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**NON-FORMAL TRAINING ACTIVITIES 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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## 1. Introduction and TOR

The goal of the missions was to produce model training course modules in the skill area of Unfinished (Frame) Building (job profile: Builder). The modules are to reflect and meet the expectations of the different target groups and training providers.

The anticipated missions results are:

- to carry out appropriate needs analysis,
- to draw up a modular Curriculum, and
- to investigate the quality of existing Teaching/Training and Learning Materials (TLE).

For these purposes, during a first mission from 19 June - 6 July 1999,

- Construction firms and sites in urban and rural areas were visited and discussions held with construction contractors, and public and private training providers,
- existing Training Regulations (Unit Standards), Curricula and Teaching and Learning Materials were analysed, and a workshop with building curriculum officers, instructors and representatives of construction firms was held, with the goal of determining the content of training for the occupations of Builder.

In addition, the consultant was to indicate:

- how training is to be organised in cooperation with the private sector, and
- how the training could be more efficient as regards quality and quantity.

It was decided to elaborate the latter in a separate concept paper<sup>1</sup>.

In the briefings at VETA HQ in Dar es Salaam, the new VET system was presented to the consultant and it was agreed to test this concept in the workshop in Mbeya on development of training profiles for the category of 'Builder'.

The experience gained there was presented and discussed in a regional workshop in Dar es Salaam on the introduction of the new VET system.

Between the missions, the consultant developed a

- curricular outline for the training programme of the 'Builder' according to the results and information obtained during the first mission and workshop;

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<sup>1</sup> See Moll, D.: Observations and recommendations on structure, implementation and financing of vocational training in Tanzania/Draft/ Sept. 99.

- proposal regarding possible formats on Teaching and Learning Elements (TLEs).

During a second mission from 28 August - 16 September 1999, the curricular outline (see Annex 3) and the proposal regarding formats (see Annex 4) was presented to VETA representatives and instructors and other relevant building institutions and/or persons.

For more details of the programme of the first and second mission, see Annex 1, TOR of consultant and Annexes 2a and 2b, Itineraries.

## **2. VETA's new training concept and non-formal training**

The Tanzanian VETA is in the process of improving the effectiveness of training courses to respond to labour market and social demand. The earlier fixed curricula are appropriate mainly for long-term, unitary training courses that are most often attended by young school leavers.

The goal of the new VET concept is to have modular training that would meet workplace requirements for wage and self-employment and permit interruptions of training between training sequences (modules and Standard Units). The latter is a big advantage for socially weak target groups. Alongside the traditional long-term courses for the target group of school leavers, short-term training courses can also be offered to other target groups.

Reaching out to socially disadvantaged groups (unemployed, retrenched, trainees without or little academic qualifications, independent workers, part-time workers, etc.) will mean removing the academic entrance requirements for the planned non-formal courses.

Graduates who have completed the modules should have been equipped with employable skills. The same applies to shorter training sequences, Standard Units, that are together to form the Training Modules. The proposed structure calls for an assessment after implementation of the required exercises in each Standard Unit. Standard Units can in turn be composed of several Teaching and Learning Elements (TLE), in which specific exercises will be prescribed (see graphic presentation (Chart 1) in Annex 3, The proposed training profile of a 'Builder').

At the workshop to develop a training profile for a Builder, the new VETS concept was examined from a practical viewpoint: the workshop participants listed the necessary exercises (Teaching and Learning Elements (TLE)) and then clustered them in Standard Units and modules.

The desired system of Standard Units is designed to meet the training needs of various target groups in the informal sector. This means that it is appropriate for further and upgrading requirements of semi-skilled, skilled workers and small contractors (fundis) (see Chart 3 of Annex 3, Examples of training and upgrading possibilities for different target groups) as well as for Basic and Block Training for unskilled target groups (see Chart 2 of Annex 3, Non-formal basic and block training possibilities for unskilled trainees).

The Standard Units lend themselves to serve as assessment tool, as intended. However, at least in the building crafts sector, national training standards should, because of the special characteristics of non-formal training, be adapted on a regional basis within the country (different work methods and construction materials).

### **3. Non-formal training in the construction sector (the 'Builder' example)**

#### **3.1 Developing a curricular outline**

A draft of a curricular outline on the basis of the already elaborated Training profile of a Builder was developed, based on the identification of the main tasks of such a work person and VETA's new VETS.

In Tanzania, small-scale building projects in the informal sector most often involve four multi-skilled craftspersons (Builder (self-employed mason), carpenter/joiner, plumber and electrician). Further specialisation is found only in large urban centres, particularly Dar es Salaam.

A curriculum for the non-formal training of a Builder must take into account both the varying levels of skills and knowledge of the persons from different target groups who are interested in this training and the varying market demands (customer). Thus it cannot be part of a long-term course, but must be flexible so as to meet different needs. A curriculum for non-formal training can thus only be a curricular outline - or better a list of exercises according to the workplace requirements - that will need to be modified continuously according to (local) framework conditions (for more information see Dr. S. Adam, Application of a Guideline for Curricular Work and the Development of a Curriculum Concept for Food Processing in the Informal Sector in Tanzania, March 1998).

The training programme for the Builder course will be determined by the applicants. In this way, the market demands and customer demands for the various parts of training will be

seen automatically. Parts of the course that have attracted no applicants will not be offered. This will mean that labour-intensive revision of the curriculum will not be necessary, and that responding to technological change and to local characteristics of building techniques and materials will be taken care of by simply exchanging TLE s.

The Training Profile developed in the workshop (Determination of important training exercises, Standard Units and Modules (see Chart 1 of Annex 3, The proposed training profile of a 'Builder')) will not apply in its entirety to most trainees. The planned training structure permits further training and upgrading in short sequences, which is better for socially disadvantaged target groups given the socio-economic framework conditions. Instructors in the Vocational Training Centres (VTCs) visited by the mission reported that once trainees obtain enough skills, they leave training and start working. Self-employment seems to be more important than the formal certification.

Each Module and Unit of the developed curricular outline should focus on direct employability, and each TLE on improving the living that can be made following the training.

The curricular outline developed should - according to VETA curriculum structure - consists of rationale, course aims and general objectives, course concept (philosophy) and structure, entry requirements, certification and means of awarding certificates, trainee assessment, course evaluation, training methodology, resources used and the syllabi for trade modules and related subjects.

The major aims mentioned in the outline are:

- to cover the training demand of the labour market and different target groups, and
- to improve their possibilities for employment within the formal and informal sectors.

The general objectives of the course are:

- to provide masonry skills together with basic formwork and bar bending skills,
- to improve the quality of job performance, and
- to enable graduates to become self-employed through provision of entrepreneurial skills.

As major target groups are identified:

- Unemployed, retrenched persons and school drop-outs,
- Self-helper, part-time workers and helpers, and

- Skilled employees, craftspersons and self-employed contractors and operators.

For further details see Annex 3, Curricular outline for (Frame) Building, Draft for 'Builder's' Training.

The training structure is determined by the different training demand of the target groups. While demand-oriented basic training in blocks for unskilled persons is covered by four modules, i.e. walling (1) , concreting (2) and partly finishing (3) and entrepreneurship (4), further up-grading and tailor-made training courses would be structured by combining shorter training sequences (Standard Units (SU) and Teaching and Learning Elements(TLE)).

The duration depends on the training demand of the individual trainee. The entire training course for a builder lasts 240 training days (> 1 year).

### **3.2 Developing instructional materials**

The Production Group to produce Teaching and Learning Materials, established with the assistance of SIDA, has up to now developed curricula for 6 occupational areas (carpentry/joinery, electrical installation, masonry, machinery fitting, motor vehicle mechanics, welding and fabrication). In addition, around 200 Teaching and Learning Elements (Units) have been produced. These instructional materials do not entirely fit in the modular-based VET system and need to be adapted to it.

The infrastructure and staff of the Production Group should be used to produce the TLEs for non-formal training. The organisational approach of developing these materials at a workshop should be retained to the fullest extent possible.

An adaptation of the Units must be undertaken as regards their structure (so that they fit into the new modular-based structure of VET), content (practical orientation) and language (TLE in Kiswaheli, or bilingual with English if desired).

The consultant was asked to develop possible TLEs formats and presented his recommendations at a joint meeting together with VETA, DANIDA and GTZ experts. At that meeting it was recommended that the finalisation/adaptation of the curricular outline and the development of instructional materials should be done on a 2-week workshop in Morogoro TTC at the beginning of the year 2000.

For this purpose a TLE Development Group has to be appointed. Besides curricular experts and experienced instructors, responsible instructors from selected Pilot centres and - if needed - technicians from the Building Research Unit (BRU, Dar es Salaam) with experience

in the development of instructional materials should join in the exercise. Backstopping activities should be foreseen by the Project.

Instructional materials already developed will be used to the extent possible. This includes the materials of the Morogoro Production Group, ILO (Modules of Employable Skills), GTZ materials developed for projects in other countries such as Jamaica, Tanzanian documents, etc.

The instructional materials will be adapted to match special requirements of envisaged target groups, common regional building techniques and VETA's Unit Performance Standards. If necessary, some few elements on specific building techniques and materials and entrepreneurship skills would have to be additionally developed. It was recommended that - in addition to the cover page, the lay-out of which has to be decided upon - that the contents of the TLEs should focus on four major points:

1. Preparation of exercises and lessons for (Frame) Builder's training, which consists of objectives, duration, kind and amount of equipment, tools and building materials, teaching aids, reference materials and preparation (motivation) of trainees;
2. Presentation of teaching/training steps including technical information for the instructor, illustrations and major instructional points and information about teaching aids to be used;
3. Information sheet (hand-out) for trainees; and
4. Evaluation of exercise/lesson (progress report).

For further details on format recommendations and explanations see Annex 4.

### **3.3 Identifying VTC for piloting**

Jointly together with VETA it was decided to implement ant pilot the Builder's training programme first in two regions. Because of the results of VETA's studies on skills development for the informal sector priority was given to the Dar es Salaam and Kilimanjaro regions, both indicating construction activities (especially in masonry and carpentry) that are above average. (For further details see Annex 5, Informal Sub-Sectors and Respective Activities in the Kilimanjaro region, and Annex 6, Informal Sector Activities by Sector of Arusha Region). In addition, it was decided to expand the programme in the Iringa and Mbeya regions and - once the pilot measures in these four regions have been evaluated as demand-oriented and successful - in Arusha and Mwanza.

For the selection of the pilot training centres, criteria were developed which consists in conditional ownership and existence of necessary construction workshops, with priority given to the relevance of training activities in the skill areas of masonry and carpentry and self-sustainability and capacity of the respective training centres. The main criteria for choosing the VTC were the commitment of the management, the qualifications and experience of the instructors, and the extent of activity in the above-mentioned training areas (for further details see Annex 7, Criteria for the selection of pilot training centres).

Altogether 8 VTCs were visited, of which 3 passed the selection process. These are for the

**Dar es Salaam region:**

1. Bandari College, owned by the Tanzania Harbours Authority; and
2. Montfort Technical Training Centre, owned by the Montfort Brothers of St. Gabriel;

**Kilimanjaro region:**

1. Hai Training School

It is also planned to visit two Training Centres, the Don Bosco Youth Training Centre in Iringa and the RVTSC in Mbeya at the end of October, to examine whether they could become Pilot Centres in the programme.

It must be pointed out that during the visits, a problem arose which will need to be solved.

This involves the unsatisfactory number of applicants to become masons, in spite of above-average employment opportunities and, at the same time, the high number of applicants in industrial skill areas, for whom only limited employment opportunities exist. VETA would be well advised therefore to become active in career guidance.

In addition, the number of applicants for the courses offered by training providers, which must cover their costs, is considerably smaller for the subsidised - and thus to some extent oversubscribed - VETA courses. In the medium term, VETA should introduce an incentive system to provide incentives for good quality training initiatives outside of VETA. As noted in the Interim Report, given the limited means of VETA, German financial cooperation (FC) could promote private training initiatives in the meantime. The Tanzanians might consider submitting a proposal for this for discussion in the intergovernmental negotiations this year.

Furthermore, to strengthen VETA's Plan, an information network is to be created that would mean that trainees not taken on by VETA could be placed in other VTCs.

It is of particular interest that according to commonly opinion the occupation of mason is learnt on the job, with no training centre needed. Although this is sometimes seen negatively,

in the long run this is a positive aspect, since it offers a particularly important opportunity to structure cooperative training through the project. On through such cooperative measures will it be possible to improve what Tanzania can offer in terms of training. The analysis now being carried out by the project on traditional training will provide the data needed for a pilot training programme. One part of the questionnaire probes the willingness of non-formal operators to participate in a cooperative training programme and identifies the conditions they would require to do so.

### **3.4 Preparing the selected VTC**

#### **3.4.1 Provision of equipment, tools and training materials**

The project should assist by equipping the VTCs with training materials, tools and simple equipment which are not available in the VTC. The type of tools and equipment and their specifications are to be determined for each Standard Units and TLE. The list of tools and materials should be fixed once it is known which training sequences are in demand.

#### **3.4.2 Marketing the training courses**

In addition, the new concept (demand-driven and tailor-made training, certification after each Standard Unit, etc.) and the new training options (basic training by using modules, short-term training by using parts of modules, Standard Units and TLE) will be announced to the communities (marketing). Advantages of the approach will be explained by the responsible VETA officers at seminars and public events. Public relations activities will be planned and implemented.

#### **3.4.2 Training of instructors**

The approach of leaving it up to the market and to customers to decide which training sequences should be implemented requires the instructors to have a new perception of their role -- that of facilitator rather than teacher and instructor.

The richness of the planned training exercises and lessons could mean that it will necessary to engage external training staff, since the requirements will be too high for a single instructor to meet. This calls for flexible management and a sufficient budget for each training institution.

If the quality and quantity of what the national system can offer is to improve, it appears urgent for VETA in the long-term to have the funds to support such training initiatives.

## **4. Further steps**

In the final discussions with representatives of VETA, DANIDA and the GTZ CTA during the first mission, it was proposed that an Action Plan should be embarked upon (see Annex 8, Action Plan and further steps for developing a Builder (Fundi) training pilot exercise).

### **Activity 1: Developing a curricular outline**

Up to now the Activities, 1.1, Identifying main tasks of a Builder, 1.2, Structuring Builder's training according to new VETS, 1.3, Developing a curricular outline and 1.4, Developing a sample format for TLEs, have been completed. By the end of October 1999, VETA will need to decide what the remaining TLE formats should look like (1.5, Deciding on TLE formats), whether the proposed Unit Standards (Activity 1.9) are acceptable and can be certified (Activity 1.10, Developing Standard Units certificates) . For Activity 1.6, Founding a TLE Development Group, VETA is asked to take the corresponding steps. Once the Development Group has been established, Activities 1.7, Collecting instructional materials and 1.8, Adapting and producing TLEs, can begin immediately. The setting up and content of quality control should follow in a seminar to be held in January 2000, during which, if needed, a final checking of the TLEs could be done through the project. They could then be produced in the VETA printing school. At this seminar the VTC instructors who have implemented the Builder Training should also be made familiar with the TLEs. (For further details see Annex 8.1, Proposed action plan for the development of a curricular outline for the pilot 'Builder (Fundi)' training).

### **Activity 2: Identifying VTCs for piloting**

The corresponding Action Plan as well as Activities 2.1 and 2.2, Proposing and Selecting VTCs for piloting the Builder training in the Dar es Salaam and Kilimanjaro regions, was completed during the second mission. In the final consultations on the results of the mission it was decided to include centres in the Iringa and Mbeya regions in the programme. It should be investigated whether the Don Bosco centre in Iringa and the RVTSC in Mbeya are ready to

take part in the programme (For further details see Annex 8.2, Proposed action plan for the identification of VTCs for the pilot 'Builder (Fundi)' training). It would be an advantage to include a VETA centre as a programme partner alongside the three private and one parastatal training centre.

### **Activity 3: Preparing the VTCs**

For Activity area 3, Preparing the selected VTCs, the organisational steps were discussed and decided upon. A Marketing Strategy (Activity 3.1, Marketing the training courses) is to be launched together with the selected VTCs. Events in surrounding communities, printing and distribution of posters and leaflets, and other forms of press and radio publicity for the new training offered are to be planned and implemented.

Once the marketing activities have been completed, and it becomes known how many applicants have shown up for which training sequences, the necessary tools and consumable materials, which will be needed for real projects, can be defined and obtained (Activity 3.3, Analysing the need of tools, equipment and materials). The Hai VTC is an exception, since it has only a construction workshop that is too small. It is recommended that building materials be made available for the construction of an additional simple training shelter with a store that can be locked. Design and material calculation should be done by the consultant together with the Hai VTC instructors. The construction itself should be done with self-help (Activity 3.4, Equipping the VTCs).

Additional activities are would be Activities 3.5, Identifying training needs and 3.6, Training of instructors, and 3.7, Identifying need for external staff, and 3.8, Hiring external staff to improve the preparation of the VTCs. The final activity (Identification and Hiring of external staff) applies for all training areas that cannot be covered by the responsible instructor despite provision of additional training. This could for instance include areas such as building regulations and permit procedures, payment and billing, etc. It would in any event be better to have the Entrepreneurship course implemented by entrepreneurs (for further details see Annex 8.3, Proposed action plan for the preparation of VTCs to pilot 'Builder (Fundi)' training).

### **Activity 4: Implementing the training courses**

It was agreed that the VETA and GTZ Project, Vocational Education and Training Project, P.N. 94.2145.4-001.00, would be jointly responsible for backstopping the non-formal training

programme in the construction sector. During its preparation and implementation (Activity 4), extension possibilities for the programme (for example to Arusha and Mwanza) and possibilities for road training (Rufiji) should be analysed (for further details see Annex 8.4, Proposed action plan for the implementation of the 'Builder (Fundi)' training).