



TVET PROJECT CONCEPTS

Bridging the Skills Gap

Devotra is an ISO 9001-2000 certified company whose activities are mainly focused on engineering projects in developing countries and upcoming markets. Devotra offers turn-key services for any kind of project in the field of education and training from primary up to higher education, including vocational training. The name Devotra is an acronym for Development of Vocational Training, which indicates our involvement in human resource development projects, in particular in the field of quality improvement for the Vocational Education and Training (VET as well as in the TIVET and TEVET) sector. For more than 20 years Devotra has been active in this area and gathered ample expertise. Throughout the years we have noticed common challenges in the education and training sector that prevail in many countries world-wide. While studying these challenges and working with various stakeholders Devotra developed different project concepts.

WORLD-WIDE COMMON CHALLENGES IN EDUCATION AND TRAINING SECTORS

- overcrowded workshops, labs and classrooms
- too much theory based training
- limited practical training
- no apprenticeship programmes
- outdated curricula
- no interaction with labour market
- limited teaching and learning materials available
- equipment outdated/ obsolete
- no teacher skills upgrading
- no Teacher Training Colleges available
- limited ICT skills
- limited attention for students with special needs



TURN-KEY SOLUTIONS OFFERED BY DEVOTRA

- establishment of Teacher Training Colleges
- rehabilitation and upgrading of Vocational Training Centres
- ICT based learning for science and technology
- special needs education

OUR APPROACH

- projects based on holistic concepts
- flexible and tailor-made solutions
- from concept to implementation
- detailed design based on feasibility studies
- integration of all project components
- focused on impact and measurable outcomes
- long-term support



CREATING A MODERN, SAFE AND IN

UPGRADING OF VOCATIONAL TRAINING CENTRES

Many existing TVET systems do not have the capacity to enrol the increasing number of students. Education programmes need to be adjusted to match the continuously changing needs of the economy. Modern labour forces will need to contribute to economic development, as such there is a need to streamline the TVET system with labour market demands. TVET reform and development can be expected to play a strategic role in providing highly skilled artisans, craftsmen, technicians, and technologists for different sectors of the economy.

In order to revitalize the vocational education and training sector at different levels, existing technical secondary education schools can be converted into youth polytechnics (supporting vulnerable youth).

Vocational training centres and/ or technical training institutes can be converted into Centres of Excellence. These Centres of Excellence will serve as role models for other (satellite) training centres in the area.

CENTRES OF EXCELLENCE BASED ON MODERN TVET MODELS

- modular based curricula
- competency based education and training
- student-centred learning
- independent and work oriented learning
- wide variety of vocational subjects
- based on labour market and industry needs
- entrepreneurship development
- apprenticeship programmes
- practical skills training
- integration of ICT based learning
- introduction of new technologies
- continuous upgrading
- upwards mobility



THE CONCEPT IS FOCUSED ON 5 INTERRELATED TOPICS

- definition of qualifications and learning outcomes based on local needs
- upgrading of curricula and learning materials
- training of teachers and management staff
- updated equipment related to labour market needs
- rehabilitation of facilities to cater for all education requirements



PROJECT COMPONENTS

- renovation works to upgrade facilities
- fast track sustainable building solutions
- supply, installation and commissioning of equipment
- supply of spare parts and consumables
- technical assistance, including;
- staff development
- teacher training
- overseas fellowship programmes
- curriculum development
- in-country training



INSPIRING LEARNING ENVIRONMENT

TURN KEY ESTABLISHMENT OF TEACHER TRAINING COLLEGES

Quality of the vocational education and training sector depends, amongst others, on the quality of pedagogical and technical skills of TVET teachers. Often no dedicated Teacher Training Colleges are in place which results in the overall decrease of TVET teaching quality, as teachers are not trained in the practical use of new technologies.

In order to improve the vocational education and training sector Devotra has developed a unique turn-key concept for the establishment of a Teacher Training College. The objective of the establishment of the Teacher Training College is to upgrade skills, knowledge and attitudes of TVET teachers in line with the labour market requirements in order to increase employability of TVET graduates. At the Teacher Training College students are trained to become teachers. At the same time the Teacher Training College can provide refresher courses to teachers. The Teacher Training College can also serve as a knowledge centre for TVET.



INTEGRATION OF DIFFERENT PROJECT COMPONENTS

- project management
- interim management of the Teacher Training College
- development of (teacher training) curricula
- implementation of teacher training programmes
- provision of management and staff training
- facility requirements and architectural drawings based on international standards
- classroom design and workshop lay-outs
- fast track building solutions
- supply and installation of equipment
- provision of spare parts and consumables
- facility management
- maintenance missions



WIDE VARIETY OF EDUCATIONAL TOPICS

- mechanical
- building and construction
- ICT and communication
- automotive
- thermodynamics
- electrical and electronics
- agriculture
- business administration
- hospitality and tourism
- health and care
- language education
- general education topics (mathematics, science, technology)



PROJECT IMPLEMENTATION IN THREE PHASES

- inception phase: feasibility study, training needs assessment and labour market assessment
- implementation phase: upgrading of facilities, supplies, logistics and installation of equipment, technical assistance and training
- support phase: management support phase and capacity building programme before project hand-over



ICT BASED LEARNING FOR SCIENCE AND TECHNOLOGY

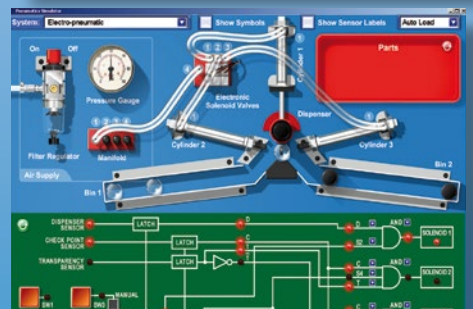
Within modern education systems the use and advantages of ICT are becoming vital for successful education. Providing students with virtual science experiments, engineering systems simulators in combination with hands-on practical equipment, makes education more challenging and allows schools to create a safe, modern and inspiring learning environment. The concept of the smart classroom, includes ICT based learning materials for science and technology for age group 6 to 18. The smart classroom combines traditional education with ICT based learning materials, which can be used in schools, colleges and universities. Furthermore education management, student assessment and student tracking solutions are included.

THE BASIC CONCEPT INCLUDES

- ICT based learning environment
- coverage for primary, secondary, vocational and higher education
- educational materials for science and technology
- combines hands-on practical training with virtual experiments and simulations
- teacher-led whole class lessons
- simulate the use of scientific equipment
- curriculum covers all education sector
- teacher delivered lessons & assessments.
- computer managed learning environment

OTHER SUPPLIES FOR PRIMARY AND SECONDARY EDUCATION

- language laboratories
- science laboratories
- arts, crafts and music materials
- audio-visual equipment
- office equipment and furniture
- classroom furniture
- libraries
- sports materials and furniture
- mobile solutions for science, language and ICT



SPECIAL NEEDS EDUCATION

For schools who wish to adjust their learning environment for inclusion of children with special needs Devotra offers, amongst others, specific education needs equipment, education ICT applications and specialized furniture for students with special needs.

SPECIAL EDUCATION NEEDS MATERIALS AVAILABLE FOR

- short sighted and blind students
- deaf and hard of hearing students
- students with down syndrome
- students with autism spectrum disorders
- students with physical handicaps



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