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STANDARD UNIT TRAINING  
FOR THE BUILDING AND CONSTRUCTION SECTOR IN TANZANIA

**MAIN REPORT**

ON BEHALF OF THE  
VOCATIONAL EDUCATION AND TRAINING AUTHORITY (VETA)  
GERMAN AGENCY FOR TECHNICAL COOPERATION (GTZ)

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## **Introduction**

The structure of this report follows the Terms of Reference of the consultant (see Annex 1, Terms of Reference), which are based on the already introduced Action Plan for the planned Builder's Training, as updated during the mission (see Annex 9, Action Plan).

During the mission from 16 - 31 October 1999, all five pilot projects were visited and discussions were held with directors, instructors and VETA representatives. For more details of the programme of the mission, see Annex 1, TOR of consultant and Annexes 2 and 2.1, Itinerary.

The introduction of Standard Units creates a modular training structure which is able to meet the socio-economic needs of all target groups in Tanzania. By sequencing of state-recognised Standard Units, formal training leading to state-recognised certificates (Grade III, II and I) can grow out of original non-formal training for builders. The emphasis on results does not exclude any target group, which is of key importance for the development of a demand-oriented training structure. The original approach of the Builder programme, to have the new VET system tested first in practice, has special meaning. This implies a particular responsibility for the Builder Pilot programme to produce excellent results. It is especially important to have thorough preparation of the programme, including the implementation of long-term Marketing Activities which require time.

## **1. Development of the Curricular Outline**

### **1.1 Curricular outline and Standard Units**

The draft Curricular Outline submitted earlier (see Mission Report of D. Moll, October 1999) was adjusted to take into account regional requirements and new knowledge. For example, the Entrepreneurship skills training was enriched by adding elements on Bookkeeping, Marketing and Credit and Loans. The Painting training course remains somewhat unclear. It has to be decided whether a Builder (Fundi) course will include painting or not. A final adjustment to the Curricular Outline should be presented at the TLE Workshop planned for January 2000.

It was agreed that the Unit Standards for the Builder course would be developed according to the VETA model. The Unit Standards provide evidence requirements and assessment guidance in addition to performance criteria and range statements. The assessment

guidance is in particular an essential information of assessment methods and assessment contents. To reach special target groups and to take into account the self-employment orientation of the Builder programme, assessment criteria will have to be developed principally on the basis of training results, and less on the technology used and the academic knowledge gained. Thus the development of Unit Standards reflecting these requirements takes on great importance.

## **1.2 Formats of the Teaching and Learning Elements (TLEs)**

The formats for the Teaching and Learning Elements were discussed with the curriculum experts from VETA as well as with Danish experts. The formats should consist of:

1. Cover page;
2. Exercise/Lesson Preparation Sheet indicating objectives, duration, equipment, tools and materials, teaching aids, reference materials and trainees preparation;
3. Presentation Sheet of Teaching Steps including illustrations/instructional points and use of teaching aids;
4. Information Sheet (hand-out) for the trainee.

For further details see Annex 3.1, Formats of TLEs and Annex 3.2, Explanations of TLEs.

## **1.3 Assessment and certification of Standard Units**

In addition to these TLEs to be developed at a workshop in January/February 2000, Unit Standards Assessment Sheets for the envisaged final assessment at the end of each Standard Unit need to be drawn up.

These assessment tools should be developed by the end of the first quarter of 2000 (for further information see Annex 9, Action Plan).

Consideration was given to having the instructors evaluate the trainees on the basis of 50% through the ongoing evaluation and 50% through final examinations. This would however exclude external applicants who could only take the examinations. Therefore the evaluation of trainees should be done only on the basis of final examinations, and to ensure objectivity and comparability, with the involvement of external assessors appointed by the Regional Directors (for a proposal for financing assessment procedures see Chapter 4, Financing Builder training). Should the Regional Directors be given other wide-ranging tasks in connection with

decentralisation, consideration could be given to making these assessors part of the regional Trade Advisory Groups.

The intention to have records of successful completion for each unit kept in the trainee log book<sup>1</sup>, and to issue a certificate of completion after each module, is basically a welcome initiative. Given the various target groups for the Builder Programme and the flexibility of the Builder training that will mean less implementation of entire training modules. In favour of training and further training that is more in the nature of short courses such as Standard Units, after each unit there should also be a certificate issued directly by the Training Centre and the external assessor acting on behalf of the Regional Director. This certificate must be developed and printed by the end of the first quarter of 2000, so that at the end of April they can be issued to the first graduates of the Builder Course (see Annex 9, Action Plan).

#### **1.4 Use of existing instructional materials**

For the drawing up of Teaching and Learning Elements (TLEs), as well as the clustered Standard Units, use should be made of the training materials that have already been developed. This includes the materials of the Morogoro Production Group, ILO (Modules of Employable Skills), and GTZ materials developed in Jamaica, among others. The following **ILO-Modules of Employable Skills (MES)** should be ordered by the project as basic material for the planned workshop for the development of instructional materials: All elements **on Building and Construction**: Safety, tools and equipment, drawing and sketches, masonry, concreting and carpentry. In addition, VETA should provide a whole set of building and construction instructional materials produced at the Morogoro TTC together with SIDA.

All of these instructional materials should be available to the project by mid-January 2000, so that they may be used in the workshop on the development of Builder TLEs, planned for the end of January (see Annex 9, Action Plan).

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<sup>1</sup> VETA, Information Manual: The New Vocational Education and Training System, August 1999.

## **1.5 Organisation of workshop to prepare the Builder's training courses**

This Workshop should be a major planning event to take place between 24 January and 4 February 2000 in VETA's Dar es Salaam conference room.

In addition to the final agreement on the Unit Standards and Curricular Outline, the Workshop should also develop the TLEs for the Builder course. For this purpose, the Project should invite experienced VETA instructors, all Builder instructors<sup>2</sup> from the pilot centres, VETA curriculum experts and entrepreneurship experts (see Annex 4, Workshop participants/TLE Development Group). To ensure good quality training materials, it is recommended that an additional construction consultant who has experience in developing TLEs be included as a resource person.

The TLEs should be developed in English and should complement the structure and content of the formal training courses. Thereafter they should be adapted to academically weak target groups and should be illustrated, before being translated into Swahili.

During the last two days of the TLE Workshop, on an additional workshop remaining difficulties should be taken separately in turn (for instance, number of applicants, fees, marketing activities etc.) and solutions worked out (see Annex 9, Action plan). Workshop participants of the 2nd Workshop should include the four Regional Directors from the pilot areas, all Managers/Principals of the pilot centres and national VETA and project representatives.

## **2. Identification of Pilot-Vocational Training Centres, qualification and motivation of personnel**

Two additional centres were added during the mission to the three selected in the previous mission, which were:

- Bandari College,
- Montfort Technical Training Centre (both in Dar es Salaam),
- Hai Vocational Training School (Kilimanjaro Region).

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<sup>2</sup> In addition to the masonry instructors, two carpentry and two painting instructors should be invited, to help develop the Painting and Formwork TLEs.

The two new pilot centres selected were:

- Don Bosco Youth Training Centre (Iringa)<sup>3</sup>; and the
- RVTSC in Mbeya.

All five centres have, over many years of training experience, shown that they have well-qualified instructors and good management capacity. The management capacity is important, since understandably the instructors cannot always meet the higher programme requirements, and their optimal placement has to be realistically assessed by the management and if necessary arrangements made for additional instructional personnel (in entrepreneurship training, credit and loans etc.). Unsatisfactory training harms the reputation and the sustainability of the Builder programme and - in the long-run - raises questions about the applicability of the pilot programmes to other skill areas and training centres. The Management of the pilot centres bears a high level of responsibility that should be supported as much as possible by project activities. In this regard, the "January workshop" should focus on this relationship so that problems can be identified and necessary project inputs made operational (see Annex 9, Action Plan).

Another management task is the development of an incentive system for measures involving participating VTC staff, to the extent that they are involved in additional programme work. This means that in particular evening training, training on weekends and holidays should also be evaluated. Staff, and especially instructors, should be motivated in a way that does not endanger the running of the "normal" programme.

### **3. Preparation of Pilot VTCs**

#### **3.1 Development of the marketing strategy**

Various marketing strategies were examined and compared. It was clear that the marketing of the Builder programme needs to be done in **two consecutive phases**.

**1st phase:** During the pilot phase, publicity should be aimed principally at the communities and target groups in the area of the 5 pilot centres. This approach could, if the project budget permits, be supplemented by an overall national information campaign for VETA to present its new Unit Standards concept.

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<sup>3</sup> The Management of the centre must be determined for purposes of cooperation. This decision should be taken at the latest by mid- November 1999.



For the target groups of the pilot centres, an appropriate strategy should be adopted to use radio programmes, leaflets and posters. Leaflets and posters should be distributed in public venues by the pilot centre staff (in markets, churches, party offices, bus stations, etc.). The advantage of large bill-boards in front of the pilot centres was discussed, but the cost of this should be further explored. Other centre-based events, such as an Open House Day, information stands at the markets, speeches to clubs and community groups, etc., should of course be promoted.

With the two marketing firms interested in submitting bids, the following time-frame for the publicity campaign was discussed:

Tendering of offerings by 15.11.1999;

Awarding of contract by the end of November 1999;

Implementation of the campaign from the middle to end of December 1999 for up to 3 months;

Analysis of the marketing results at the beginning of February 2000, planned at the January Workshop together with the managers and principals of the pilot centres and afterwards - if needed -

Determination of further marketing activities.

**2nd phase:** A broader national campaign that would extend the concept to other skill areas and training providers should be planned in detail once it is clear that the approach taken for the Builder training has achieved the desired results. Such a campaign should be done on a large scale involving television, radio and the print media.

The local and later the national campaign should stress the possibilities offered by the new VETA approach. For example, this would highlight:

- modular, short-term training and further training,
- no need for academic entrance requirements,
- training according to individual needs,
- orientation towards self-employment and entrepreneurship,
- multi-skilling opportunities through flexible training offers,
- national recognition after short training courses (Standard Units),
- affordable fees because of short but intensive training sequences,

- partial reimbursement of fees for successful trainees (see chapter 4, Financing of training, 4.3, VETA's contribution),
- etc.

To reach the target groups, the campaign should be waged in Swahili (posters, leaflets, radio spots, etc.).

## **3.2 Construction of a training shelter for the Hai Vocational Training School**

### **3.2.1 Design**

The building design presented (see Annex 5, Workshop design, Hai VTS) was adapted to permit self-help measures. Thus wooden rafters would replace steel rafters and concrete pillars would be used instead of steel pillars.

### **3.2.2 Materials and costs**

The training shelter should be constructed with self-help. The materials costs amount to 11.39 million Tshs (c. USD 15,000), with the rate of 50,000 Tshs per m<sup>2</sup> definitely economical<sup>4</sup> (see Annex 6.2, Calculation of training and building materials).

## **3.3 Demand for tools and training materials**

The cost of the Builder course was calculated on the basis of the pilot centres. For all 5 centres to train 10 trainees,<sup>5</sup> the cost for tools is 1,5 million Tshs and for training materials it is around 2.5 million Tshs. Thus the cost of tools and materials is altogether 20 million Tshs (5 centres x 4 million Tshs = 20 million Tshs (USD = 25,000 Tshs)). For further details see Annexes 6.1, Calculation of tools and 6.2, Calculation of training and building materials.

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<sup>4</sup> This corresponds to c. DM 100,-. In Germany, the cost of a m<sup>2</sup> for a comparable building would be c. DM 1,500,-

<sup>5</sup> Support for tools and materials in the centres is limited to 10 trainees, whose costs could be covered. Additional tools and materials needed for a larger group of trainees should be covered by training fees.

### **3.4 Upgrading of instructors of Pilot Centres**

#### **3.4.1 Identifying training needs**

All instructors who participate in pilot activities should take a basic upgrading course, which should have two main themes::

- Vocational pedagogic;
- Entrepreneurship skills.

The major contents of the vocational pedagogic part should be:

- Training methodology (preparation, implementation and follow-up of training exercises;
- Four-step and five-step (project) training methods;
- Interactive learning;
- Assessment methods of training results;
- Identification of training needs;
- Development of adapted curricula (DACUM (task) method).

The major contents of the entrepreneurship skills should be:

- Building regulations and permits;
- Calculation of time and labour;
- Calculation of materials and costs;
- Marketing;
- Micro-financing possibilities for small entrepreneurs;
- Contracts of employment;
- Payment and billing;
- Simple bookkeeping;
- Accident prevention and safety;
- Supervision and human relations.

(For further details see Annex 7, Tender document for further training of Builder programme instructors). The planned upgrading course should last approximately 1,5 - 2 weeks (3 days

for pedagogic and 5 days for entrepreneurship) and the implementation should take place between 15.12.1999 and 08.01.2000, i.e. during the normal holidays for the centres.

In addition, tailor-made upgrading measures could be organised between the "January workshop" and the beginning of the training programme in April 2000. These upgrading measures will, based upon surveys in the pilot centres, include in particular natural stone shaping and laying and - if needed - painting. The specific contents and implementation procedure should be determined during the above-mentioned workshop.

### **3.4.2 Identifying training institutes**

Tender documents will be drawn up for the identification of an institute that could carry out general further training for instructors in pedagogic and entrepreneurship. Bids should be solicited from the Arusha Technical College and the Morogoro Teacher Training Centre, and should largely follow the training content outlined under point 3.4.1. In addition, the bids should indicate the timing and costing of the training (for further information see Annex 7, Tender document).

## **4. Financing the Builder Course**

In addition to the contribution of the VETA/GTZ project (tools, instructional and building materials, instructor upgrading, etc.) to the pilot phase, resources will be needed for the implementation of the Builder course to cover the running costs and future capital costs. Three suggestions may be made to address this.

### **4.1 Income generation**

It could be observed from the visits to the various training centres in Tanzania that possibilities for income generation activities were far from exhausted (although the Don Bosco YVTC covered its own running costs (!), the income from its building workshop was marginal). Setting up small-scale production lines, implementing small-scale construction projects, etc., could lead to a marked increase in additional income. Another positive side effect of income generation is that it brings training closer to the world of work.

## **4.2 Training fees**

Financing should come mainly from training fees. For the entire Builder course (220 training days in a year) the fees would be 110,000 Tshs. Assuming average monthly fees per trainee of 10,000 Tshs, running costs could be covered by having more than 10 trainees enrolled at one time in training and/or further training.

The level of the fees was discussed with several Regional Directors, managers and instructors of the pilot VTCs (for details see Annex 8, Possible training fees). The basis for calculating the average fees was information in the National VET 1999 catalogue for 470 VTCs. For a one-year masonry course, nation-wide the fees range from 100,000 to 150,000 Tshs. The VETA centres, charging 30,000 Tshs, are the exception, and their fees should be raised to 90,000 Tshs.

Given this background, it appears that the fees for the Builder course appear reasonable, especially since the training offered is clearly more extensive than for masonry. They are only indicative, however, and would need to be fixed by the VTCs themselves. Training and further training for socially disadvantaged groups could be subsidised.

## **4.3 VETA's contribution**

Since VETA is coordinating all training activities in Tanzania and performs quality-control, it is highly recommended to reward training providers (VETA's centres, private VTCs, training companies, etc.) for successful training. In addition to the income from fees paid by trainees, VETA could pay an amount representing 50% of the fees. From this 50%, 30% could be incentive payments to motivate the VTCs. The remaining 20% could be reimbursed to trainees upon successful completion of Standard Units. This could be for designated purposes (purchase of tools, share for micro credits, etc.), but this would need further investigation.

The costs that VETA would incur to pay for successful training and further training measures undertaken by other providers would lie clearly under the training costs of the VETA centres. This approach would also provide the opportunity to reduce the immense subsidies for VETA's own centres. It would also promote the self-reliance of the VETA VTCs and of the RVTSC, while also moving towards equality of treatment for various training providers. The approach also offers the possibility in the medium-term to offer incentives to training companies, an idea that should be investigated by the project.

With this "instrument," VETA could steer training activities to training needs. Payments could be increased for skill areas in demand, and reduced for skill areas with limited employment opportunities. Even particularly efficient types of training (for example dual/cooperative training) could be promoted or discouraged (school-based training) by such payments.

A decision should be made by VETA's on the proposal to provide payments for successful training activities, before the end of 1999, so that there will be time to implement the idea with the beginning of the Builder programme.

#### **4.4 Financing Standard Units assessments**

To avoid possible misuse of the payment option, assessment activities using external assessors paid by the Regional Directors should be undertaken. The cost of this, for instance 5,000 Tshs for a Standard Unit assessment, would have to be collected in fees from the centres and paid to the coordinating Regional Director's office. This would somewhat reduce the VETA subsidy of 30,000 Tshs, but would produce comparable assessment results.