



ICT, EDUCATION AND SOCIAL TRANSFORMATION

COL's Experience in "Learning for
Sustainable Development" & Its
Relevance to Jamaica



COMMONWEALTH of LEARNING

K. Balasubramanian

ICT in Education
Conference 2016
EduVision

October 26, 2016, Ocho Rios,
Jamaica

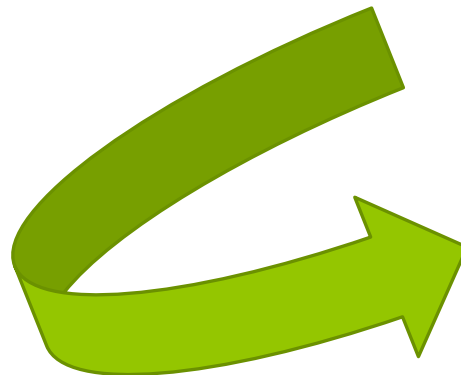


Jamaica and the Commonwealth of Learning

Active Partners



Sustainable Development Goals



Source: <http://www.worldbank.org/en/news/feature/2015/10/28/17-ways-the-east-africa-public-health-laboratory-networking-project-contributes-to-the-17-sustainable-development-goals>

<http://sdg.gdrc.org/post/128479353317/the-five-key-elements-5-ps-that-led-to-the>

GOAL 4

ENSURE INCLUSIVE AND EQUITABLE QUALITY
EDUCATION AND PROMOTE LIFELONG LEARNING
OPPORTUNITIES FOR ALL



SUSTAINABLE DEVELOPMENT GOALS

More at sustainabledevelopment.un.org/sdgsproposal

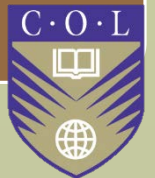
Goal 4

Quality education leading to effective **learning outcomes**

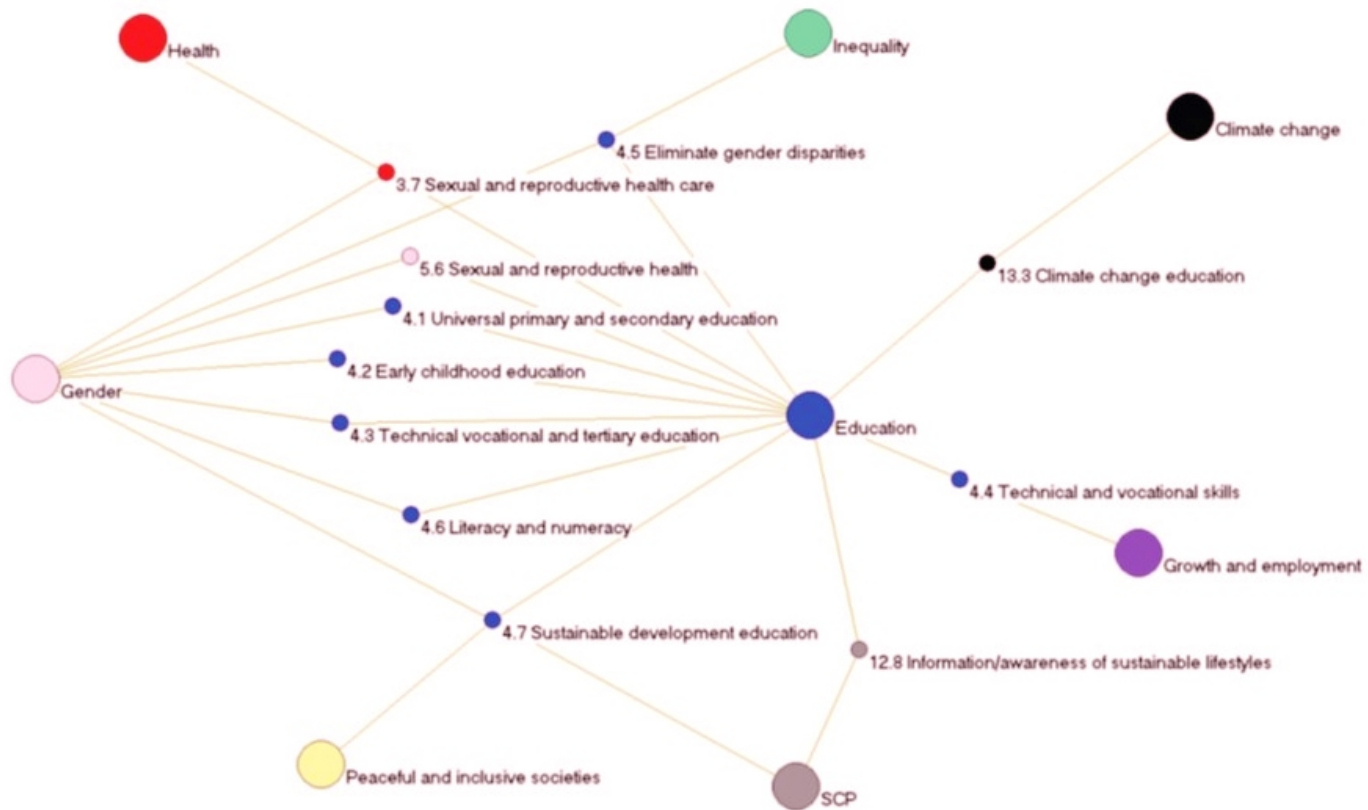
Skills for employment and entrepreneurship

Knowledge and skills for **peace** and **global citizenship**

Qualified **teachers**



Links between education and other SDGs through the SDG targets

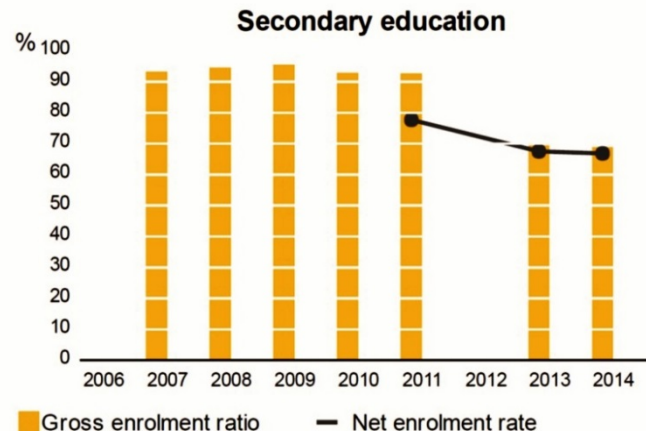


Source: Katia Vladimirova, David Le Blanc, DESA Working Paper No. 146 ST/ESA/2015/DWP/146, October 2015
<https://sustainabledevelopment.un.org/content/documents/2111education%20and%20sdgs.pdf>

GROSS ENROLMENT RATIO in Jamaica

Education	Male%		Female%		Total %	
	2009	2014	2009	2014	2009	2014
Secondary Education	94.2	66.3	96.9	71.5	95.6	68.8
Tertiary Education	14.4	17.1	33.6	39.0	23.7	27.8*

* Year 2013



Jamaica

Government Expenditure

Education expenditures

	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Government expenditure on education										
as % of GDP	...	5.49	6.19	6.2	6.37	6.27	6.12	6.26	6.03	...
as % of total government expenditure	...	17.17	19.12	17.55	16.1	18.58	18.81	20.57	21.8	...
Government expenditure per student (in PPP\$)										
Primary education	...	1423.56	1347.45	1513.94	1739.05	1692.68	1840.2	1926.12	1948.94	...
Secondary education	...	1635.75	2280.56	1976.13	1979.15	2112.59	...	2517.78	2000.99	...
Tertiary education	3610.15	4692.66	4314.22	3880.14	3143.83	3431.98

UNESCO Institute of Statistics

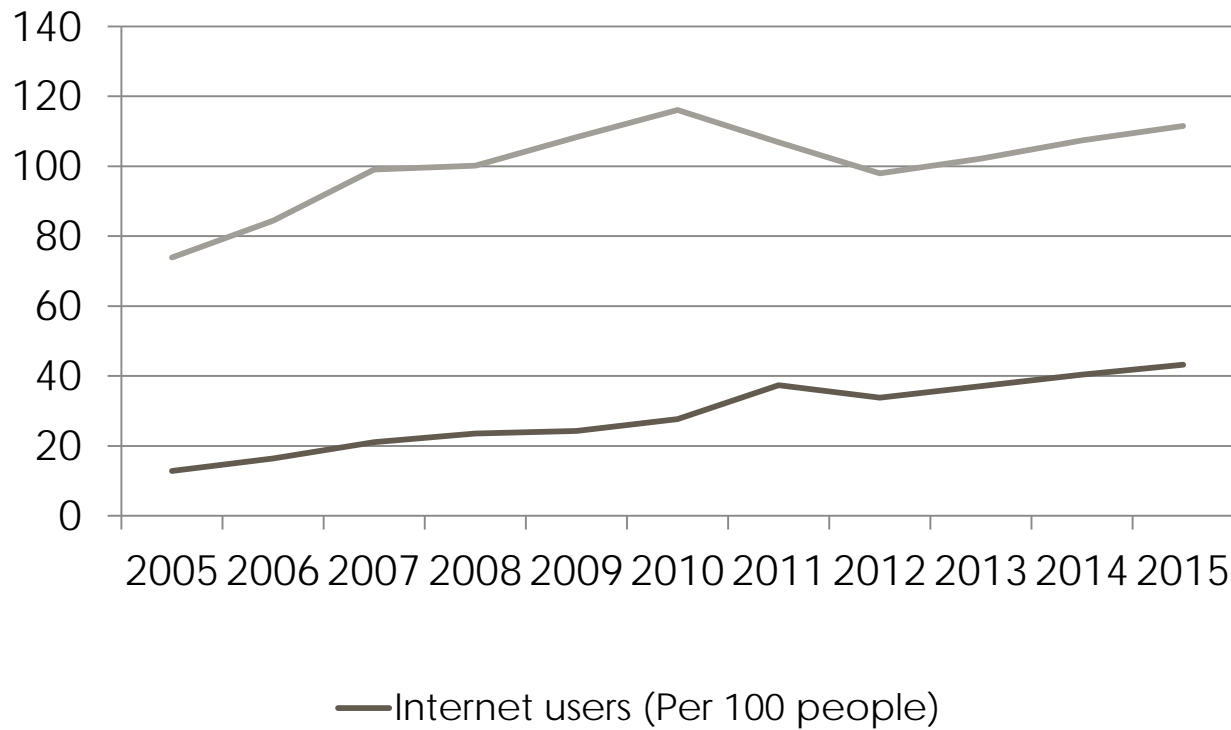
<http://www.uis.unesco.org/DataCentre/Pages/country-profile.aspx?code=JAM®ioncode=40520>

Strategic Objectives of the Ministry of Education, Youth & Information, Jamaica

- To strengthen the Gross Enrolment Ratio in Secondary Education
- To Strengthen the Gross Enrolment Ratio in Tertiary Education
- Improving Boy's Education in Secondary and Tertiary Education
- To Achieve Sustainable Development Goal 4 and Add Value to other Goals.

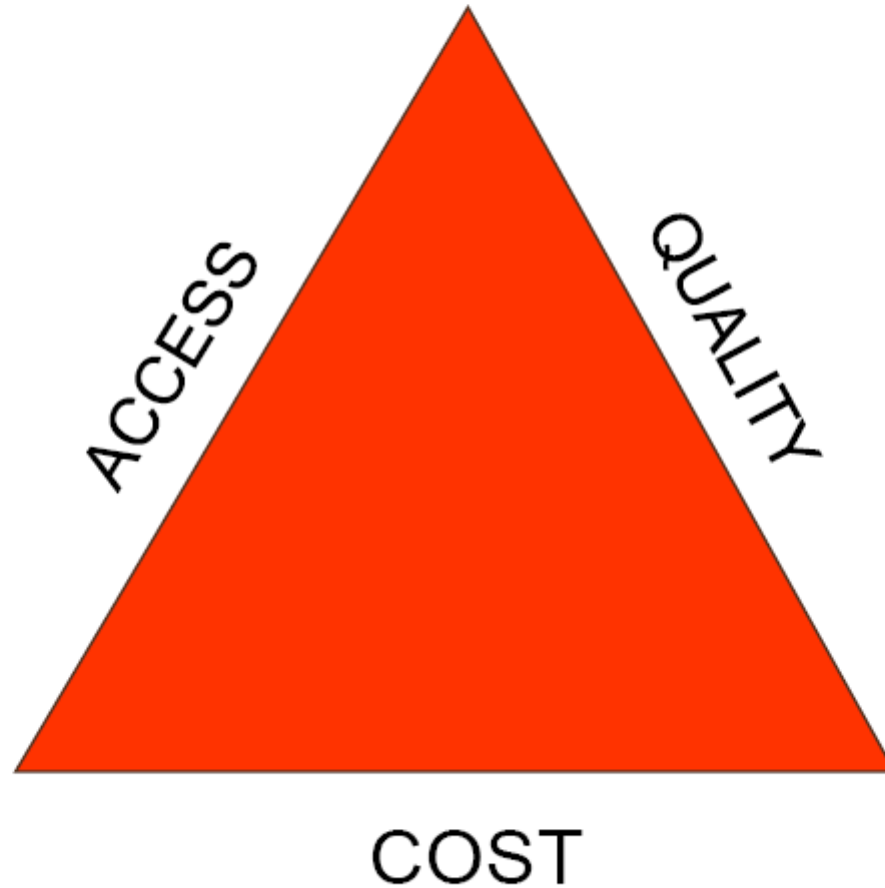
Source: <http://www.moe.gov.jm/content/mission-statement>

ICT in Jamaica 2005 - 2015



Source: [The World Bank DataBank](#), Retrieved on October 21, 2016

The Iron Triangle In Education

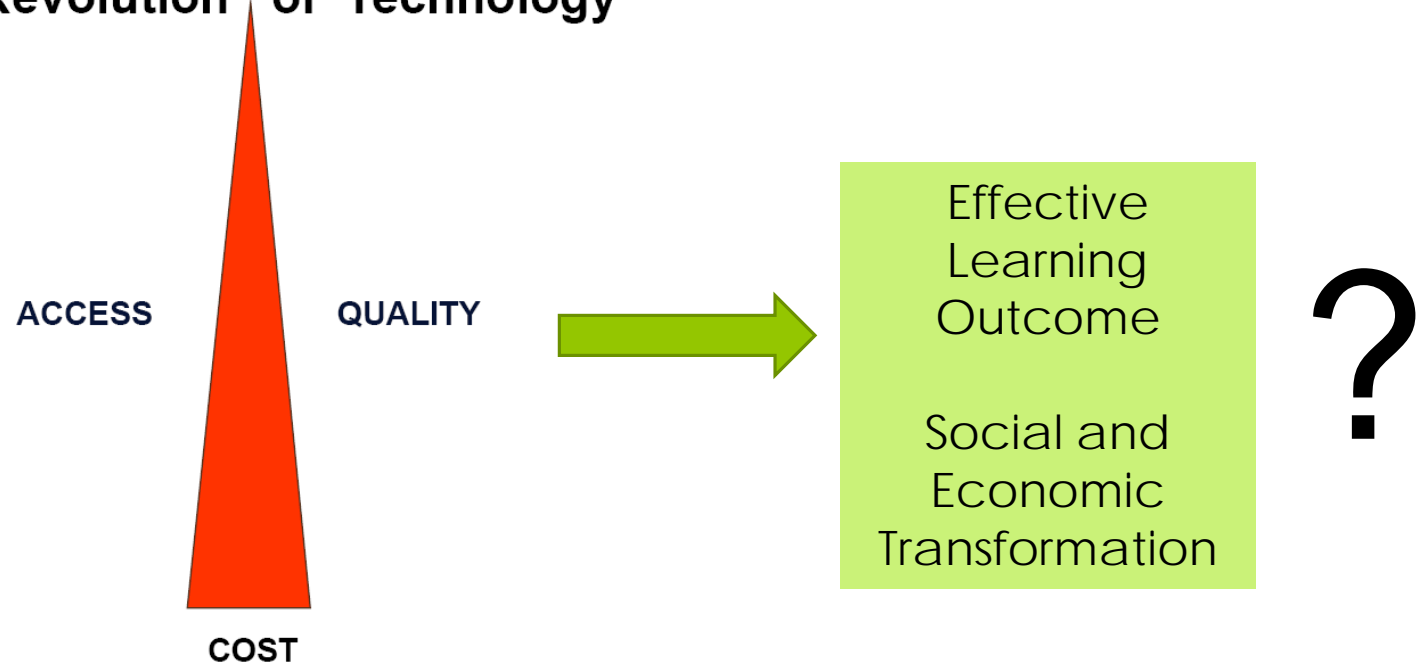


Source: <http://sirjohn.ca/wordpress/wp-content/uploads/2012/08/120917KNOUForumPPT.pdf>

Can ICT

- Widen the Access?
- Enhance the Quality
 - Reduce the Cost

The Revolution of Technology



ICT4D

the belief that there is a technological silver bullet that can “solve” illiteracy, ill health or economic failure reflects scant understanding of real poverty.

(HDR UNDP, 2011:iii)

http://www.np.undp.org/content/nepal/en/home/library/human_development/human-development-report-2001/



ICT4D

ICTs...have the potential to increase equality or to reduce them, depending on the social, political and economic contexts within which they are introduced

(Unwin 2009:7)

Unwin, Tim, ICT4D: Information and Communication Technology for Development
edited by P. T. H. Unwin, Cambridge University Press, 2009



Social Shaping of ICT

Learning Communities
facilitated in
domesticating ICT

Domestication of E-Learning in Higher Learning Institutions in South Africa

(Rabelani Dagada, University of the Witwatersrand, 2011)

How domestication
(commodification, objectification,
incorporation and conversion)
influenced the performance of
eLearning in South Africa

Source: Dagada , Rabelani, *Domestication of E-Learning in Higher Learning Institutions in South Africa*, Global Learn, Mar 28, 2011 in Melbourne, Australia

Dagada, R. (2011). Domestication of E-Learning in Higher Learning Institutions in South Africa. In S. Barton, J. Hedberg & K. Suzuki (Eds.), *Proceedings of Global Learn 2011* (pp. 2285-2293). Association for the Advancement of Computing in Education (AACE).

ICT can play a role

Mobile telephones, community radios, increasing internet-potentials yet to be optimized

ICT is not just an issue of technology: content, connectivity, financial, economic and social viability and ability to reduce transaction costs and opportunity costs

But ICT alone cannot do it. A Paradigm shift is required.

Conventional Approach

Framework	For
Pedagogy	Children. Teacher and Institution determine the learning process
Andragogy	Adults. Self-directed Learning with institutions facilitating
Heutagogy	Adults. Self-Determined Learning

Paradigm Shift

- Lifelong Learning is the combination of pedagogy , andragogy and heutagogy.
- ICT has enabled children to move towards self-directed learning and self determined learning . Hence Pedagogy alone is insufficient.
- Singapore discussing fostering Self-Directed Learning among students in formal schooling. Training Teachers to facilitate such learning.

Source: <http://ictconnection.moe.edu.sg/ictconnection/slot/u200/mp3/monographs/self-directed%20learning%20with%20ict.pdf>

What is Open Schooling?

- The physical separation of learner from the teacher
- The use of unconventional teaching methodologies, and information and communications technologies (ICTs)
- Flexible approach

Effectiveness of Open Schooling (Partners of COL)

	Namibia	India	Belize
Cost per student in Open School	1,262 (ZAR)@	1,151 (INR)@@	
Cost per student in regular school	5,346	14,817	
Number of Students Reached	Around 30,000	Around 2.2 Million	
Social Return on Investment			8.16 : 1@@@

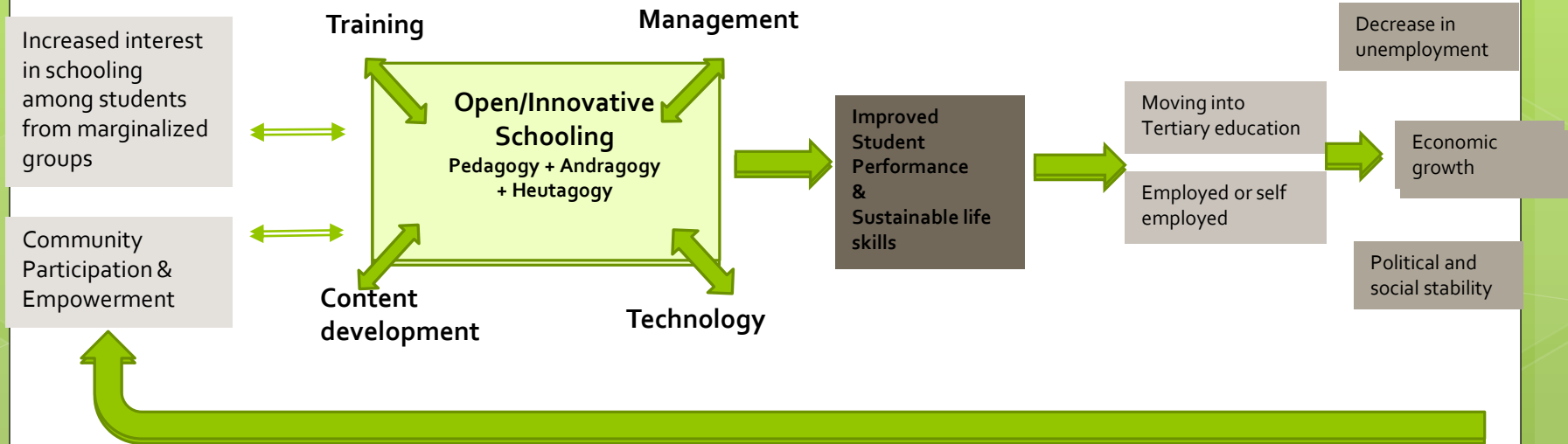
@ 2007-08

@@ 2004-05

Rumble and Kaul, 2007 **Open Schooling for Secondary & Higher Secondary Education: Costs and Effectiveness in India and Namibia** <http://oasis.col.org/handle/11599/228>

@@@: Ed Du Vivier, 2016, http://dspace.col.org/bitstream/handle/11599/1777/2016_COL_Value-for-Money-Analysis-Open-Schools-Vanuatu-Belize.pdf?sequence=1&isAllowed=y

Open Schooling....



Can Open Schooling arrest the declining GER in Jamaica?

Created by the
Heads of
Commonwealth
through CHOGM

Intergovernmental
Organization of 52
Commonwealth
Countries.
represented by the
Ministries of
Education

COL's VISION

**Access to
Learning
is
the Key
to
Sustainable
Development**

Learning for Sustainable Development



Economic
Growth



Social
Inclusion



Environmental
Conservation

MISSION

To help governments, institutions to expand
the scope , scale and quality of learning by
using new approaches
and technologies especially
those subsumed under the general term
of
Open and Distance Learning
and
link the learning to sustainable development



COL Programme

Education

- Open schooling
- Teacher Education
- Higher Education
- VUSSC
- GIRLS INSPIRE (Special Project)

SKILLS

- TVSD
- Learning for Farmers
- Technology Enabled Learning (TEL)
- OER for Skills Development (Special Project)

Gender

models

policy

capacity

materials

partnerships

Higher Education: COL in Jamaica & Caribbean

- University of Technology piloted the Commonwealth of Learning Review and Improvement Model (COL-RIM) for enhancing quality
- The University College of the Caribbean offers Commonwealth Executive Master of Business Administration (CEMBA) and Master of Public Administration (CEMPA) programme

Teacher Education: COL in Jamaica & Caribbean

- helped Joint Board for Teacher Education to convert 8 face-to-face B.Ed. modules for online delivery.
- JBTE developing and piloting of special education assessment instruments which are culturally appropriate for Caribbean students.

Virtual University for Small States in Commonwealth (VUSSC)

- Jamaica-Active role in Transnational Qualification Framework (TQF)
- TECHNICAL AND VOCATIONAL TEACHER TRAINING (TVET) Courses for University of Technology
- Partnership with UWI, Mona Campus

VUSSC OER Courses

- Sustainable Tourism
- Disaster Management
- Port Management - Stevedoring
- Sustainable Agriculture for Small States
- Bachelor in Business and Entrepreneurship
- Master in Educational Leadership

TH 002 - Introduction to Sustainable Tourism

Home > Courses > Tourism and Hospitality > Tourism 002

NAVIGATION

- Home
 - My home
 - Site pages
 - My profile
- Current course
 - Tourism 002
 - Participants
 - Badges
 - Course Information
 - Course Introduction
 - Unit 1: Introduction to Sustainable Tourism
 - Unit 2: The Impact of Tourism
 - Unit 3: Carrying Capacity as a Management Tool
 - Unit 4: Scope of Sustainable Tourism
 - Course Summary
 - Courses
- ADMINISTRATION
 - Course administration
 - Turn editing on

Course Information

This section is used to introduce your instructor and as a place v Course News/Announcements forum. You can also communica

- Your instructor
- Instructor Expectations
- Course News and Announcements
- Class Cafe
- Course Chat Room

Course Introduction

This unit provides an introduction to your course and a list of ins

- Course Description, Assignments & Schedule
- Student Introductions
- Course References

Welcome to BBE

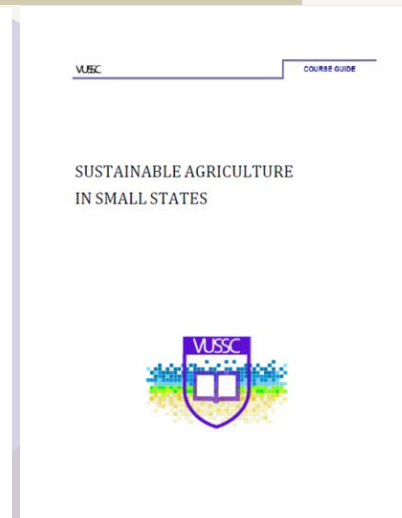
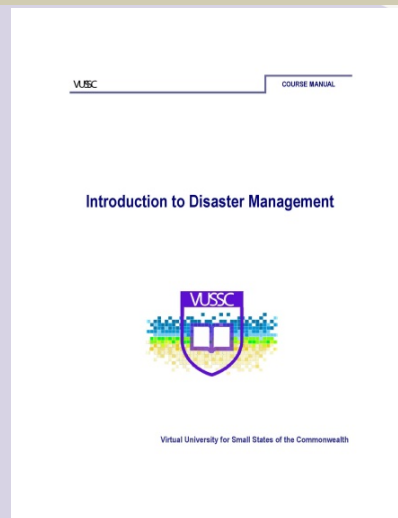


Welcome to the Bachelor of Business & Entrepreneurship (BBE) programme. This section describes the BBE and its curriculum. It also includes programme and course news and announcements and a chat line you can use to connect with online peers.

- BBE Curriculum Description
- Course News and Announcements
- Navigating Moodle - An Introduction
- Technical Support
- BBE Cafe

▶ Educational Leadership

- Module 1 : Higher Education in a Global World: The Context of Quality Assurance
- Module 2 : External Quality Assurance
- Module 3 : Operating an External Quality Agency
- Module 4 : Maintaining Quality within the Institution



Technical Vocational Skills Development (TVSD)

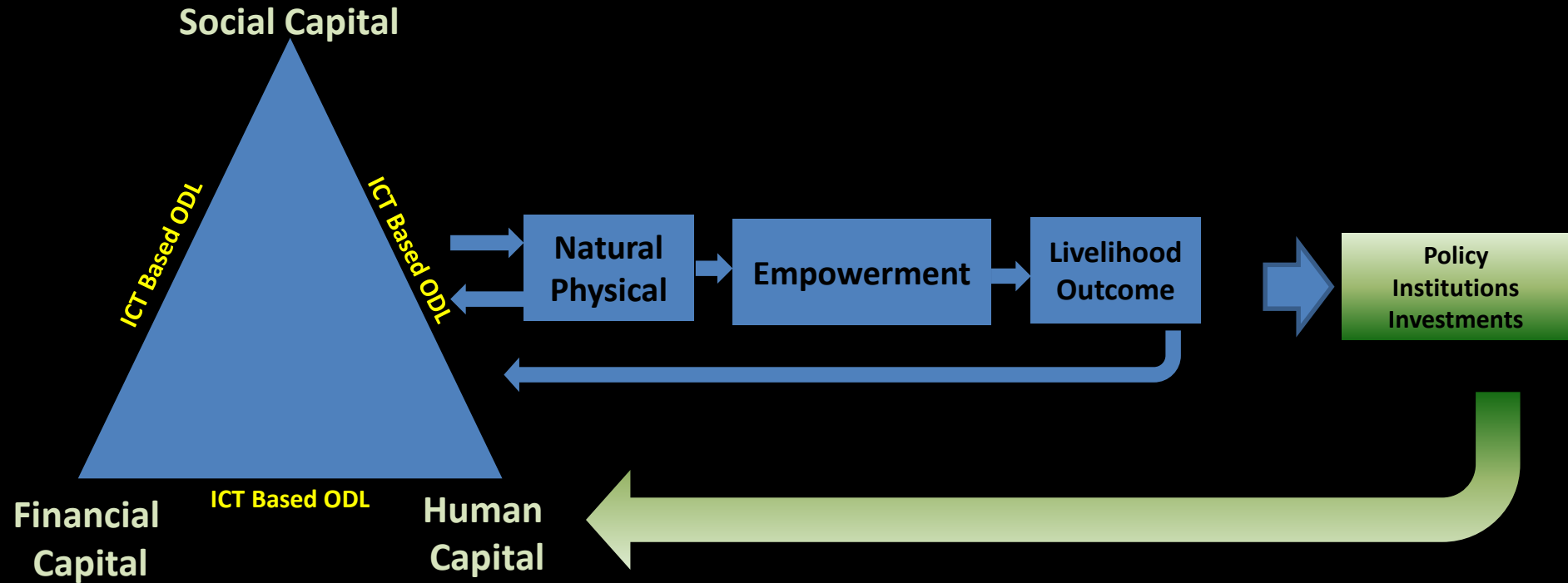
- Capacity building for online materials development to strengthen their online learning programme; training in online materials development and training in instructional design of HEART Trust NTA staff; Training in flexible TVET systems and quality assurance for HEART Managers

Lifelong Learning for Farmers (L3F)

With Rural and Agricultural Development
Authority (RADA)

- Mobile Phone Based Extension System
- Capacity Building Programme for
Extension officers through eLearning
- Strengthening Gender Policy
- Online Repository on Agriculture

L3F Model & Replication



L3F & Paradigm Shift:
Extension is converting Social Capital into Social Learning Capital & Livelihood

Outcomes & Impacts of L3F in Six Years

Every **\$1** invested in learning, facilitation and networking resulted in **\$9** worth of income and assets

100% Prompt Repayments to Financial Institutions which earned **8 times more income** from L3F farmers for the same product compared to non L3F farmers in the same region

Cost of Training and Capacity Building: **Six times less** than that of the agricultural extension and bank trainings



Improved Food Security in Kenya & Uganda

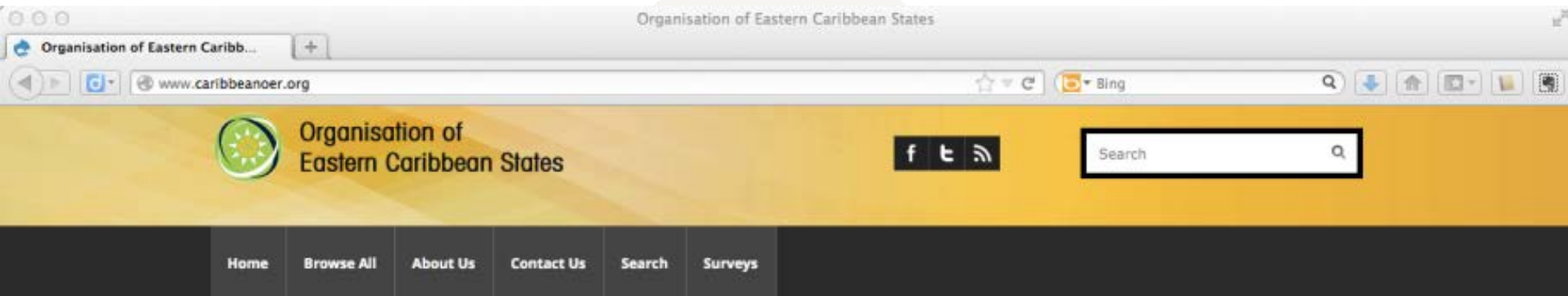
Open Educational Resources (OER)

- Education is **sharing**.
- OER is a **participatory, consultative Process**
- OER enable extremely **efficient and affordable sharing**.
- OER can be freely copied and shared (and revised and remixed) **without breaking the law**.
- OER provide an immediate way to make education significantly **more accessible** for students.
- OER provide instructors with free and legal permissions to engage in **continuous quality-improvement** of resources.
- OER represent multiple **opportunities for innovations** in the teaching and learning context, and enable **better personalization** of instruction.

World OER Congress

- In 2012, with the support of COL, UNESCO member States unanimously approved the 'recommending States to foster awareness and promote use of OER
- During 2017, UNESCO, COL and Government of Slovenia organising the 2nd World OER congress with the theme "OER for Inclusive and Equitable Quality Education: From Commitment to Action" to make it relevant to SDGs

Open Textbooks



Welcome to the OER Textbook and Repository

Online OER Textbook

The Caribbean Examinations Council (CXC) Caribbean Secondary Education Curriculum (CSEC) mathematics syllabus has been used to guide the selection and sequencing of quality Open Education Resources (OER) to create a free textbook or online course. The resources have been collected and vetted by experienced mathematics teachers and organised to allow a 'reader' gain mastery of each of the CSEC topics and objectives. The topics available for study include:

1. Computation
2. Number Theory
3. Consumer Arithmetic
4. Sets

Attribution

The following contributions are acknowledged:

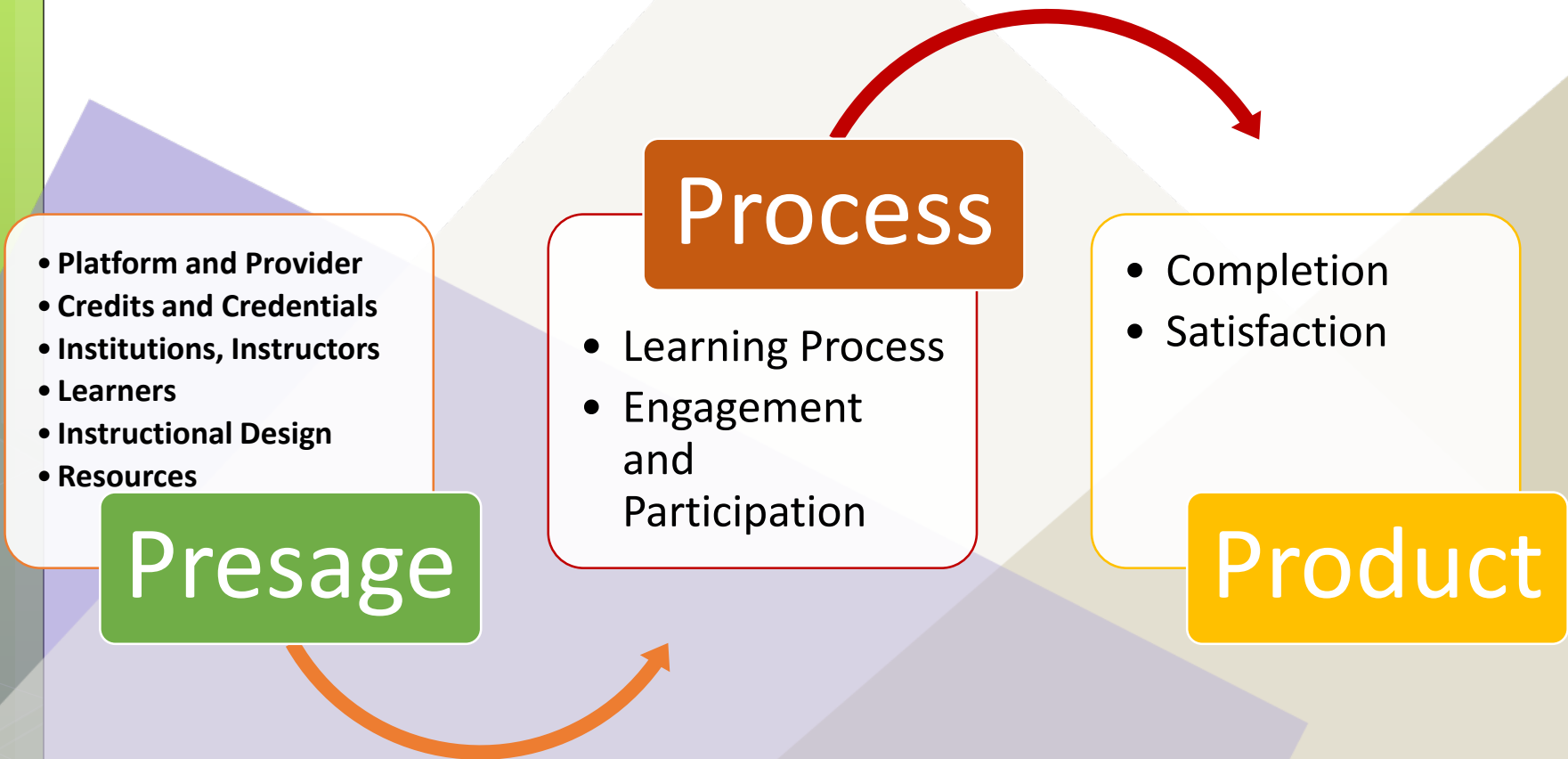


<http://www.caribbeanoer.org>

Massive Online Open Courses (MOOCs)

- Provide access to quality learning at low costs
- Build capacity at scale
- Foster innovative uses of technologies, such as mobile devices
- Improve learning outcomes, through the use of alternative pedagogical approaches
- Be integrated within national quality assurance frameworks

Guidelines for QAA of MOOCs



Malaysian MOOC Credit Transfer

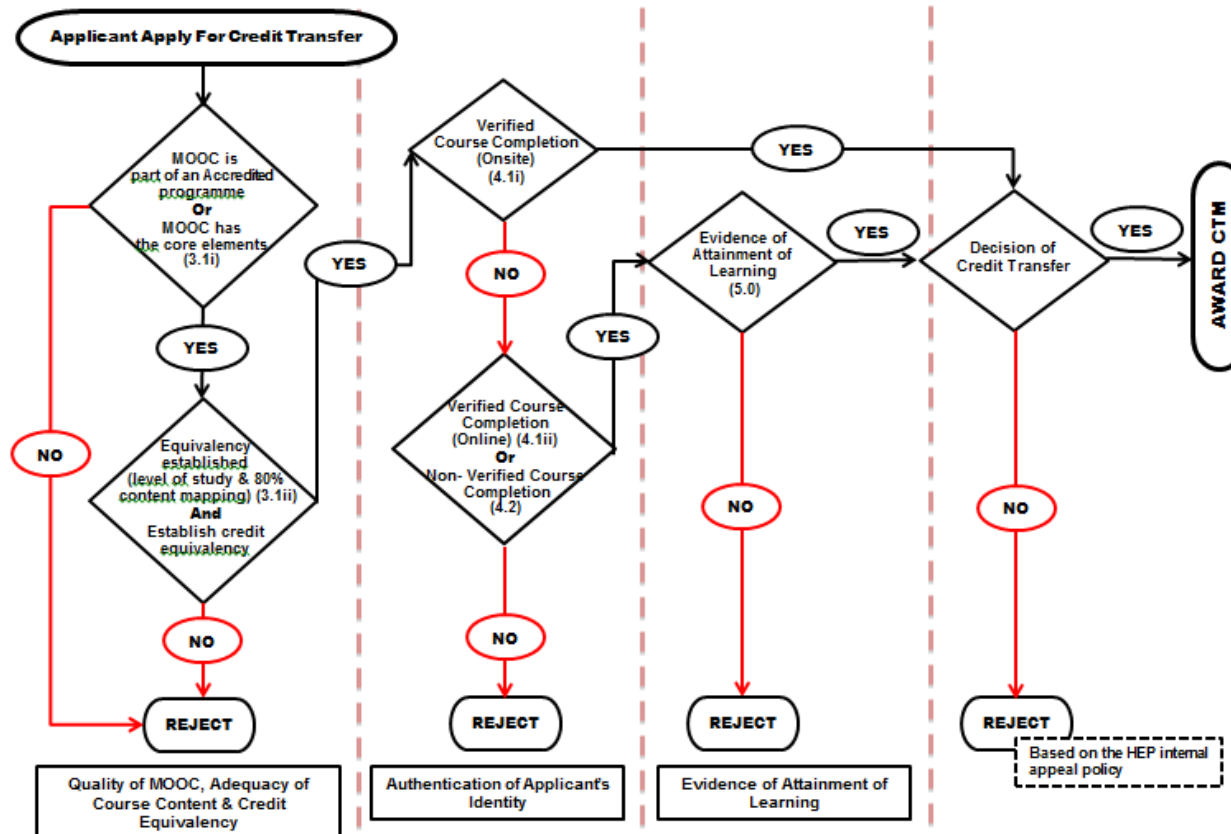


FIGURE 1: EVALUATION PROCESS ON CREDIT TRANSFER FOR MOOCs

Guideline of Credit Transfer for MOOCs I25



Aptus

Off-Line Wi Fi System

-High impact at a low cost:
-USD 150



Schools in Samoa, Fiji , Vanuatu and Pakistan have started using Aptus in the classroom

Aptus: Classroom without walls

Multiple students can access the materials hosted on the server using their own tablets or mobile devices.



Photo credit: to EU Humanitarian Aid and Civil Protection CC BY-SA 2.0

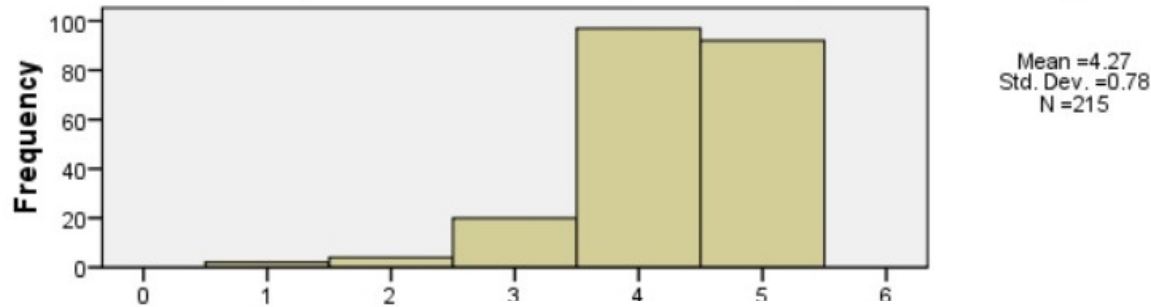


Photo credit to Linux Devices

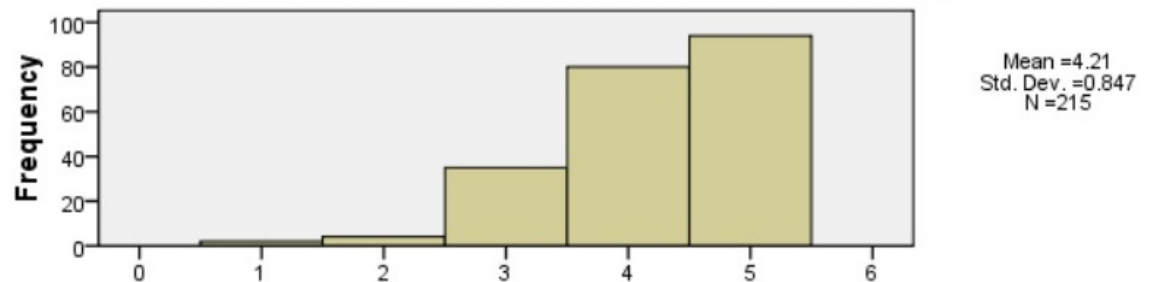
The Classroom Without Walls is off-grid and offline; It can be set up anywhere without need for access to electricity or the internet. Can be accessed through mobile, tablets and computers

Study by National University of Samoa on the use of Aptus

Using the aptus makes teaching and learning more interesting



Using the aptus has enabled me to learn new things



Source:

An Evaluation of the usefulness and ease of use of the Aptus within the Samoan education context: Findings of the Phase 1 Trial at the National University of Samoa Ioana Chan Mow, Mose Mose, Tara Patu, Elisapeta Mauai, Edna Temese, Joseph Namulaulu, Fiafaitupe Lafaele, Agnes WongSoon, Vensall Chan, Misioka Tanielu, Eileen Hazelman , 2016

Conclusion

- ICT by itself will not bring the change
- Paradigm shift in the educational theory and practice of education is a precondition for ICT integration
- Local Innovation System is a must for placing ICT in an appropriate socio-economic and cultural context.

Jamaica: A country of innovation

- You gave a new meaning to music (reggae music)
- You gave a new meaning to sports (a tropical country in bobsled).
- You can give new meaning to ICT in Education. Jamaica has potential to be a leader and a role model in this area.



Thank You