Skills Development and Training

Education for All and Knowledge Society agendas are challenging the institutional and human resource capacity of education systems around the world. The pressure to provide access and a quality education to learners partaking in 21st Century knowledge-based societies and economies is immense. Governments in developing countries have been responding to this pressure by investing in ICT for education. However, these investments often go to waste, because teacher, lecturer and instructor capacity to effectively and appropriately use and integrate ICT is not addressed. Teachers, lecturers and instructors are pivotal agents in the drive to transform education systems. Ministries of Education, Higher Education and Science and Technology across Africa are now harnessing the power of ICT for Skills Development and Training to equip teachers, lecturers and instructors with the skills and knowledge to spur the development of an inclusive knowledge society.

Our Role

We consider teachers, lecturers and instructors to be critical leverage points in the ICT in Education system. By working with Ministries of Education, Higher Education and Science and Technology to equip teachers, lecturers and instructors with the knowledge and skills they need to integrate ICT into their practice we know we are helping to address issues of relevance, quality and access at multiple points in developing country education systems.
Our Strategy

GeSCI has facilitated national multi-stakeholder consultative workshops in collaboration with Ministries of Education, Ministries of Higher Education and Technical and Vocational Institutions in Kenya, Tanzania, Ghana and Rwanda to determine ICT in Teacher Professional Development needs. ICT teacher competencies were identified as a major challenge. Competency standards are critical to ensuring that teachers, lecturers and instructors are taught the same relevant material and that training programmes can be evaluated to determine their appropriateness and completeness.

We’ve been focusing on Standards and Competencies for Teachers, lecturers and instructors with the help of the ICT TPD matrix. The matrix, which was developed by GeSCI in 2009 is based on the UNESCO ICT Competency Standards and each framework in the matrix defines principles and models for ICT integration along a continuum of emerging (basic use), technology literacy (applying), knowledge deepening (infusing) and knowledge creation (transforming) stages.
Standards and Competencies

ICT Competency Standards are Important because:

» They make it clear for all to see what is required of a qualified teacher, lecturer and instructor in terms of knowledge, classroom skills, behavior and attitudes.

» They provide a benchmark for teacher and technical and vocational education institutes responsible for training.

» They help to ensure that training providers provide training programmes which meet country priorities as expressed in the ICT competency framework.

» They enable teachers, lecturers and instructors to meet the minimum standards required of them and help them to maintain those standards.

» Parents and the general public can be confident that their children are being taught by educators who have achieved agreed and transparent standards for ICT in Education.
Rwanda

Where there are ICT training programmes in developing countries such as Rwanda, the training of teachers is not systematic, often focusing only on basic ICT skills or how to use ICT. General subjects at the teacher training institutes are not taught using ICT which would expose teachers to the practical aspects of ICT integration across other non-ICT subjects. ICT skills for teachers should not simply be about how to use technologies but also about why and when to use them in transforming teaching practices. Without capacity building of the teachers, the potential and benefits of ICT to address issues of quality and relevance in the education system will not be realized.

In May 2010 the Rwanda Ministry for Education-GESCI partnership and H2 consultancy conducted a series of visits to schools and institutions. The purpose of the visits was to provide directors, teacher trainers, principals & teachers with an opportunity to reflect on where they are with some of their projects and programmes and where they felt there were needs and gaps.

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The MINEDUC-GeSCI partnership subsequently organised a one day focus group discussion workshop to critically review feedback from the field visits and to localise the ICT TPD Matrix for use in national, institutional and school-based programmes. The localisation of the ICT TPD matrix will pave the way for the development of an implementation road map for building teachers’ capacity to effectively integrate ICT in educational practice.

Workshop participants used the GeSCI ICT-TPD matrix to tentatively assess Rwanda’s progress in the six ICT TPD matrix domains with the objective of identifying three priority areas for the coming three years.

**Ghana**

The Government of Ghana has placed within its national development agenda an emphasis on skills, science, technology, and innovation for promoting economic growth and job creation. Over the past year GeSCI has been expanding its partnership with the Ministry of Education to include support for Technical and Vocational Education and Training (TVET). Within this support a number of priority sectors have been chosen, including ICT. Policy makers have prioritised a cross-sectoral programme to harmonise and implement this agenda. With support being provided by a number of development partners, the Council for Technical Vocational Education and Training, COTVET, has been spearheading the Ghana Skills and Technology Development Project (GSTDP) to support this government programme. To provide inputs and support to the Government, GeSCI was appointed project coordinator by the World Bank for this project. The expectation is that skills and technology development will support two different but related agendas: poverty reduction and competitiveness.
Better skills and technology use can contribute to the efficiency and competitiveness of Ghanaian firms both in the formal and informal sectors, thereby creating new job opportunities and reaching the poorest.

The project consists of the following components:

Component 1: Institutional Strengthening of Skills Development. This programme includes, among others, strong monitoring and evaluation (M&E) for skills development, a certification system based on competency-based training standards, and strategic positioning of the skills provision.

Component 2: Institutional Strengthening of Science and Technology Development. This component will strengthen governance and coordination of national science, technology, and innovation (STI) policies and programmes and support improvements to technology development and diffusion at universities and public research institutes.

Component 3: Financing of Skills and Technology Development through the Skills Development Fund. The objective of this component is to finance skills and technology development programmes in prioritised economic sectors through a demand-driven skills development fund (SDF) managed by COTVET.

Component 4: Project Management and M&EA project support unit (PSU) will be established within COTVET to support the implementation of the project.
Kenya

In Kenya, of the 500,000 youth seeking employment annually, less than 25% are absorbed into the labour force. One of the factors cited as a contributor to unemployment is the lack of requisite ICT skills among graduating youth. The Ministry of Higher Education Science and Technology (MoHEST) and the Ministry of Youth Affairs and Sports (MoYAS) is implementing ICT in Technical Industrial Vocational Education and Training (TIVET) institutions with the aim of endowing youth with the skills necessary to achieve Kenya’s Vision 2030.

In June the MoHEST and MoYAS in collaboration with GeSCI, held a three day workshop with the goal of identifying the lecturer/instructor ICT competencies for effective integration of ICT in education.

The GeSCI ICT TPD Matrix was again used as the basis for identifying and contextualising lecturer/instructor ICT competencies. A situation analysis carried out by GeSCI identified the following gaps in the implementation of ICT in the education sector in Kenya:

Quality and relevance of education: TIVET education and curriculum needs to be aligned with industry requirements.

Strategies for ICT integration need to be developed as these are currently not in place.

Curriculum and Assessment: there is a need to synchronise the curriculum with industry requirements and with assessment criteria.

Institutional Capacity: comprehensive statistical data on the needs and gaps of the institutions is not available.
Presentations included a description of government plans to fund and equip Youth Polytechnics with ICT infrastructure; TIVET case studies from around the world and an institutional snapshot of ICT TIVET use in Kenya. A panel discussion revealed that the private sector is keen to partner with the institutions and especially to reach out to rural schools to transfer industry knowledge. They also stressed that soft skills and communication skills, such as listening skills, teamwork, decision making and problem based learning need to be sharpened in education institutions.

Participants continue to discuss the outcomes of the workshop on GeSCI’s 21st Century Learning Ning.

GeSCI strategic advice is supported by data. In terms of teacher, lecturer and instructor standards and competencies for ICT, we undertake a series of measures before we advise our partners. We use our own bespoke ICT in Education capacity audit, and undertake a situational analysis and baseline survey to determine partners’ needs and abilities in a variety of ICT in Education contexts. The Kenya Ministry for Higher Education Science and Technology in partnership with GeSCI is conducting a baseline survey of ICT use in TIVET institutions. The purpose of the survey is to provide data and information required for strategic decision making and planning. Specifically issues will focus on enhancing ICT usage training/learning and management, as well as increasing gender parity among trainers and trainees. The objective is to inform policy support and management of ICT in TIVET projects as well as monitoring and evaluation of technology integration.
2010 Rwanda Results

» Finalisation of the e-content localisation process agreed

» ICT Competency Standards for Teachers of Rwanda has been developed through a multi-stakeholder partnership approach

» All partners committed to determine performance indicators and assessment and to pilot implementation with the Kigali Institute of Educatin (KIE) and the Regional ICT Training and Research Centre

» Final Draft ICT in Education Policy developed. We continue to provide support to the MINEDUC until the policy is approved by the cabinet

» First draft ICT in Education Strategic Implementation Plan developed. We continue to provide support to the MINEDUC as the draft plan is further refined

» The GeSCI MINEDUC Partnership Evaluation completed (which will be made available in early 2011)

2010 Ghana Results

» Development of draft project proposal

» Facilitation of the drafting of Institutional and Sectoral Studies

» Coordination of the development of the Draft Project Appraisal Document (PAD)

» Coordination of drafting of PAD sections in collaboration with World Bank and government team

» Ensured input and buy-in from all government and non-governmental stakeholders to PAD Coordination of inter-governmental steering group
2010 Kenya Results

» First draft of the ICT Competency Framework for Lecturers and Instructors in Kenya complete

» Facilitation of cross-sector dialogue to narrow the gap between industry requirements and TIVET institution delivery

» Baseline survey on the state ICT in education landscape in Technical Education in Kenya 50% complete

» Facilitation of the creation of a TIVET ICT in Education Integration coordination team

» Development of Joint ICT in Education plan between GeSCI and the Ministry of Youth Affairs

» Institutionalisation of the National Environment Management Agency (NEMA) and GeSCI partnership

» Facilitation of the development of guidelines for creation of content for environmental education (has been developed and approved by board for publication)

» Development of e-waste guidelines as a first step toward the development of the e-waste policy (approved by NEMA board for publication)

» Support for the development of an M&E framework for NEMA