



# Turn-key solutions for building schools of the future in Ghana

“Building schools of the Future in Ghana” is a concept developed by Devotra with the objective to provide turn-key services to the Government of Ghana and other key stakeholders who are in the process of improving the education sector in Ghana. It is our vision to support these stakeholders in order to create a modern, safe and inspiring learning environment, which takes into consideration the specific needs of children, students and teachers.

Devotra is a specialized company for upgrading and modernizing the education and training system. Together with our local partner we can offer turn-key solutions in Ghana, for primary, secondary, vocational and higher education. The turn-key solution includes:

- Rehabilitation and fast track construction of school buildings, workshops, dormitories and other facilities
- Supply, installation and commissioning of scientific experimental laboratories and educational training equipment
- (Teacher) Training and Technical Assistance

Through our unique partnerships, extensive knowledge, experience and track-record in education reform worldwide, we ensure that our projects are built on sustainable solutions that meet the precise needs of our clients.

Devotra offers a wide range of state of the art laboratories, equipment and services, to support education improvement. The company stands for successful project implementation, from concept to completion.

[WWW.DEVOTRA.COM](http://WWW.DEVOTRA.COM)

# CREATING A MODERN, SAFE AND IN

## PRIMARY & SECONDARY EDUCATION

### EXPERIMENTAL LABORATORIES

For primary and secondary education (years 6 - 18), DEVOTRA can supply complete experimental laboratories covering the full range of science and technology related subjects. These labs can be equipped with conventional teaching and learning recourses, such as laboratory equipment, demo units, sectioned models, etcetera. However most of the science and technology subjects are now also supported by ICT based learning programs, virtual laboratories, smart classrooms and e-learning. These are even available as a Mobile Science Cart that incorporates a series of digital presentation tools linked to an on-board computer. The inclusion of a digital camera and scientific image processing software allows the teacher to conduct experiments that are projected for whole-class viewing.

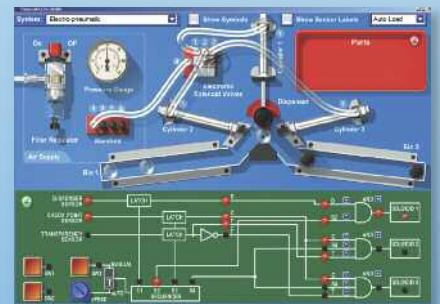
### ICT AND E-LEARNING

ICT is very essential in every area of industry and society. Therefore also in any educational subject. E-learning can be applied at different educational levels from primary education, technical vocational training and applied science up to university level. Practical training equipment and traditional curricula can be combined with e-content (such as virtual labs, online assessments, encyclopaedias and flash media). Full range of materials are available for mathematics, English language, technology, science, engineering, oil and gas training and much more.

### SMART CLASSROOM

The smart classroom combines traditional education with ICT based learning materials, which can be used in schools, colleges and universities. It is a unique product that combines hands-on practical training equipment with virtual experiments and simulation. State-of-the-Art audio/visual equipment and furniture is used. Education management, student assessment and tracking solutions, specialised software, teacher manuals and presentations are included.

- mobile science cart
- virtual experiments and simulations
- student response system
- hands-on training hardware
- specialised furniture
- arts, craft, music and sports material and equipment
- didactic learning materials
- science and technology laboratories
- smart classroom technology
- language laboratories
- ICT based learning
- virtual learning environment
- multi media laboratories
- mobile language lab
- mobile ICT lab
- e-learning



# INSPIRING LEARNING ENVIRONMENT



## VOCATIONAL AND POLYTECHNIC TRAINING

### EQUIPMENT FOR EDUCATION AND TRAINING

DEVOTRA provides an increasing range of practical training equipment for vocational training and in particular for Technical Vocational Education and Training (TVET, TIVET, TEVET and ATVET) projects. Equipment can be modified according to customer requirements and can be provided in the form of real life workshop equipment, pilot plants, experimental laboratories, demo units, including e-learning, ict based resources, software, course ware and furniture.

- automotive
- building and construction
- carpentry and joinery
- electrical and electronics
- forging and foundry
- machining and fitting
- plumbing and pipefitting
- refrigeration and air-conditioning
- agriculture
- surveying and measuring
- welding and sheet metal
- ict and e-learning
- oil and gas training
- business administration
- language training
- health care
- hotel and tourism
- services sector

### TECHNICAL EQUIPMENT and SUPPLIES

Besides the specific equipment for education and training, DEVOTRA also supplies a wide range of other professional technical equipment and supplies. These materials are often supplied to complete the scope of supply for a turn-key education project.

#### Equipment:

- audio/visual equipment
- office equipment
- furniture
- workshop furniture
- ict equipment
- libraries
- classroom furniture
- security equipment
- sports equipment and furniture

#### Supplies:

- electrical parts
- hand tools
- electrical tools
- fasteners
- cleaning materials
- consumables
- industrial parts
- safety materials
- raw materials

## SPECIALISED SERVICES FOR TVET

In order to ensure the sustainability of the projects that we develop and implement, DEVOTRA always includes a tailor made Technical Assistance Programme in their proposals. Our unique partnerships with professional training providers all over the world allows us to offer our clients a wide range of specialized services. Training programmes can be conducted in various professional training institutes in Europe or alternatively a specialised training facility can be created in Ghana.

- feasibility studies
- training needs assesment
- specialised teacher training
- curriculum development
- national qualification framework
- competence based training and education
- accreditation
- auditing
- prior learning assesment
- train-the-trainer skills programmes

# HIGHER EDUCATION

For higher education and universities DEVOTRA offers a wide range of professional science- and technology training equipment. Complete state of the art laboratories for different specialized areas can be designed and supplied.

## AGRICULTURE ENGINEERING

- environmental technology
- food processing and technology
- irrigation and drainage
- flood technology
- laboratories
- soil and water technology

## CIVIL ENGINEERING

- geotechnical engineering
- hydrology
- material testing laboratories
- meteorology
- soil technology
- water resource management

## AUTOMOTIVE ENGINEERING

- aero dynamics
- engine diagnostics
- auto electronics
- diesel technology
- engine demo units
- injection systems

## CHEMICAL ENGINEERING

- biotechnology
- corrosion study
- evaporation technology
- extraction technology
- heat exchange technology
- plastics technology

## ELECTRICAL ENGINEERING

- analogue communication
- digital communication
- digital electronics
- electronic circuits
- power engineering
- telecommunications
- control technology
- micro electronics

## MECHANICAL ENGINEERING

- cad/cam
- fluid mechanics and dynamics
- heat transfer
- hvac
- hydraulics and pneumatics
- mechanisms
- mechatronics
- metallurgy
- metrology
- cnc technology

## OIL AND GAS TRAINING

- emergency shut down systems
- health and safety
- high and low voltage systems
- instrumentation
- pilot plants
- pressure and flow demo units
- pump systems
- valve systems
- vibration monitoring and analyses
- temperature demo units



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