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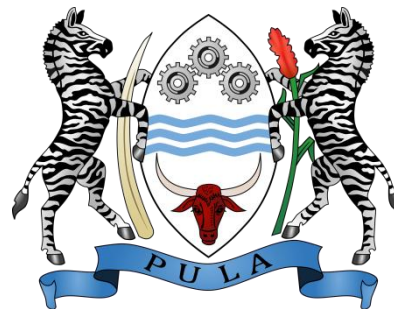
ICT for Education Summit 2012

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ICT FOR EDUCATION – BOTSWANA, MALAWI, NAMIBIA

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Investment in ICT for Education in Botswana



Republic of Botswana

Perception of ICT

- **ICT refers to technologies that are used for improving our performance in the handling of information**
- **In education these ICT's include:**
 - Broadcast receiving systems (eg. intercom, roja roja)**
 - Telecommunication systems (phones, faxes)**
 - Media such as CD's, DVD, Flash discs, MP3**
 - Computer –based laboratories, smart classrooms**
 - The Internet, Instructional software, Printed Media (books, magazines), Educational Television, Computer Systems.**

Government Policy on ICT in Education

- **Exposing children to effective education in ICT for knowledge-based society through Thuto-net programmes :**
 - **Schools connectivity**
 - **Education Management Information System**
 - **Computers for Schools – Repairs workshops**
 - **Professional Development – for instructors**
 - **Second university dedicated to ICT-based skills and expertise**

Schools Computerisation Project - 2003

- **The main objective was to equip all the 235 secondary schools computer labs with computers and other accessories each, for ICT-based teaching and learning.**
- **The labs are also used for the teaching of the computer curriculum:**
 - **Computer Awareness at both Junior and Senior Secondary Schools**
 - **Examinable Computer Studies at Form 5 level.**

Key Resources for Actualising Computerisation in Schools

- **1998: IT Unit established MoESD structure – to build and support ICT infrastructure**
- **2005: Senior Teacher – Computer Education post established – for coordination and integration**
- **2008: Computer Lab technician post established in all secondary schools and colleges for systems administration and user support.**
- **2010: Dep't of ICT&MS established - for all ICT and media functions.**

Software Provision

- **Linux server software (Open Source) was used for most of schools servers.**
- **For users' PC's Ministry got into partnership with MS for subscription licensing – School Agreement, more affordable than Enterprise Agreement**
- **Currently in 2nd year of 2nd term of 3-year School Agreement @ >P2m p.a. with Microsoft local *Reseller*.**
- **Ministry considering open source alternative as proprietary software licensing is too costly.**

Schools Connectivity Project - 2007

- **Gov't initiative for ICT-driven innovation in class, prepare learners for globally competitive workforce.**
- **Connectivity of Schools and Colleges to Government Data Network (GDN) and broadband internet services, sharing requisite resources with national Television.**
- **Project done in 20 months and was completed in March 2007, covering 234 sec. schools in the country at the time. New schools are connected once they are ready.**

Computer Refurbishment Project - 2008

- **Project accepts donated new and used PC's from both Government and private sector.**
- **MoESD in joint venture with 2 sister Ministries for provision of refurbished computers to Primary Schools, to raise computer awareness/literacy .**
- **Since July 2009 to date, 295 primary schools supplied with 10 PCs each, installed with MS licensed software.**
- **Provides practical PC maintenance experience to technical colleges/brigades students.**

TV's & VCR's for *Talkback Show*

- **>800 primary schools and >230 secondary schools supplied with TV's ,VCR and Decoder for HIV&AIDS curriculum**
- **Purpose - Capacity building for multimedia interactive distance education on HIV&AIDS.**
- **Interactive elements of SMS, Email, phone, fax provide opportunity for audience (teachers, students) to discuss issues raised during live broadcast.**
- **Initiated from partnership between Botswana and Brazilian governments.**

Radio Lessons

- **Primary Schools are supplied with battery and/or electricity operated radios as additional classroom resource.**
- **Teachers use them for both actual and remedial teaching**
- **Broadcasts are done through the national broadcaster for 3 hours each day of the week during school term.**
- **Schools are also provided with cassettes for the same programmes to enable teachers to use them at their convenience**

Educational TV

- **Through partnership with Japan Broadcasting Corporation (NHK), the Ministry has established Educational TV to provide a teaching and learning resource which would combine both sound and pictures.**
- **Broadcasts are made 6 days a week for 2 hours in the national TV channel.**
- **The Broadcasts started in October 2011.**
- **Programmes are mainly focused on curriculum support, but there are other educative programmes as well**
- **The long term aim is to have a dedicated educational channel and avail programmes using multimedia.**

Media Centre

- **Educational resource centre with equipment for production of both electronic and paper-based teaching and learning resource material.**
- **Offers in-service training to teachers to empower them for production of the resource materials, like videos and CDs for model lessons.**
- **Also offers in-service training on basic ICT skills and ICT integration in teaching and learning**
- **Provides e-Learning for teacher professional development**

Special Education Units

- **For learners with special educational needs.**
- **Equipped with ICT visual and hearing aids**
 - **Visual Impairment Centres have : Perkins Brailers, Talking Calculators/Computers, Zoom Text (to enlarge item on screen display) , Brillo 200 printer (touch readable print for VI) .**
 - **Hearing Impairment Centres have: FM systems – transmitter & hearing aids (to improve users hearing capability)**
 - **Physically challenged learners are provided with: Laptop (for improved access) , modified keyboards for typing using other limbs).**

Systems for Education Administration

- **SOUR for EMIS/SASM - integration of key systems with envisaged ones for planning and decision-making in departments' key processes. These include:**
 - ***TSM infinium – HRS for teachers**
 - ***LANTIS – learner assessment for special needs**
 - ***SLMS – management of gov't sponsored students for tertiary education**
 - ***F4SS – selection of JC leavers to limited SS spaces**
 - ***QAAIS – for assessment of certification of outcome-based trainees in Technical Colleges.**

Other ICT Infrastructure Development

- **LAN Extension from Computer Labs to Admin Block in secondary schools (Phase 1 of 2)**
- **Computer hardware provided for utilization of LAN, including Thin Client for all senior schools**
- **VLAN provision for virtual separation of school administration from student environment.**
- **Production Unit set up to produce materials for SEN learners, including audio books and brailled books**

Cost of Investment in Key Projects

No	Project	COST @ 0.1334 exchange rate	
		US\$	BWP(Pula)
1	Networking/Cabling of Institutions	1,776,845.58	13,319,682.00
2	ICT Equipment (Development & Replacement)	10,183,934.34	76,341,336.89
3	Software Development (includes Microsoft Contract + SASM SOUR)	1,521,374.16	11,404,603.90
4	Schools Connectivity Project	1,555,510.69	11,660,499.95
5	Educational Television (Production Equipment)	2,121,060	15,900,000
6	Computer Refurbishment Project	1,496,681.30	11,219,500
Grand Total		18,655,405	139,845,570

Policies Guiding Investment in ICT for Education

- Maitlamo - National Policy for ICT Development (2007)
- Botswana National e-Government Strategy 2011 - 2016
- Vision 2016 – Long Term Vision for Botswana (1997)
- The Revised National Policy on Education (1994)
- National Development Plans (NDP 9 & NDP 10)
- Organisation and Methods – Restructuring of ministries for improved performance
- MDG's

Challenges in ICT for Education

- Power provision to drive ICT in Primary Schools
- Legislative framework to guide the usage of ICT in work environment/school setting
- Shortage of skilled personnel to use ICT to leverage performance
- Slowness of access to online services due to bandwidth limitations
- Cost of software licensing
- Meeting the ideal computer/student ratio of 1:7 in 2012.

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