors, appropriate facilities, necessary equipment, and other resources needed to provide effective training. In addition, the institution is evaluated on its ability to collaborate with industry partners and to provide adequate support services to trainees.

Please use the checklist in Appendix 1 to determine the institutional capacity, including adequate infrastructure such as workshops, equipment, and sufficiently qualified teachers to deliver the courses.



Step 1.3: Curriculum Adoption, Development, and Review

The focus here is on adopting, developing, or reviewing the Dual Training curriculum. A Competency-Based Education and Training (CBET) curriculum ensures that the training is relevant to industry demands. If a current CBET curriculum is available, the TVET institution should then proceed to acquire it for adoption in line with the requirements of the relevant awarding / certifying authority. If such a curriculum is unavailable, then a review of the existing curriculum is done in order to ensure that the content aligns with industry standards and needs while identifying existing gaps. A new curriculum is then created that incorporates the latest industry practices and technologies. The review should follow the normal process of the awarding body for the curricula. It is recommended that curriculum review be carried out after three cohorts of trainees have undergone the dual TVET programme. In order for the curriculum to be relevant to the labour market and meet employers' expectations, industry experts and employers are actively involved in the process.



Step 1.4: Develop Dual Training plans and course design

After the curriculum has been established or revised, dual training plans and course designs will be developed based on the newly established or revised curriculum. During this process, it is necessary to determine the duration of training blocks and structure of the training plan, to define the learning outcomes for each block, as well as to develop a detailed schedule for both classroom instruction and on-the-job training (mentorship) in the workplace. A dual training plan should strike a balance between theoretical and practical components, such that trainees are able to gain the necessary skills and knowledge in the shortest possible time.

There are two types of Training Plans that should be developed.

1. **General Training Plan:** It shows the content that is meant to be delivered at the TVET Institution (mainly theoretical) and the content that is set for delivery at the partnering companies. This general Training Plan guides the TVET Institution on what to cover and has a rotational plan for the various blocks between the institution and Companies.
2. **Customised In-Company Training Plan** focusing only on practical content that is to be delivered at the Industry training blocks. The customised plans should be structured based on the organisation of the general plan but in a simple format that is easy to implement by the industry trainers. **Please see Appendix 5**



Step 1.5: On-boarding companies (Acquiring training slots)

Establishing partnerships with employers willing to provide on-the-job training is the last step in pre-training. In order to secure employer commitments to offer training slots, it is important to communicate the benefits of dual training, negotiate agreements, and secure training slots. Trainees and employers should be matched according to their skills and career goals to ensure an adequate number of training slots. It is important to ensure enough in-company

trainers to mentor the trainees. The ideal ratio is one in-company trainer for every three trainees.

To provide training slots for Dual TVET programs, it is necessary to mobilise companies. The following steps should be taken to on board the industry:

- Reach out to potential partnering companies through established networks with industry where trainees in regular programs have been placed in the past. The companies can be contacted directly via visits or official letters / emails. Alternatively, contacts can be made through membership in business associations. TVET institutions can also pitch partnerships through key decision makers such as directors or managers of companies. Organise workshops or platforms to raise awareness among potential partnering companies about Dual TVET programs and their benefits, including better competitiveness, trainees learning company-specific skills thus reducing recruitment and retraining costs, and improving production quality.
- Once companies have shown interest in the Dual TVET program, a Company Aptitude Test is then conducted to determine if the potential industry partners could effectively offer industrial training. **Refer to appendix 4 for guidance**
- It is encouraged that a formal agreement is reached between the TVET Institution and the Companies that pass the aptitude tests. Though not mandatory, such an agreement should outline each party's responsibilities regarding Dual TVET. **Refer to appendix 8 for guidance on the roles of different stakeholders.**

This step is closely related to Step 1.1 "Assess Demand for Identified Courses" and can be done simultaneously. If companies do not provide training slots, then it implies that there is no demand for the course. In this regard, demand assessment can serve as part of training slot acquisition. **Refer to appendix 2 for guidance.**

Point to note:

It is advisable to have many companies providing a few training slots, rather than one company providing many training slots. The goal is employability. One company will not employ many trainees in the end. But many companies will highly likely absorb one or two trainees that they mentored.



Step Two: During Training

This process involves identifying available training slots and onboarding trainees into the dual training class. The following points are crucial:

- Dual training class requires trainees to be affiliated with a training company. This affiliation ensures that trainees receive industry-specific mentorship. The dual training program is not open to trainees without a company affiliation.
- In the event a company cannot cover all competencies listed in the training plan, the trainee may rotate or transfer to another company.

- In order to ensure a successful training program, training companies select trainees based on their own criteria and procedures. The qualification awarding body may require entrance levels such as C+ or equivalent.
- Trainees are administratively registered in TVET institutions where the course is offered, making them eligible for government benefits such as capitation from Kenya Universities and Colleges Central Placement Service (KUCCPS), financing from the Higher Education Loans Board (HELB), and insurance cover.

Further information is available in **appendix 6**.



Step 2.1 Trainee selection process

The student selection process is a crucial step in ensuring that the dual program enrolls motivated, qualified, and committed students who are ready to pursue industry-oriented skills to kickstart their careers. After determining the number of available slots from the companies, the TVET institution can proceed with the identification of students. It is advisable to attract a large pool of applicants to allow industries to screen and select the most suitable candidates for the dual TVET program. The following steps should be followed:

1. **Advertising and Creating Awareness:** TVET institutions can utilise various advertising methods such as newspapers, local radio channels, distribution of flyers, and road shows to attract a wide range of students for the program. Additionally, some companies may be willing to advertise the program through their company websites, so the TVET institution can collaborate with them for joint advertising initiatives. It is important to ensure that the information shared on the posters and advertisements is accurate to manage students' expectations effectively.
2. **Shortlisting of Trainees:** During this process, candidates are shortlisted based on the entry requirements of the program. This involves assessing their previous academic qualifications and any other applicable criteria. The successful candidates are then required to express their interest in the pool of companies that have committed slots. The next step is to shortlist candidates per pool based on their expressed interest in specific companies and submit those names to the respective companies. A recommended guideline is to send a minimum of three candidates for every available slot to the companies for screening. However, some companies may specify the number of candidates they would like to interview, and this should be agreed upon with the TVET institution.
3. **Interview of Candidates:** Once the pool of candidates has been sent to the companies, the TVET institution should coordinate and confirm interview dates for the final selection of students. It is preferable to set aside a specific day at the TVET institution where the companies and students can meet for the interview process. However, some companies may prefer to conduct interviews at their own premises, in which case the TVET institution can make the necessary arrangements and communicate them to the relevant students. It is important to note that different companies may have different methods for selecting their students, such as oral interviews or aptitude tests. The selection process should be left to the discretion of the respective industries. To support the students, the TVET institution can organise an interview preparation session a week or a day before the interviews, as most students may lack experience in presenting themselves during an interview. This session can also cover important skills such as CV writing.

4. **Finalization and Training Agreements:** The TVET institution should collaborate with the respective industries to consolidate the final list of selected candidates and prepare admission letters for the upcoming intake. The number of candidates on the final list should match the committed slots from the companies. It is advisable for the selected students to sign a training agreement with both the TVET institution and their respective companies. The training agreement, which is distinct from an employment agreement, will outline the responsibilities of the trainee, the TVET institution, and the company during the training period. Copies of the training agreements should be filed at the TVET institution. Since most school blocks are the starting point, students can be given until the first industry block to have their training agreements signed.

By following these steps and ensuring a thorough selection process, the TVET institution can enrol students who are well-prepared and motivated to excel in the dual TVET program, fostering successful industry partnerships and supporting the students' career development.

Trainee's selection is done by both the TVET institution and the company as follows:

By the TVET institution: As part of the trainee selection process, the institution advertises its dual TVET program and markets it to attract a wide range of applicants. Once applications are received, candidates are shortlisted according to their qualifications and program requirements. Orientation sessions are conducted for companies to explain the dual TVET approach and clarify their roles in the program. Interviews and selection processes are then conducted by the companies. To ensure a thorough selection, industries are engaged to finalise the list of selected candidates.

By the company: Companies select trainees based on their own procedures, including interviews and aptitude tests. The TVET institution can assist in these activities. The company then forwards the shortlisted trainees to the TVET Institution for registration. The selected trainees then report to the TVET institution for official admission after successful placement in the company. A legally non-binding trilateral training agreement is signed by the trainee/trainees, training company and TVET institution. **Refer to appendix 6** for an agreement template, more information and more guidance.



Step 2.2 Rotation between the school and Industry

During the rotation between the school and industry in dual training, trainers at the TVET institution follow the agreed-upon training plans and conduct assessments based on examination guidelines. The first industry block follows the TVET Institutions block, during which trainees will undergo onboarding and induction sessions in accordance with the program structure of the industry. The industry floor remains a practical learning environment as in-company trainers provide hands-on training using industry-based training plans. The training schedules for different companies may vary, but when trainees return to school-based training blocks, these differences are addressed and equalised. During the dual TVET program, at least 50% of the training time is devoted to industry training, while the remainder is devoted to classroom instruction at the TVET Institutions.

Different training models can be implemented in dual TVET: Block release, day release, and front loading can all be used to alternate between training at the TVET Institution and in industry.

Block release model: Under this model, students alternate between the TVET institution and the industry in three-month intervals. For example, they may spend the first term in institution, the second term in the industry, and so on until the training period is completed. Please note that the entire training duration will vary with the KNQA levels of training and will be determined and defined by the Kenya National Qualification Framework

Day Release model: In this model, students divide their time between the industry and the TVET institution on different days of the week or for specific hours each day. For instance, they may attend training at the TVET institution on Mondays and - 3 - Tuesdays and engage in industry training for the rest of the week. Alternatively, they can study at the institution in the morning and receive practical training in the industry during the afternoon.

Front loading model: This model involves completing either the entire school-based training block or the industry training block before transitioning to the other. It is particularly suitable for shorter courses, such as a six-month program, where students can spend the first three months at the TVET institution and the last three months in industry training

Note: The selection of the appropriate model depends on factors such as the type of vocation and the proximity of industries. It is crucial to discuss and agree upon the model with the respective industries before the program begins



Step 2.3: Coordination of the training between TTI and industry

Coordination of Dual TVET: To ensure effective implementation of dual TVET, the TVET institution and participating companies need to establish a TVET-Industry Coordination Committee (TICC). The TICC serves as an overseeing body for dual TVET. During the committee's initial meeting, a chairperson and secretariat can be elected. The TVET institutions are well-positioned to serve as the secretariat and take the lead in organising the meetings. Best practices suggest that TICCs should meet at least once every quarter (about four times a year), prior to each term or industry block, with additional ad hoc meetings as required. The meetings can be held at various venues, including alternating between company premises and the TVET institution.

The coordination of the Dual TVET implementation between the TVET institution and partnering companies will be managed by the TVET institution and Industry Coordination Committee (TICC). The committee is composed of the following members:

- Training institution: Up to five representatives, including representatives of institute management and some Dual TVET trainers
- Partnering companies: At least one representative per partnering company
- Industry association: One or two representatives from an industry association aligned to the vocation profile being offered, e.g. Kenya Association of Manufacturers for Industrial mechatronics
- Trainee: A representative of trainee's representative
- Advisory assistance: Up to three representatives from government agencies, such as TVETA, TVET CDACC, and KNQA.

Point to note: The above list of members is a suggestion. At the minimum should be the TVET institution and the partnering companies, clustered per vocation (in the event the institution is offering more than one Dual TVET course).

The TICC will coordinate and monitor schedules between TVET Institutions and workplaces and make delivery adjustments as needed. It also maintains the operational quality assurance. The TICC furthermore provides a platform to exchange information on progress, successes, and challenges, as well as possible solutions. **Please find the ToR for the TICC and further guidance in appendix 7. Find also the monitoring tool that will be used in Appendix 9**



Step Three 3: Post-Training



Step 3.1 Assessment and certification

Dual TVET trainees are assessed and certified based on specific criteria aligned with Competency-Based Education and Training (CBET) principles. As a result, the evaluation of trainees' competencies meets the required standards and is comprehensive. The assessment and certification steps include:

Step 3.1.1 In Dual TVET, competencies are assessed and certified based on Competency-Based Education and Training (CBET). Comprehensive assessment and certification processes include methods. Assessment criteria are transparent, clear, and aligned with industry standards. Competency based assessment and certification relies heavily on the presentation of a Portfolio of Evidence (PoE) proving that the trainee is indeed competent.

Step 3.1.2 Dual Certification: Trainees can receive dual certification for completing the assessment. A qualification awarding institution issues the first certification, acknowledging the trainees' competence and completion of the program. During practical training, trainees may receive a certification from the industry at the company's discretion. In this regard, graduates who have successfully completed the program will particularly benefit from this dual certification, which highlights their practical experience and skill development. As a result of dual certification, graduates demonstrate both theoretical knowledge and practical skills to potential employers. Their skills are comprehensively validated, enhancing their employability and competitiveness on the job market.

For graduates who have completed the program, company certification emphasises their practical training. Certification demonstrates the company's endorsement and recognition of graduates, enhancing their credibility and demonstrating their ability to contribute effectively in a professional setting.

Dual Training ensures that trainees' competencies are thoroughly evaluated and acknowledged by both the qualification awarding institution and the industry by aligning the assessment and certification process with CBET principles and incorporating dual certification. As a result, graduates' confidence is boosted, their career progression is facilitated, and their chances of finding a job are increased.



Step 3.2: Transition to the labour market

A smooth transition from education to employment, especially for recent graduates who lack prior experience with job search and work readiness, can be challenging. This step helps facilitate a smooth transition for Dual TVET graduates.

Fresh graduates, particularly youth, require specific assistance to facilitate their early entry into the labour market and mitigate their risk of unemployment. A variety of components can be included in "life skills" training, including digital learning, self-presentation training, interview preparation, and CV writing.

In addition to technical skills, the "life skills" training provides graduates with important employability skills, such as effective communication, problem-solving, teamwork, and adaptability. In addition to contributing to their professional development, these skills are critical to their success on the job market. In addition to technical skills, the "life skills" training provides graduates with important employability skills, such as effective communication, problem-solving, teamwork, and adaptability. In addition to contributing to their professional development, these skills are critical to their success on the job market.

This training in "life skills" is provided by TVET institutions. Graduates are provided with guidance and support in developing their digital literacy, refining their self-presentation skills, preparing for job interviews, and creating professional resumes or CVs. The TVET institution improves graduates' job search capabilities and their chances of finding a suitable job by imparting these skills.

Appendices

1. Checklist for Institutional Capacity to Deliver Dual Training Courses (identify courses which can be delivered).
2. Communication guide to reach out to private sector on demand assessment for identified courses and acquisition of training slots
3. Guidelines, templates and checklists on conducting a round table/awareness meetings of several companies and BMOs.
4. Guidelines, templates and checklists for companies including in-company mentors / trainers.
5. Guide, sample and template on development of training plans for the TVET institution and companies.
6. Guide on trainee selection, template and sample for training agreement (trilateral).
7. Guide and ToR for the TICC establishment and operation.
8. Table with roles of TVET institution, companies, trainees, BMOs, regulating and awarding agencies and the Ministry of Education.
9. Monitoring and evaluation template for dual training
10. Important considerations for dual training

