

SKILLS DEVELOPMENT PARTNERSHIP BETWEEN VOCATIONAL EDUCATION AND TRAINING AUTHORITY (VETA) AND THE INDUSTRY

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Abstract

This paper is based on the experience gained by Vocational Education and Training Authority (VETA) in providing training for the artisanal cadre of the Construction Industry. It is part of a strategy initiated by VETA to dialogue with Vocational Education and Training (VET) stakeholders to ensure the provision of effective training. Given the changing demands of the construction industry characterized by increasing use of information technology and a general rise in the skills requirements, those working in the industry ought to have rising levels of applied competences. The focus of this paper is on continuous skills development for the construction industry, taking into account of the close partnership between the industry and VETA

1.0 INTRODUCTION

1.1 The Construction Industry

- The Construction Industry in Tanzania generates 9% of direct wage employment. Its activities account for 5% of the Gross Domestic Product (GDP); contributes substantially to capital formation; stimulates performance in other sectors of the national economy, and accounts for substantial informal sector employment. The construction business market annual turnover is USD700 – 900 million (TACECA: 2006). It is further stated that even greater opportunities for employment exist in the construction sector but one of the main problems is lack of technical and managerial skills (TACECA: 2006). In general terms, the construction sector needs skills ranging from operators to managers.

The workforce of the Construction industry in Tanzania needs to possess the required skills, but more importantly the flexibility to acquire new skills needed by the changing technologies and operating environment. The level of competence, motivation and adaptability of the construction workforce plays a vital role in the performance of the industry. Improving these features of the workforce will contribute not only to increased productivity, but also increased willingness of investors to invest in the sector. Market opportunities normally generate demands for higher levels of competence for workers as well as business management skills for managers.

1.2 Training Skills

Properly structured entry-level training programmes and regular upgrading of the skills of workers and the management is essential for enhancing competitiveness. The relevance and quality of specialized learning that the working age population needs is critical in order to access employment in the construction industry to be able to perform effectively. In addition, establishing relevant work and managerial competences are vital to support the development of viable small and medium enterprises of the construction sector. Skills development programmes for the construction industry need to be sustainable and constantly improved. For example, though on-the-job training in the sector is widely spread, the methods used are mostly “sit-by-Nelly”. Apprenticeship training system (modern and informal) has been on the decline for over a decade, and while skills training institutions seem to be operating without close partnership with the construction industry. These two “systems” are responsible for generating the key skills required by the construction sector. The sector has great potential for employment generation but special training programmes needed in the construction sector are limited due to lack of partnership and cooperation resulting in those who have completed training failing to practice and acquire the needed experience.

The skills “training system” for the industry is infact complex. It consists of vocational training institutions and training at construction sites. The linkage and synergy between the two will result into the following benefits:

- Adequate access to specialized training for young people, recognition of skills acquired, portability of qualification across different sites of learning and therefore good formal learning progression possibilities.
- Training institutions and the construction industry work sites complement each other in terms of minimizing the effects of the use of outdated equipment in some training institutions. The industry will provide practical training which cannot be offered at training institutions.

2.0 PLANNING FOR SKILLS SUPPLY FOR THE CONSTRUCTION INDUSTRY

Planning for skills supply needed by the construction industry can be quite cumbersome. However, the following methods are discussed:

- Rigid planning
- Labour market surveys to capture skills requirements
- VETA labour market survey report on the construction sector

2.1 Rigid Planning

Planning for skills supply in occupations whose demand is mainly determined by demographic factors and public employment policies (health technicians and agricultural extension workers) is possible by estimating the volume of training needs in the medium term. But skills projections that are based on estimates of future growth like the construction industry, is a difficult task, and in many cases this has proved to be inaccurate. The reasons for this include:

- In a free market economy, skills are based on projections of outputs while in a centralized economy they are based on growth targets
- It is assumed that only a given combination of skills levels determined by employers will generate the target output. Yet employers are sensitive to the price of labour for different skills. If necessary they can re-organize production methods that reduce the skills content in order to lower production costs.

2.2 Labour Market Survey to Capture Skills Requirements

The other approach is to conduct Labour Market Surveys to determine skills needed by the construction industry. This method requires the collection of data on available job opportunities and the evolving skills demands. Determining the demand for skills is best achieved through country-wide Labour Market information system. The function of a Labour Market information system or Labour Market “Observatory” is to collect, process and make employment projections based on the information provided by employers of the sector.

2.3 VETA Labour Market Surveys Report on the Construction Sector

2.3.1 Labour Market Surveys

In the absence of a national skills demand information system, the Vocational Education and Training Authority (VETA) has taken the responsibility of conducting labour market surveys to determine skills demand for curriculum development process. A Labour Market Survey for the construction industry was conducted in 2007. The survey was the third in a series of Labour Market Surveys to ascertain the condition of employment in the various sectors of the economy and to deduce from that the skills demanded in the respective sectors, their type and level of sophistication and how the training programmes may suffice the demand. This is in keeping with VETA’s modus operandi of providing demand – driven training.

2.3.2 Findings of the Survey

The findings of the labour market survey is as outlined below. They constitute the following:

- Identified skills
- Zonal estimates on vacancies
- Estimates of vacancies by occupations/trades

2.3.2.1 Identified Skills

The Survey was conducted in eighteen (18) regions and involved 180 contractors employing 5,088 workers of different skills levels, sex and both in temporary and permanent terms of employment.

Certain skills were found to be used in almost all the construction industry which are however, not provided in the current vocational training programmes. The discovery is a challenge to training institutions. As a result work has begun to ensure that training in such skills is also provided for. The identified skills are provided in Table 1.

Table 1: Identified Skills

S/No.	Zone/Region	Skills
1.	South East Mtwara and Lindi	<ul style="list-style-type: none"> • Ditch excavators
2	Northern (Kilimanjaro, Tanga and Arusha)	<ul style="list-style-type: none"> • Heavy equipment mechanics • Structural draftsman • Site foreman • Hydraulic Mechanics • Pattern Makers in Civil Works.
3	South West (Mbeya and Rukwa)	<ul style="list-style-type: none"> • Pavement block Making • Chain Load Operator • Batch Plan Operator • Extractor Machine Operators • Concrete road sign maker • Culvert Maker • Plant operators.
4	Central (Dodoma, Singida and Manyara)	<ul style="list-style-type: none"> • Crane Hoisting operators • Crane Hoisting Equipment Operator boom truck.
5	Western (Tabora, Shinyanga and Kigoma)	<ul style="list-style-type: none"> • Concrete Mixer Operator • Road Construction headman (Village Gang Leader) • Materials Tester.
6	Highlands (Iringa and Ruvuma)	<ul style="list-style-type: none"> • Ditch Excavator • Scaffold artisans • Steel fixers.

2.3.2.2 Zonal Estimates on Vacancies

The vacancies in the identified zones which were not filled are provided in Table 2. The employers were found to have 498 vacancies while the estimates by VETA constituted 517 vacancies.

S/No.	Zone	Number of Employers	Number of Vacancies	Estimated Vacancies
1.	Northern	358	52	27
2	Lake	301	177	177
3	South West	298	139	204
4	Western	302	129	55
5	Highlands	209	59	54
Total			498	517

Table 2: Estimates on Vacancies

2.3.2.3 Estimates of Vacancies by Occupations

The survey found out that 14 identified occupations contained 517 vacancies. The occupations include: masonry; carpentry; plumbing; steel fixers and lathe machine operators. Table 3 provides the details.

Table 3: Vacant Posts

S/No.	Occupation	Total Vacancies
1	Masonry artisans	154
2	Carpentry	86
3	Plumbers	65
4	Steel Fixers	88
5	Electricians	22
6	Painters	40
7	Motor Vehicle Mechanics	6
8	Site Foreman	21
9	Welder	3
10	Heavy Duty Truck Driver	3
11	Lathe Machine Operator	3
12	Transportation Technician	2
13	Motor Grader Operators	19
14	Heavy Equipment Mechanics, Structural Drafts Persons and Hydraulic Mechanics`	5
Total		517

Although these vacancies are bound to change, they provide an indicative behaviour for projecting the demand. The skills in high demand at the time of the survey include Masons, Steel fixers, Carpenters, Plumbers, Painters, Electricians, Site foreman and Motor Grader Operators.

3.0 CURRENT VOCATIONAL EDUCATION AND TRAINING CAPACITY

3.1 Institutional Based Training

In 2007, there were over 900 National Education and Training (VET) Institutions in Tanzania, 21 of which are owned by Vocational Education and Training Authority (VETA). The total annual enrollment for long and short-term courses for the 900 centres in 2007 was 120,644, of which 24,055 or 20% were in VETA owned centres. Though VETA owned model centres represent approximately 2% of the total number of centres in the country, the enrollment is 2.5% of the total enrollment. It is significant that the 877 non-VETA owned centres enroll only 96,589 trainees or an average of 110 trainees per centre while on the average VETA owned model centres enroll an average of 1,145 trainees. This disparity can be due to poor capacity utilization.

Over the last decade (1996 – 2006), the VET system in Tanzania has expanded as follows in terms of institutional based training. The details are expounded in Table 4.

Table 4: Institutional Training

S/No.	Description	Year		Increase in Percentage, %
		1996	2006	
1.	Number of Centres:			
	1.1. VETA owned Centres	14	21	50
	1.2. Private, Religions, NGO Centres.	330	860	161
2	Number of Trainees: Long and Short- Term Courses:			
	2.1. VETA owned centres	3,070	18,030	490
	2.2. Private, Religions, NGO Centres	35,490	59,021	66
3	Number of Vocational Skills	36	107	200
4	Number of Girls Participating in VET	4,699	35,834	663

Institutional based training for the construction industry is summarized in Appendix I which captures VETA owned centres offering a total of 14 different courses for the Industry with an annual enrollment capacity of about 5,000 students in long and short-term courses.

3.2 Enterprise Based Training

The construction industry has great potential for both modern and traditional apprenticeship training programmes which cannot be realized due to weak links between the industry and training institutions. There is a strong justification for cost effectiveness of training through partnership between training institutions and the industry. This is owing to the fact that skills demand and training supply are strongly interwoven while the equipment and technical information needed to develop new skills is often found in the industry (construction sites). The existing learning mechanism for the informal construction sector is not adequate and needs to be developed through formal on-the-job training and organized instructional programmes by training institutions.

4.0 CHALLENGES FACING VOCATIONAL EDUCATION AND TRAINING IN THE CONSTRUCTION INDUSTRY

The challenges facing vocational and training for the construction industry are grouped into the following:

- Institutional based training
- Industry based training

4.1 Institutional Based Training

There exists a very weak collaboration between the training institutions and the industry. This had led to the trainees acquiring knowledge and skills which do not meet the requirements of the industry. The training institutions have failed to forge a conducive relationship with the industry for the purpose of continuously updating the curriculum that will enhance the production of trained personnel that possesses skills needed by the industry.

4.2 Industry Based Training

The industry needs incentives to participate in meaningful training schemes. The industry and the training institutions need to forge relationship and collaboration for the purpose of organizing meaningful training programmes that can cater for on-job-training and off-job training. This arrangement will bridge the gap of knowledge which exists between the skills delivered by the training institutions and the requirements of the industry.

5.0 CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

5.1.1 Collaborations Needs

- The collection, analysis and dissemination of information on construction industry skills needs and their implications for skills development is essential if investments in education and training for the sector have to bear tangible fruits. The responsibility for generating and dissemination of this information will be with Vocational and Education and Training Authority (VETA) in partnership with the National Construction Council (NCC).
- The publication of Labour Market Survey information would articulate decision making at different levels. At national level, it will assist VETA in prioritizing training needs to meet identified deficiencies. The result will also be of value to NCC and employers in the construction sector in highlighting trends within the sector. By identifying fast and slow growing occupations, the results will help to inform training providers about changing skills needs. Such information will be of value in assisting prospective trainees to make career choices.

5.1.2 Training Arrangements

- Apprenticeship training is a mechanism to facilitate the linkage between structured learning at a training institution and work experience in order to obtain recognized qualification.
- Apprenticeship that addresses the “how” of training and will very much depend on close cooperation between VETA and the National Construction Council. The apprenticeship system must be responsive to skills needs and hence, must keep in pace with the changing operating environment. This type of training should be accessible to both the formal and informal sector employees and enterprises.
- Structured learning at the Vocational Education and Training (VET) Institutions will consist of both basic and specialized training. Work experience needs to be related to the structured learning and prepare the learner for competence assessment. The practical training can take place at construction sites or be spread across several construction sites. Small construction enterprises can collectively and in a structured manner provide a wide range of specialized practical training to apprentices.

5.2 Recommendations

5.2.1 Design and Implementation Preparations

The Vocational Education and Training Authority (VETA) and National Construction Council (NCC) should form a partnership for skills promotion and development. The partnership should be based on close co-operation and a preparatory phase be initiated before taking off. The preparations will include equipping providers to be able to provide responsive training, preparation of trainers and assessors, design of apprenticeship modalities and assign responsibilities to VETA and NCC, establish work experience opportunities and database development.

5.2.2 Delivery Issues

- Apprenticeship training requires the fulfillment of all the relevant training components; including practical and work experience training. Where there is no work experience, there will be no apprenticeship.
- The work experience may be at a single worksite, at a cluster of worksites or in a development project provided that the learning outcomes are achieved. The possibility of “group training schemes”, where groups of construction companies could be encouraged to come together and provide training should be explored.
- The institutional training component for apprenticeship should be close to work experience component for the purpose of promoting best learning opportunity. If necessary, trainers should go to the industry to acquire new skills, techniques and technologies, and subsequently impart this knowledge to learners in training institutions. Thereafter learners should be exposed to the industry for work experience.
- The assessment of trainees on the acquired knowledge should be an integral part of apprenticeship training. Recognition of Prior Learning (RPL) should enable learners to gain credits for any component of the apprenticeship training programme.

5.2.3 Initiation

The Vocational Education and Training Authority (VETA) and the National Construction Council (NCC) should collaborate and design strategies on the way forward with regard to training of construction industry personnel.

SKILLS OFFERED BY VETA CENTRES FOR THE CONSTRUCTION INDUSTRY

S/No.	Skills	Location of Centre																				
		Dodoma	D'Salaam	Kihonda	Mbeya	Moshi	Mtwara	Mwanza	Tanga	Tabora	Iringa	Kigoma	Arusha	Dakawa	Mara	Kagera	Mikumi	Singida	Songea	Shinyanga	Mpanda	Uiyankulu
1	Plumbing and Pipe Fitting	x			x		x	x	x		x	x		x	x			x				x
2	Painting and Sign Writing	x	x				x	x	x		x				x							
3	Carpentry and Joinery	x		x	x		x	x	x	x	x	x	x	x		x	x	x		x	x	x
4	Masonry and Bricklaying	x		x	x		x	x	x	x	x	x	x		x	x	x	x	x	x	x	x
5	Road Construction	x																				
6	Civil Draughting	x	x			x																
7	Electrical Installation	x		x	x	x	x	x	x		x	x	x	x	x			x	x	x		x
8	Concrete Work and Products		x																			
9	Flooring		x																			
10	Cladding Work and Stone Facing		x																			
11	Wood Work Design		x																			
12	High Quality office and Domestic Furniture																					
13	Interior Design		x																			
14	Operation of Sophisticated Woodwork Equipment		x																			

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