PRESENTATION TO THE INTERNATIONAL ASSOCIATION OF SCHOOL LIBRARIANSHIP PRE-CONFERENCE MEETING

Hosted by THE LIBRARY AND INFORMATION ASSOCIATION OF JAMAICA

AUGUST 5 2011

Purpose of Presentation

- *Overview of Project*
- *Project Achievements to Date, Challenges, Mitigation Strategies*
- *Plans to Project Completion*
- *Impact of the Project on the Education System, the Community and National Development*

Project Overview – Genesis of Project

- In early 2004, in considering its goal for universal access, the Ministry with responsibility for telecommunications determined that an educated knowledge-based society would spur demand for Internet Services
- ITU fully endorsed and sponsored the design of an e-learning project, utilizing the technology to impact the education levels of Jamaica's citizenry
- Preliminary Feasibility Study developed by Joint Committee chaired by MOE Junior Minister
- Consulting firm hired to finalize study in late 2004
- Cabinet approved 1st e-Learning Jamaica project in March 2005

Project Overview – Genesis of Project

In 2005, Govn. established two Agencies

- The Universal Access Fund Company Limited
  - to collect and manage a cess on calls terminating in Ja, establish a broad band network to facilitate universal access, and fund ICT projects that will stimulate internet connectivity
- The e-Learning Jamaica Company Limited
  - to develop and implement projects that will contribute to Universal Access

Project Overview – Genesis of Project

- Board of e-Ljam appointed July 2005
- CEO hired Nov 2005
- Project launched in February 2006
- Period to September 2006 used to staff and equip company and establish systems and procedures
- Project started in September 2006
- 3 phased implementation planned

Project Overview – Genesis of Project

Phase 1 - pilot project in 30 schools Sept 2006 to Aug 2007

Phase 2 - roll-out to 75 schools Sept 2007 to Aug 2008

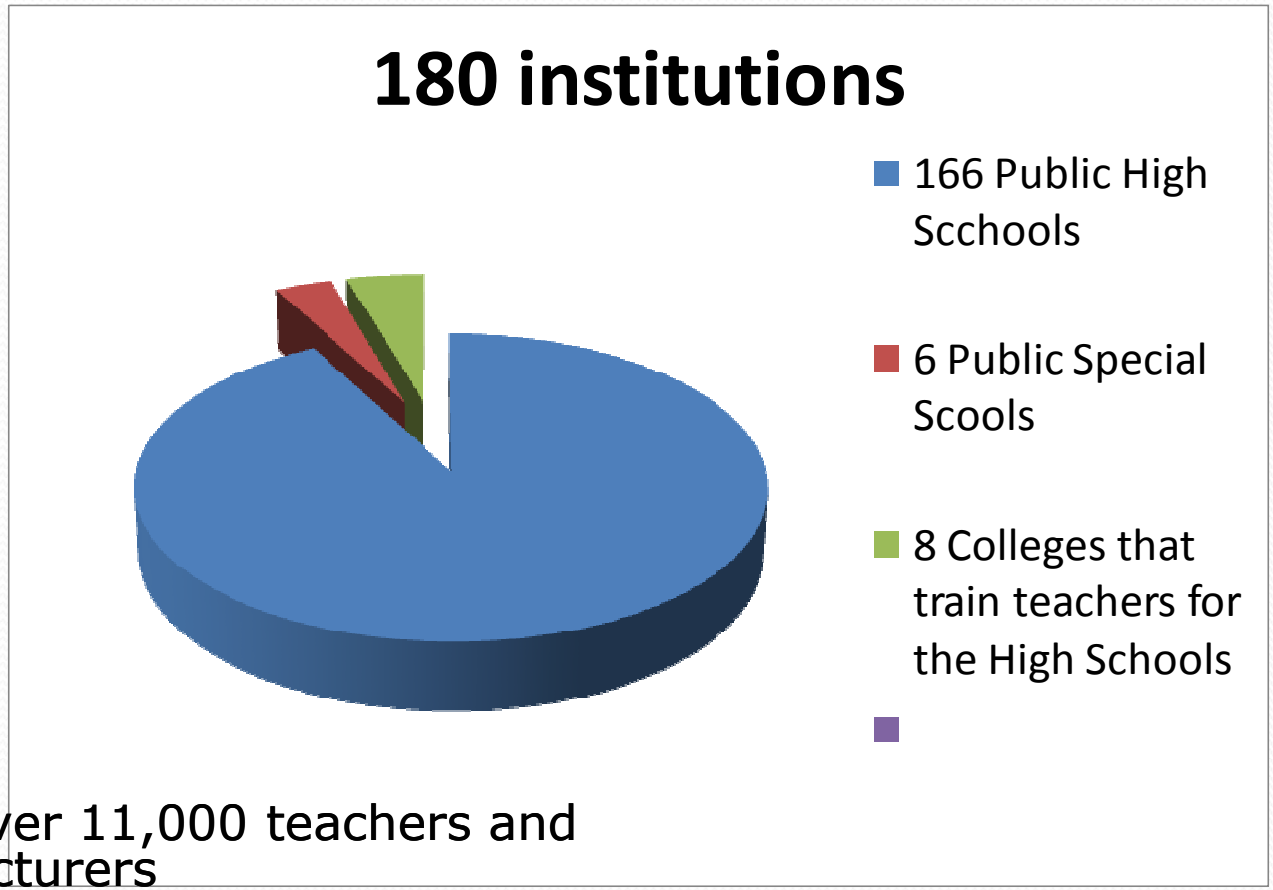
Phase 3 – roll-out to 75 schools Sept 2008 to Aug 2009

Project Overview- Purpose of Project

MOE asked that the first project be in the high schools, grade 7 to 11

- To utilize current state-of-the-art ICTs to
  - Improve the quality of education
  - Enhance the learning experience
  - Improve the level of passes in the CXC CSEC exam

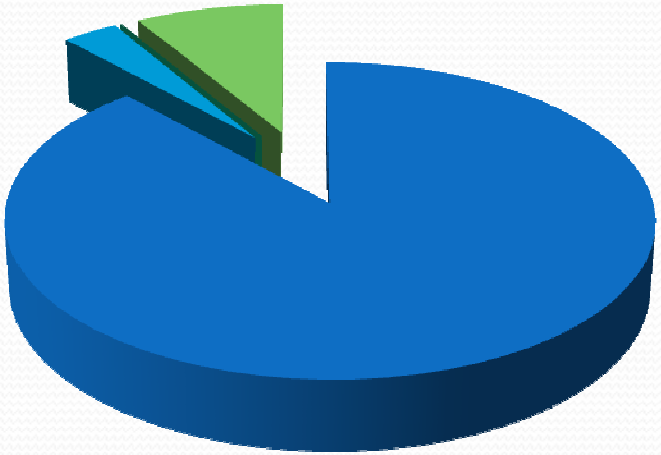
Project Overview- Scope of Project at Sept 2006



- Over 11,000 teachers and lecturers
- Over 260,000 students
- 11 subjects

Project Overview- Current Scope of Project

203 institutions



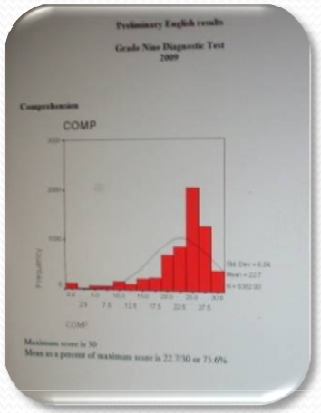
- 166 Public High Schools
- 6 Public Special Schools
- 10 Colleges that train teachers
- 5 Community Colleges
- 16 Independent High Schools

- Over 11,400 teachers and lecturers
- Over 260,000 students
- 11 subjects

Project Overview- Current Scope of Project

- **11 subjects – 1st 5 in pilot**
  - English
  - Mathematics
  - Biology
  - Chemistry
  - Information Technology
  - Physics
  - Geography
  - Building technology
  - Integrated Science
  - Spanish
  - Social Studies

PROJECT OVERVIEW-PROJECT COMPONENTS



Continuous Assessment

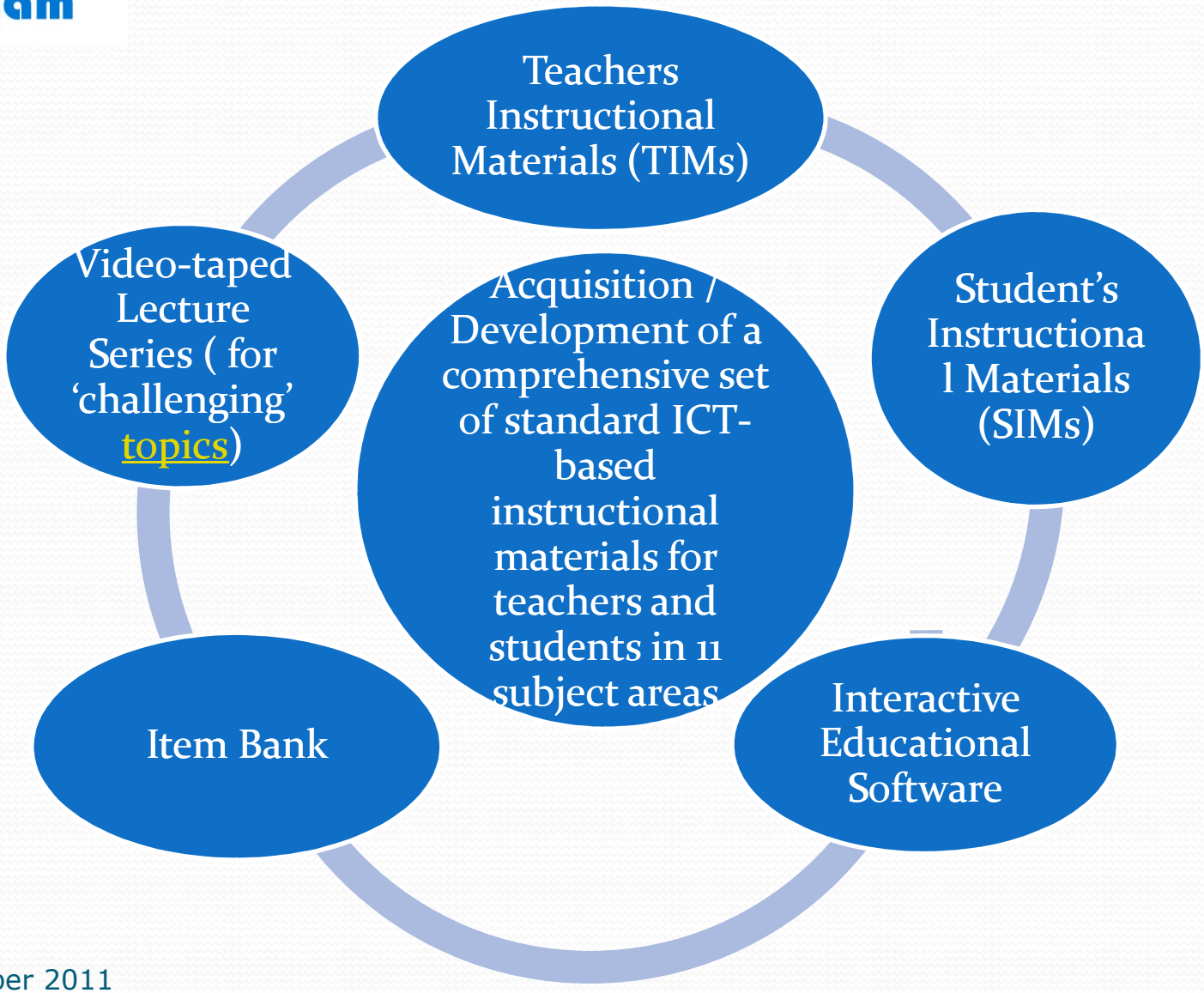
Instructional Materials

Technology Infrastructure

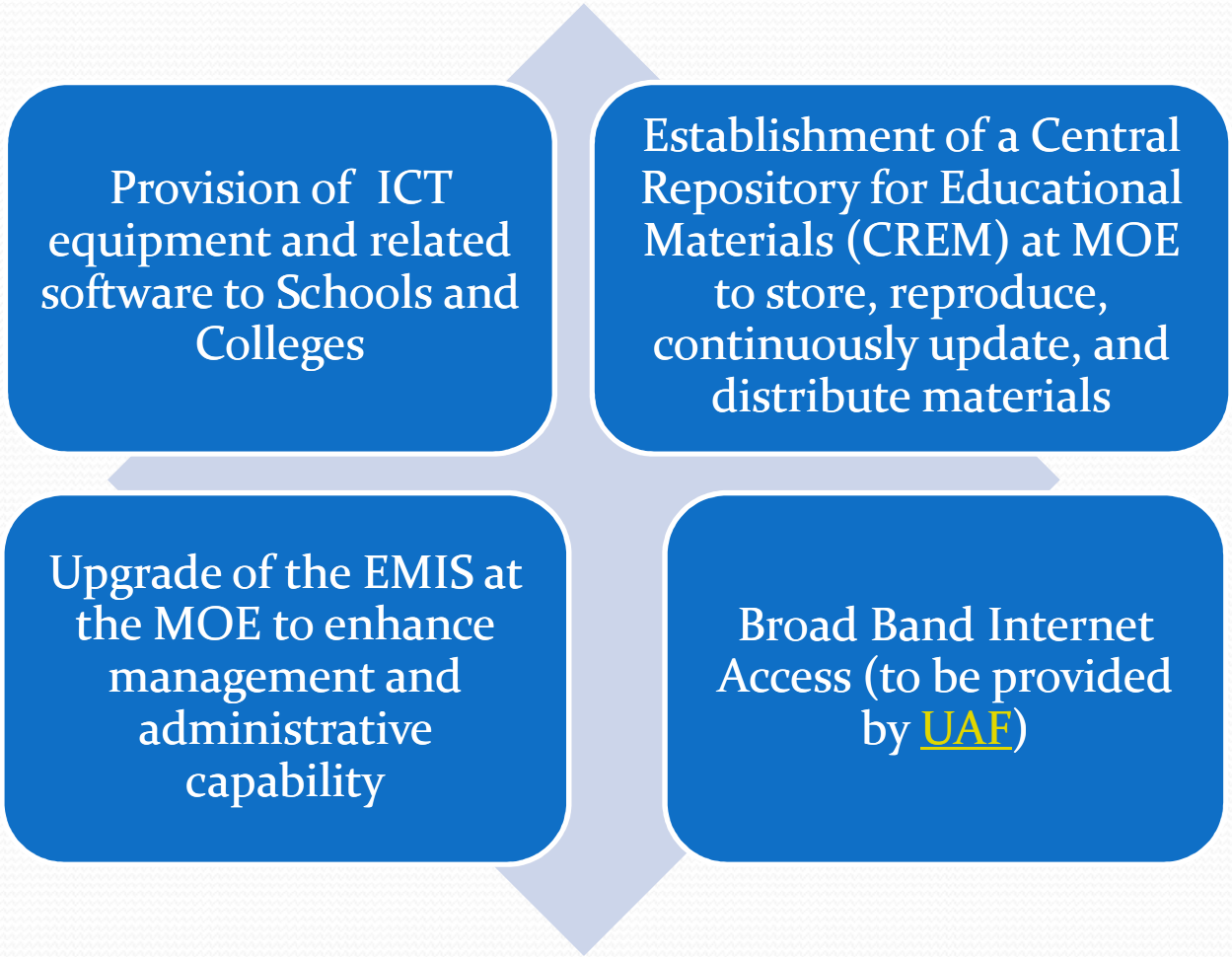
Remedial

Teacher Training

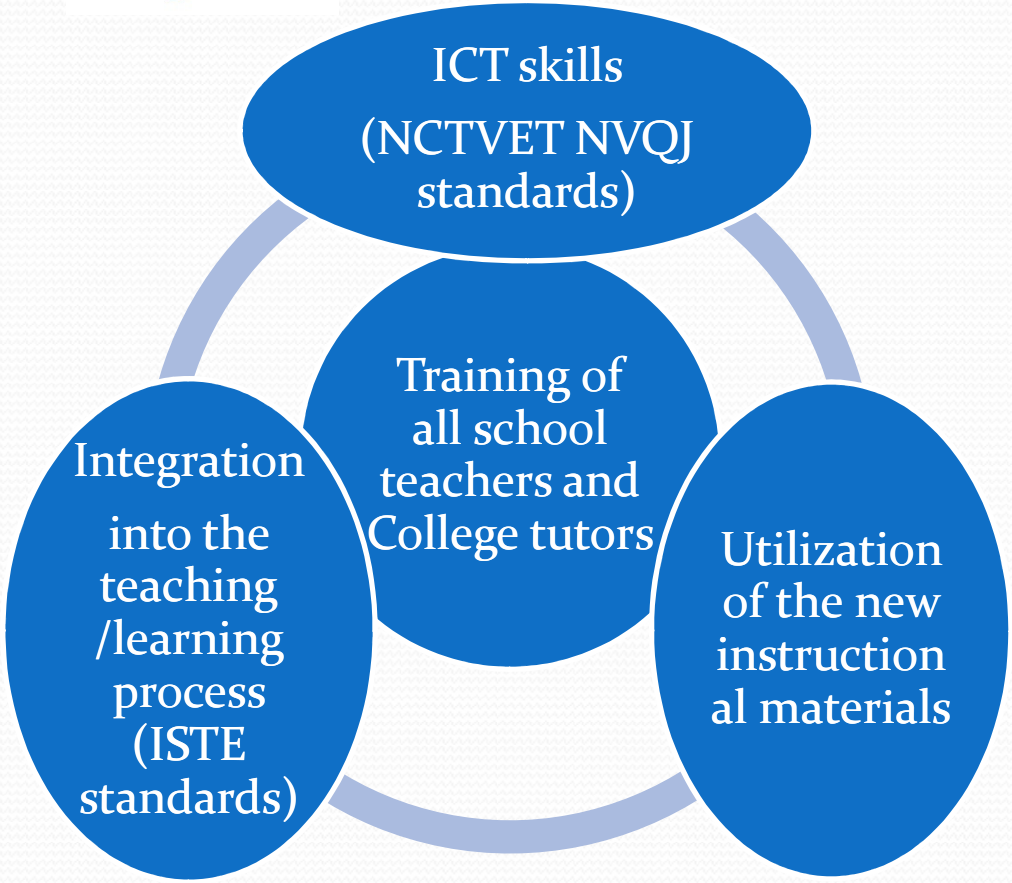
Project Overview: Component 1 – Instructional Materials



Project Overview: Component 2– Technology Infrastructure for Storage/Access/Dissemination



Project Overview: Component 3 – Teacher Training



Training of 2 Systems Administrators from each institution

Training of 2 Trainers from each institution for both ICT skills and Technology Integration

Training of 2 Lecturers from each College to Masters degree level in Technology in Education

Project Overview: Component 4 – Remedial

Collaborating with existing remedial interventions providing ICT-based materials and equipment and training of tutors and support personnel

Special equipment and software for Special Schools

Project Overview: Component 5 – Continuous Assessment

Introduction of standard examinations across the system at grades 7, 8 & 9
(Grade 11 CSEC and Grade 10 CCSC already in place)

The Pilot

- Time frame
  - 1-year pilot September 2006 – August 2007
- Purpose
  - To test procedures and methodologies, identify bet practices and support systems
  - Inform roll-out
- Scope *(decided by MOE)*
  - 5 subjects *(English, Maths, Biology, Chemistry, IT)*
  - Grades 10 & 11
  - 28 high schools
  - 3 teachers colleges *(that train 80% of the teachers in the high schools)*

Technology Deployment Strategy

Impact Required

- Teacher Planning and Organization Capability/Research Capability
- Subject Matter Delivery to include student interaction, group work, individual work
- Student Assessment / Immediate feedback
- Student Self-help
- School Administration
- Individual interactive learning - Remedial

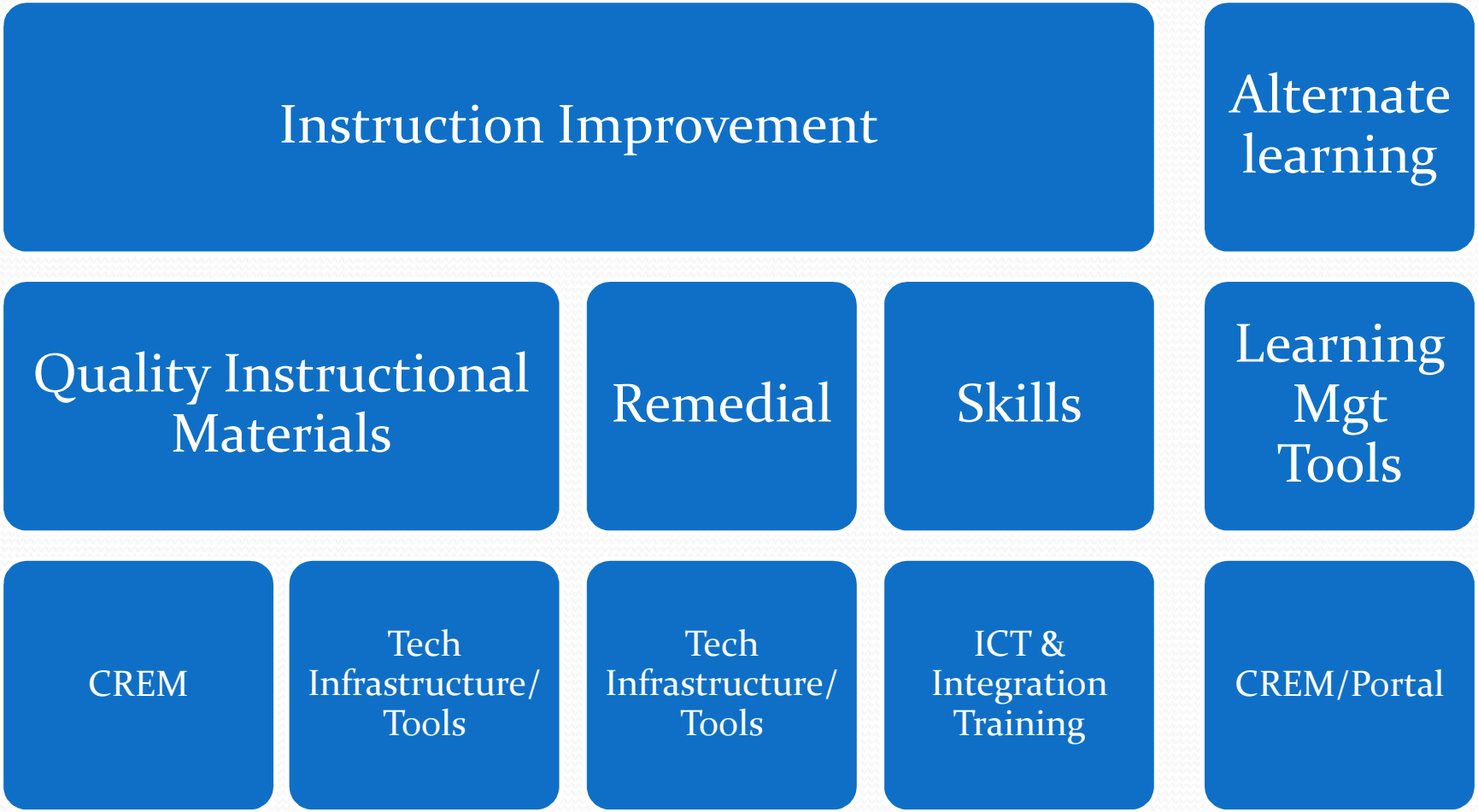
Deployment Strategy

- Remedial type lab (approx 25 computers
- Group type lab (10 desktops or laptops)
- Computers for library, resource room
- Computers for staff room (desk tops/laptops)
- Network connectivity and presentation bundles for grades 10 & 11
- Interactive white boards in group lab and AV room

Project Implementation Strategies

- Promoting Buy-in/Ownership
- Ensuring adequate management and control of implementation processes
- Handholding / Reinforcement
- Ensuring Sustainability
- Smooth/effective Handover

Project Implementation Strategies



Project Implementation Strategies

Sustainability

Buy-in

Implementation Management

Longer term support

Promotion & Planning support

Quality Assurance, reinforcement, help dsek

Sys Adm training & CREM

Teachers College intervention

Equip. Maintenance and replacement Strategy as well as Funding Recommendations

Major challenges experienced

- Pilot phase delayed by 1 year to August 2008
  - RFP for network and equipment published June 2006, protest from unsuccessful bidder delayed the signing of the contracts to May and July 2007, resp.
  - No Board between September 2007 to January 2008
  - Rollout affected by unavailability of funds in MOE 2007-8 budget to fund building infrastructure in remaining 150 schools

Mitigating strategies

- Early 2008, fast track strategies implemented including:
  - Provision of Audiovisuals to all schools ASAP (not only pilot, since do not require infrastructure)
  - Sourced off-the-shelf materials since development timeline would be protracted
  - Encouraged schools to self-finance building infrastructure
  - Negotiated with Contractors to increase rate of deployment
  - MOE assigned 2 Building Officers directly to project
- Project extended to March 2011, new timeline developed for all components

Other Happenings/Challenges 2009-2010

- In mid 2009, MOE requested inclusion of 16 independent high schools whom assist in placement of students from GSAT and GNA
- In April 2010, budget halved by MOFP, project had to be extended to March 2012
- Decision taken to defer all items for which the supplier was not yet contracted to 2011-12, affecting
  - mobile white boards
  - equipment and networks for 4 remaining high schools and 16 additional independent high schools,
  - content development for next 6 subjects

Achievements to date

Re Instructional Materials

- TIMs and SIMs sourced for English, Maths, Biology, Information technology, Building Technology and Physics, licenses purchased and materials delivered to all relevant schools,
- Spanish delivered to pilot schools only - to be evaluated for roll-out,
- Geography and Integrated Science to be trialed in selected schools, nothing found for Social Studies

Additional Achievements to date

- Govt.-owned materials developed, delivered to schools and available on e-Ljam website
  - TIMS and SIMs for English, Biology and Chemistry developed by UWI (JBTE) and Maths developed by UTECH/U. of Plymouth
  - Video lectures for 1st 5 subjects developed by ZED and CPTC, broadcast on PBCJ, Contracts signed and production in progress for remaining 6 subjects
  - Over **11500** Items written and reviewed by teachers, placed in a Moodle database on e-Ljam website, used by students to study for exams (since 2009)

Re Technology Infrastructure

- Audiovisuals delivered to 185 institutions , including the 5 Community Colleges
- Computer networks in 180 institutions
  - Grade 10&11 Classrooms
  - Library
  - Resource Room
  - Staff rooms
  - Computer Laboratories

Additional Achievements to date

Re CREM

- Decision re CREM hosting taken by MOE Nov 2009, equipment and network delivered since July 2010, and training of technical staff completed (Supplier – Dell World Trade)

- CREM Coordinator identified early 2011, and discussions commenced re establishment of unit for managing the materials development, update and dissemination/access, and providing 24/7 support

Additional Achievements to Date

Re Training

- Basic ICT skills
  - Over 11,000 teachers, lecturers and Education Field Officers nearly 8,000 certified
  - 454 systems administrators
  - Nearly 200 Trainer of trainers
  - Online application developed
- Re Technology Integration
  - 3,988 teachers, lecturers and education officers
  - Online Application developed
- Re Masters degrees in Technology in Education
  - 15 lecturers granted scholarships British Columbia University, J$1mil each
  - 8 graduated in November 2010
  - now the Instructional Technology Lecturer at the College, bonded for 3 years

Additional Achievements to Date

Re Continuous Assessment

- Grade 9 Diagnostic test
  - Pilot in 28 schools in 2009 in English, Maths
  - rolled out to 150 schools in June 2010, adding Integrated Science,
  - marked centrally at e-Ljam using Multiple Choice Marking Software (Exam View), uses scanners provided by the project - results compiled by July 2010
  - administered in 173 schools in June 2011, adding Social Studies,
  - being marked by schools who have been trained in Exam view
- Grade 7 tests administered in June 2011
- Results started coming in 1 week after test administered
- Analysis and reporting done at e-Ljam under the supervision of the CXC Consultant

Re Remedial Component

- Technology Enrichment programme designed for 30 low-performing schools,
  - Selection based on poor performance in English and Maths, by students entering from GSAT as well as in the CXC and the Grade 9 diagnostic tests
  - Institution of a Volunteer Programme to assist the teachers of these subjects at the grade 7 & 8 levels
  - Provision of Integrated Learning Software in English and Maths, as well as other resources

Additional Achievements to Date

Re Remedial Component Continued

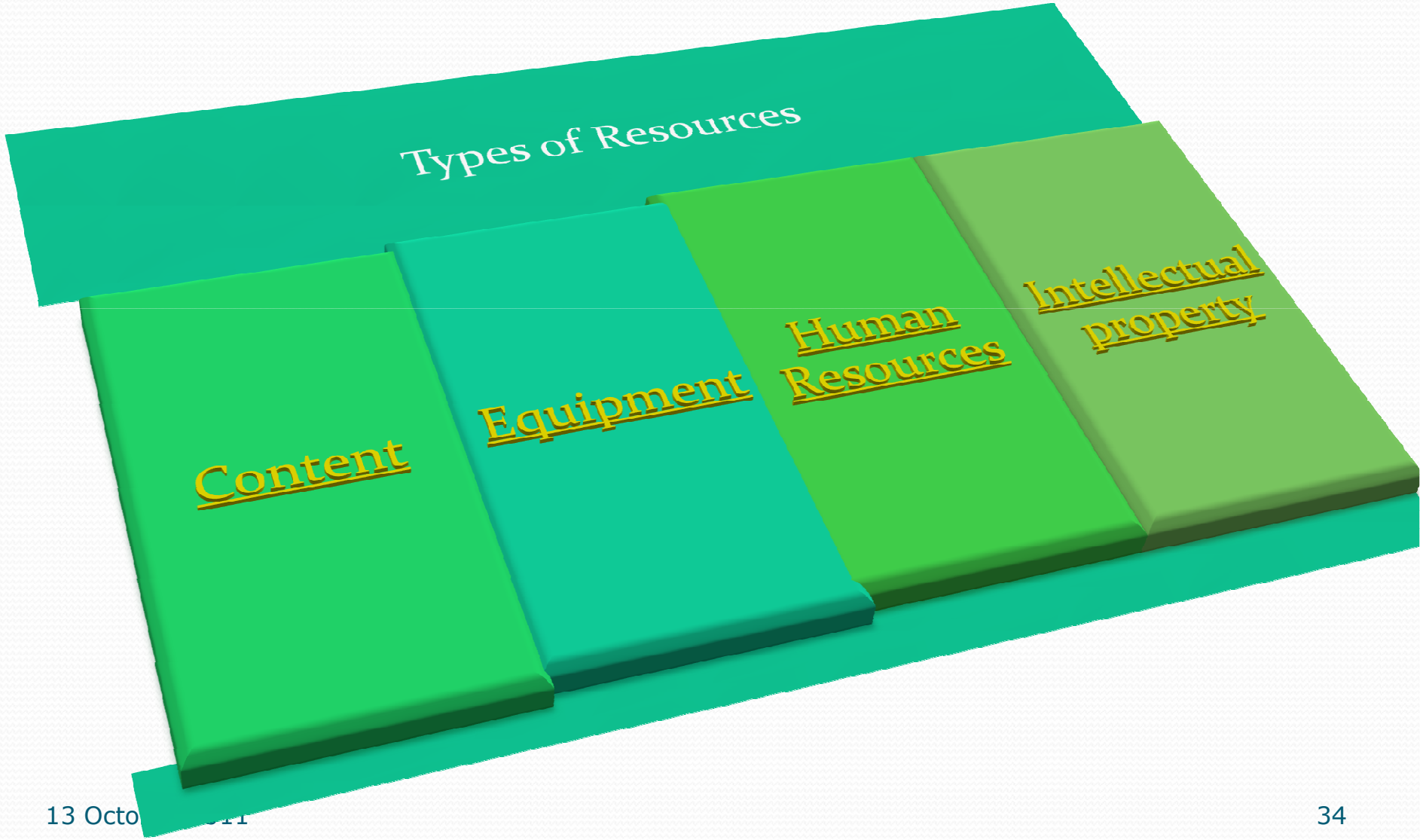
- Grade 7 diagnostic tests in English and Maths, pre and post tests
- Technology Planning Workshops
- Closer monitoring and support – increased visits and cluster meetings
- Reinforcement teacher training
- More frequent reporting

Additional Achievements to Date

Re Remedial Component Continued

- Involvement of Parents, Community, School Board
- Ensuring that the intervention interfaces seamlessly with the school's remedial programme and the MOE's Grade Seven Intervention Programme (GPIS)

- Volunteer Operation and Training Manuals developed, and volunteers identified, and training commenced


Types of Resources
Content
Equipment
Human Resources
Intellectual property

Content Resources

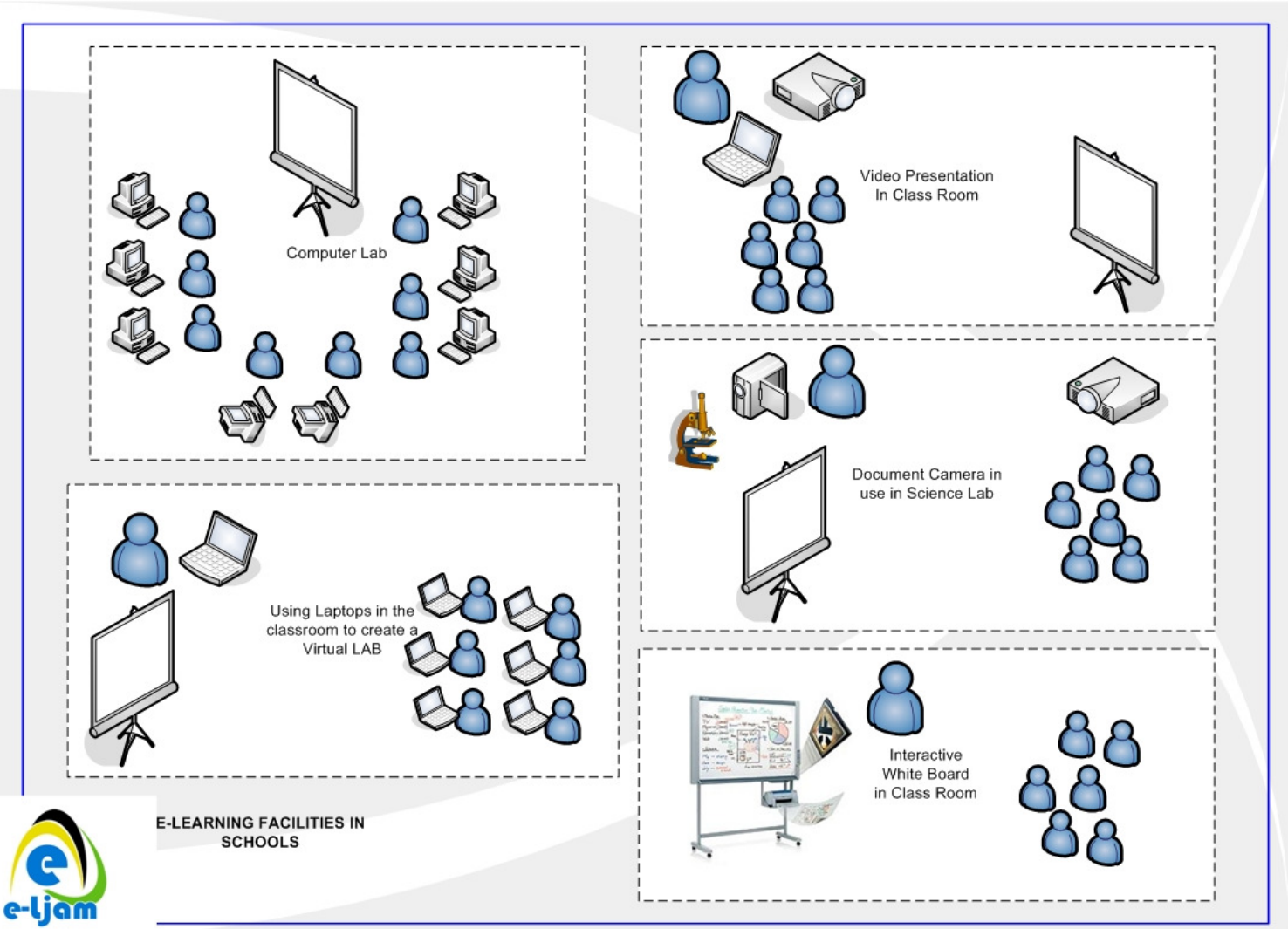
- Exciting Text
- CD-ROMs
- DVDs
- Power Point Presentations
- Video-taped lectures
- Database resources
- Interactive Software
- Item Bank
- Web-based resources

EXAMPLE OF CONTENT RESOURCE PROVIDED

Equipment Resources

- Desk tops
- Lap-tops
- Multimedia Projectors & Screens
- Interactive White Boards
- Document Cameras
- Digital Video Cameras
- DVD/CD Players
- Scanners
- Televisions
- Network connectivity

ICT's in use in project schools



E-LEARNING FACILITIES IN SCHOOLS

e-ljam

Trained Human Resources

- Teachers and lecturers trained
  - to levels 1 and 2 in ICT skills (NVTVET)
  - in Technology Integration (ISTE) – how to use the technology in instructional delivery
    - General Characteristics of Technology Tools and their Uses
    - Digital Devices
    - Using the Internet for Research and Teaching
    - Creating 2D and 3D Animations
    - Using Internet Communication Tools
    - Digital Stories
    - Web Quests and Treasure Hunts
    - Wikis
    - Blogs
    - Podcasts
    - RSS Feeds

Trained Human Resources

- Trainer of trainers for both aspects

- System Administrators trained to manage and maintain the integrity of the network, at least 2 per school
  - System Administration introduction
  - Dell Equipment Orientation
  - Network and Server Administration including Microsoft Server and Active directory
  - School Network build out and Virus Management
  - Advanced Microsoft System utilities
  - Advanced Systems Problem Solving
  - Web resources and Forum

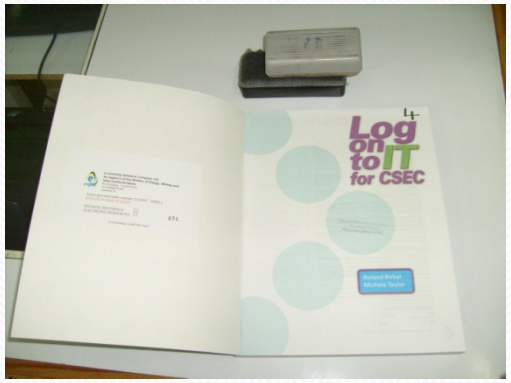
- Masters level trained Instructional Technology Lecturers in the Colleges

Trained Human Resources

Intellectual Property

- Virtual Assets that have IP value
  - Ideas
  - Designs
  - Images
  - Instructional Materials
  - Lessons
  - Vignettes
  - Stories
  - Theses
  - Power-points

Intellectual Property



Cost of Investment

Average investment per high school/teachers college

- **Equipment and Networks and related training US$142,000**
- **Materials and related training US$9000**
- **Training (HEART and Mico) US$25,000**

Additional US$11,635 per person for Masters training (15 lecturers)

Strategic Focus to March 2012

- To provide equipment to remaining 4 high schools and additional 16 independent high schools and special equipment to special schools,
- To provide whiteboards and mobile labs to all schools
- To complete establishment of the CREM (MOU for Broadband signed in May 2011)

Strategic Focus to March 2012

- To complete training and certification of teachers and lecturers, using the online application developed for the project
- To implement the technology enrichment programme to assist the selected schools in improving literacy and numeracy

Strategic Focus to March 2012

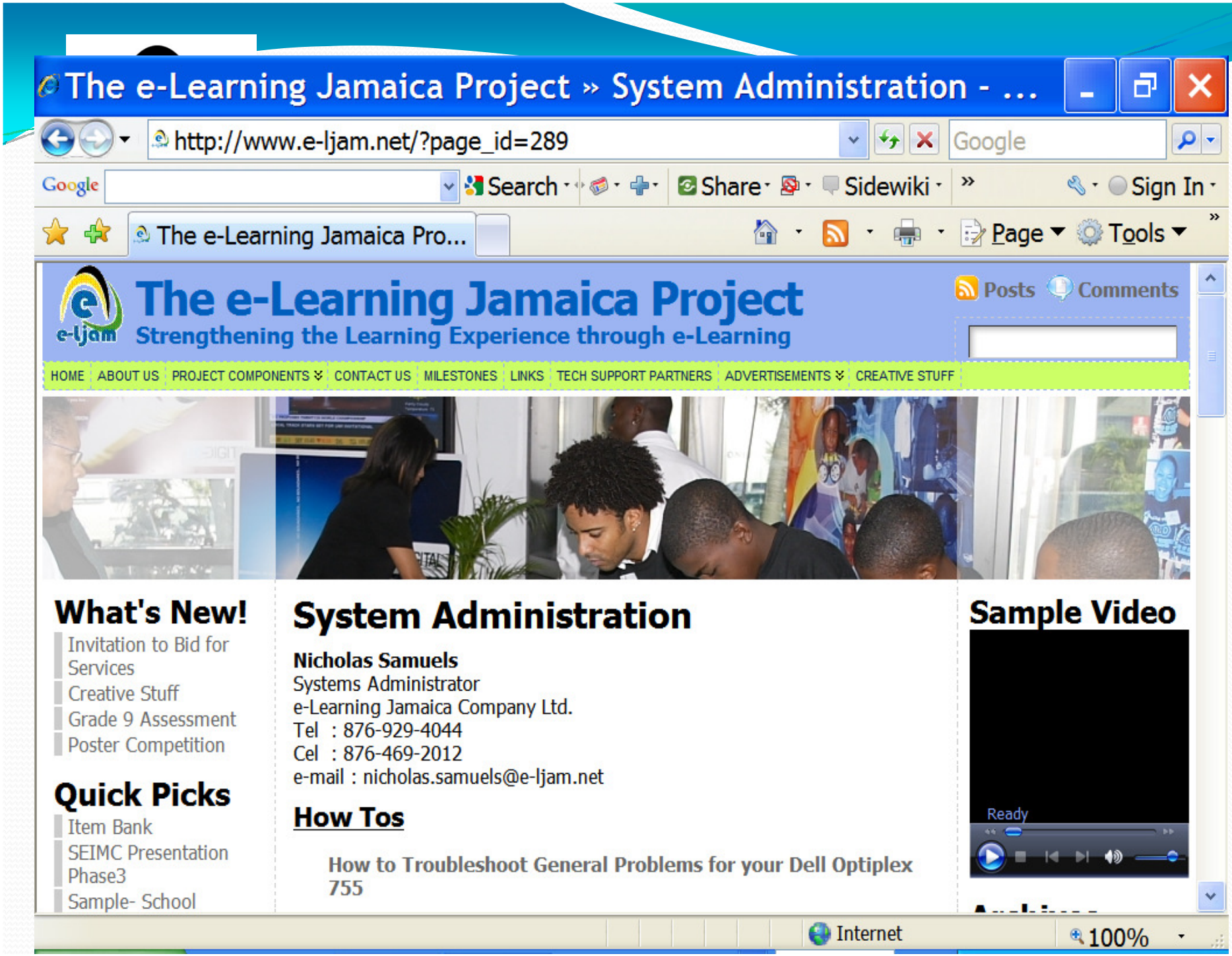
- To roll-out Chemistry materials to remaining 150 schools
- To complete sourcing and development of materials for additional 6 subjects
- To acquire/develop materials for grade 7-9
- To increase the Item bank for grades 10&11 to 22,000, 2000 for each subject, and for grades 7-9 to 5,000, 1000 for each subject
- To trial various educational software in selected schools (literacy, numeracy, CAD)

Strategic Focus to March 2012

- To handover elements of the project to MOE for institutionalization
- To develop Project #2 for Primary Schools
- To work with the schools to ensure proper Implementation and Resource Management strategies that seek to direct and control the use of resources to produce the best value from the investment and to ensure sustainability of the project interventions

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

- School Inventory and Knowledge database being maintained, periodic audits conducted
- Support provided through website, telephone, e-mail, Chat, Blogs, field visits
- Service level agreement in place for all equipment
- Technical and operational guidelines / standards /best practices provided


The e-Learning Jamaica Project » System Administration - ...
http://www.e-ljam.net/?page_id=289
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The e-Learning Jamaica Project
Strengthening the Learning Experience through e-Learning
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ADVERTISEMENTS
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What's New!
Invitation to Bid for Services
Creative Stuff
Grade 9 Assessment
Poster Competition
Quick Picks
Item Bank
SEIMC Presentation Phase3
Sample- School
System Administration
Nicholas Samuels
Systems Administrator
e-Learning Jamaica Company Ltd.
Tel : 876-929-4044
Cel : 876-469-2012
e-mail : nicholas.samuels@e-ljam.net
How Tos
How to Troubleshoot General Problems for your Dell Optiplex 755
Sample Video
Ready
Internet
100%

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

- Infrastructure Project Manager to assist schools in identifying contractors and liaise between e-Ljam and the MOE Building Officers
- Framework contract with suppliers to supply goods over period of time and give latest technology
- Electrical Consultant to sign-off on building works and electrical circuitry (paid for by MOE)
- Distinctive marking on equipment – logo on BIOS
- Training of System Administrators to ensure integrity of the school network

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

- Subject Specialists hired to manage the acquisition and development of content
- Subject Advisory Groups, led by MOE Officer, established to sign off on standards and ensure quality of materials developed/acquired
- Cluster workshops on materials provided to ensure appropriate and effective usage
- Teachers Colleges being equipped to ensure on-going professional development of teachers, both pre-service and in-service

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

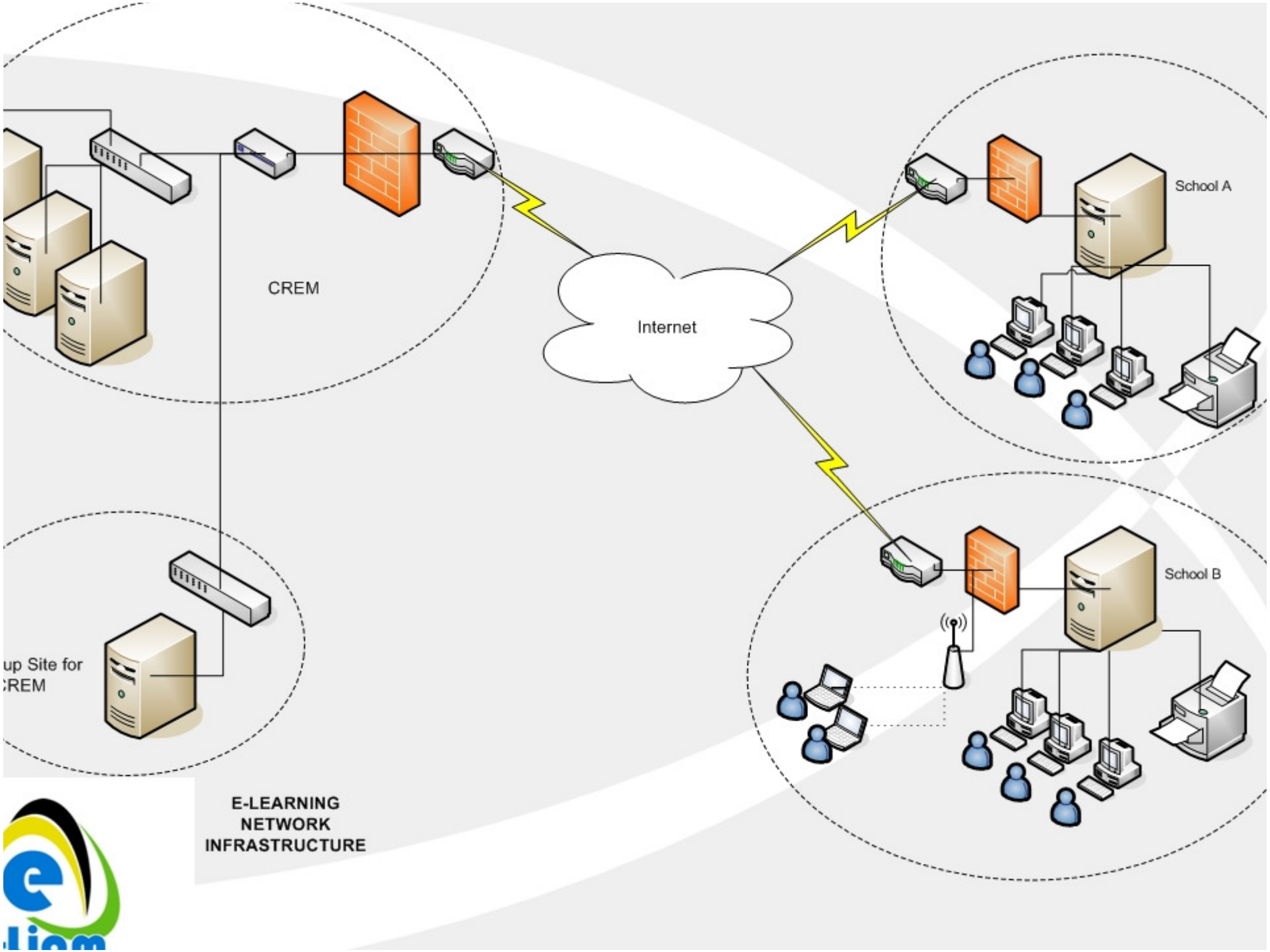
- School e-Learning Implementation Committee (SEIMC), comprising heads of departments , established to be responsible for the Steering/ Monitoring of the implementation of the project in the school
- Officers hired to monitor the implementation of the projects in the schools, includes regular visits and SEIMC cluster meetings for reinforcement /sharing / problem solving /monitoring, regular reporting
- MOE Officers part of the monitoring process

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

- Brokering adequate insurance coverage for the schools to participate if desired
- Lobbying for posts of Systems Administrator and Instructional Technology Lecturer to be added to school/college establishment
- Locks being installed to safeguard computers at the schools (incidence of theft reported thirty (30) schools, valued at US $115,289.40)

IMPLEMENTATION/SUSTAINABILITY STRATEGIES

- Looking at a workable maintenance strategy, eg use of the HEART Trust and Community College network to provide maintenance services as indicated in MOE draft ICT Strategic Plan
- Support in planning for technology sustainability
- Fully automated help desk system


CREM
Internet
School A
School B
up Site for
REM
E-LEARNING
NETWORK
INFRASTRUCTURE

Impact on Education System

Will revolutionize every aspect of the school system

- teaching,
- learning,
- administration

Impact on Education System

- **Teachers**
  - Greater proficiency in the use of ICTs by lecturers in the teachers colleges and high school teachers
    - lesson planning,
    - lesson delivery,
    - student evaluation,
    - marking,
    - reporting,
    - video presentations,
    - communication,
    - research,
    - networking,
    - accessing web-resources, etc
  - Inexperienced teachers will have a pool of standard high-quality materials to draw from

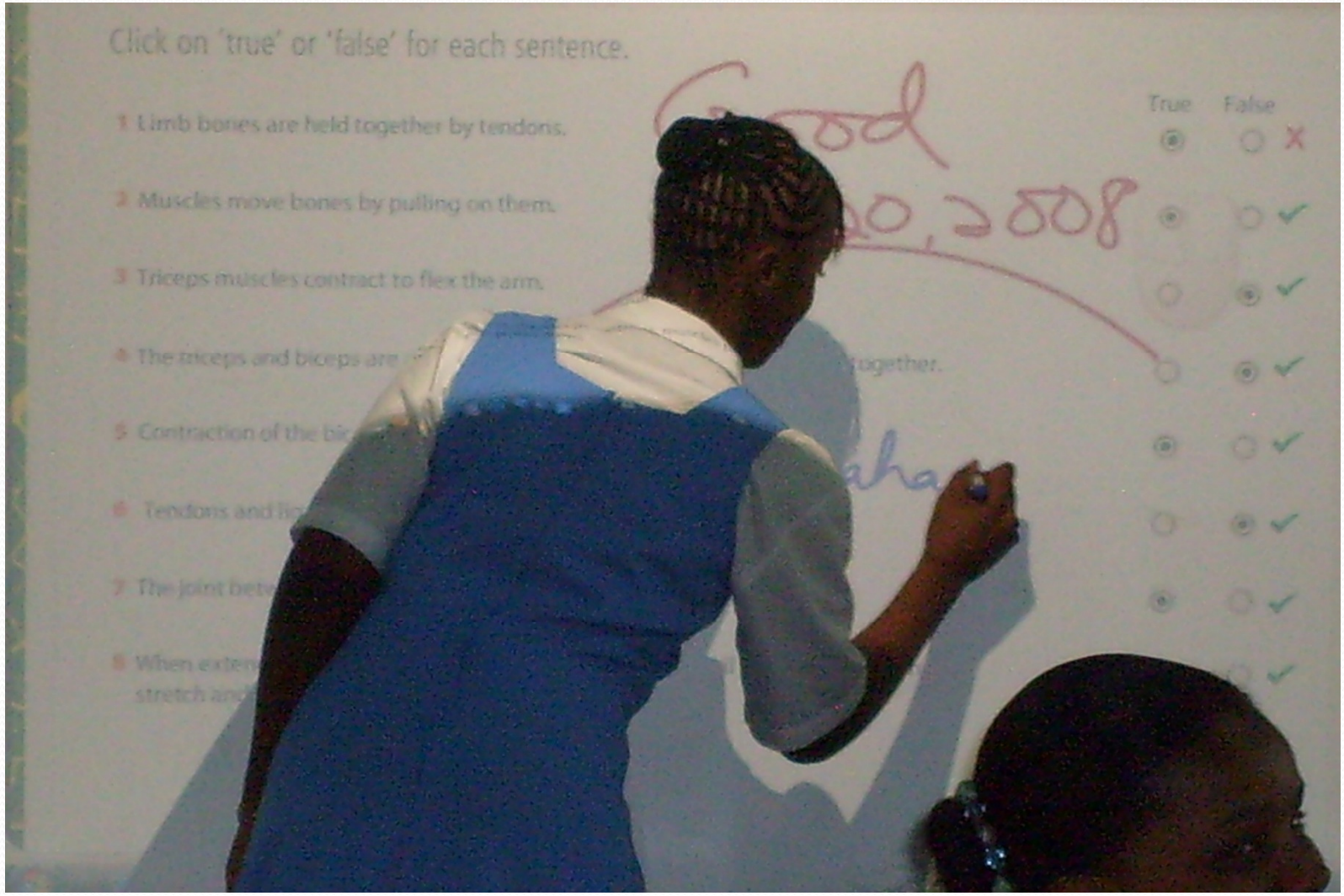
Impact on Education System

- **Teachers**
  - Better alignment between teacher communication methods and student interactive trends, eg
    - Use of Webquest to stimulate inquiry-based learning
    - Use of interactive whiteboards to stimulate interactivity
    - Use of video-cameras to stimulate creativity and innovation
  - Difficult concepts can be dealt with more easily and more excitingly
  - Content can be accessed to specifically deal with weaknesses identified from the Diagnostic tests

Impact on Education System

- **Learners**
  - Quest for knowledge encouraged
  - Increased interest in education
  - Teaching/learning process more exciting, especially for students who learn 'differently' or are disabled
  - Improved attendance at school
  - Increased participation of parents thru Cable TV, broadcasts, Internet
  - Contribution to improvement in passes at the school-leaving CXC CSEC examinations
  - School-leavers more equipped for the 21st century work – ICT skills, research skills, problem-solving/decision-making skills

USING THE INTERACTIVE WHITEBOARD



Impact on Education System

- **Administration**
  - Modernisation of school development planning
  - Greater efficiency in school operation
  - Improved decision-making since now data-driven
  - Increased and more efficient communication with stakeholders

Impact on Community/National Development

- Improvement in the quality of education between Grades 7-11 (Forms 1-5) in 188 high schools island-wide
- School-leavers better suited to the 21st century world of work
- Creation of local expertise in development of digital material and other technology-driven industries, with the possibility of exporting these services
- Greater appetite for internet and data-driven services
- Increased demand for affordable computers for teachers and students
- Project can be used as case study for project implementation nationally and regionally

DISCUSSION

THANK YOU

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