# South-South-South collaboration:
# Using e-mail to develop ICT policy in African polytechnics

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## ABSTRACT

The Commonwealth Association of Polytechnics in Africa (CAPA) with support from the Commonwealth of Learning (COL) is assisting its members to develop relevant institutional policies to support the use of information and communication technologies (ICTs) for open and distance learning in their respective contexts.

The participating polytechnics are Ho Polytechnic in the Volta Region of Ghana, Kenya Polytechnic University College in Nairobi, Kenya, the Technical and Vocational Teachers' College in Lusaka, Zambia, and Eastern Polytechnic, in Kenema, Sierra Leone. Authorised by the heads of their respective institutions, designated staff members in these four polytechnics worked with an ICT policy developer experienced in ODL who lives in the Caribbean to develop a viable framework for an institutional ICT policy that can be used both in African polytechnics and shared more widely to draft relevant ICT policies supporting open and distance learning in a tertiary educational context.

Using traditional methods of face-to-face meetings at some location central to the four institutions located on opposite sides of the African continent would have been impractical because of the cost; however, the collaborative use of Dgroups, a relatively simple and innovative software platform developed and supported by Bellanet of the International Development Research Centre (IDRC), allowed designated individuals to communicate and share electronic resources with each other via e-mail, making discussion and communication among the participants both economically viable and convenient.

This paper will present the background of the initiative and its progress from conception to final product. It will highlight the successes and challenges in using the Dgroups modality to develop institutional ICT policy to support open and distance learning (ODL) in TVET, and present the policy framework emerging from the initiative.

## BACKGROUND

There is a significant body of current literature predicting that in the 21st century, technical and vocational education and training (TVET), which has traditionally been the "poor relation" of the formal school system, will be vitally important in the education systems of developing economies and post conflict countries to enable them to improve their societies and the quality of life of their citizens. To facilitate the growth of work-related opportunities, international funding institutions and development agencies are encouraging educational institutions to provide increased access to TVET through the use of distance learning modalities including e-learning and information and communication technologies (ICTs).

On its portal (http://portal.unesco.org/education/en/ev.php-URL_ID=41685&URL_DO=DO_TOPIC&URL_SECTION=201.html) UNESCO has the following observation about ICTs and TVET:

> …In the field of TVET, ICTs have the potential to expand access through distance learning, revitalize training methods and curricula, enable customized learning and strengthen links with the world of work. Through

ICTs, students develop vital skills in collaboration, interaction and independent learning, while gaining valuable experience…

Nonetheless, the decision to adopt ICT-mediated learning for TVET requires careful consideration… [before] integrating the use of ICT into …TVET programmes… developing policy frameworks, renewing curricula and promoting international cooperation and dialogue on issues linked to ICT.

On its website,
(http://www.col.org/colweb/webdav/site/myjahiasite/shared/docs/Policy_web.pdf) COL observes,

A conducive policy environment directly influences an education initiative's success and can help countries regulate educational quality within their jurisdictions. Thoughtfully designed ODL-specific policies… integrated into existing education and development policy …help increase access to ODL… develop skills training programmes …provide a realistic budgetary framework and incentive to adopt cost effective teaching and learning options, and direct the expansion of education-related infrastructure, such as information and communications technologies (ICTs).

The need for an appropriate policy framework to underpin educational innovation is a fundamental element for the success of such initiatives. There is also need to pay close and thoughtful attention to the drafting of ICT and e-learning policies in the context of open and distance learning (ODL) and TVET programmes.

In May 2007, the Commonwealth Association of Polytechnics in Africa (CAPA), with COL's support, held a conference in Freetown, Sierra Leone to explore the role that ICT-supported ODL could play in TVET in the African polytechnic context. The consultation was entitled, "Integrating ICT and e-learning into TVET." More than 100 participants from polytechnics and other tertiary institutions in 13 African countries, representatives of CAPA and COL and a facilitator from Jamaica took part in this important meeting. At the opening of that consultation, Sierra Leone's Minister of Education, Science and Technology observed,

…Even the black African school system [at the end of colonialism] only accepted "the best" and excluded the masses of people needed to meet the development needs of countries… Quality education used to be equated with the study of the classics… the measure of quality today is TVET.

At the conclusion of the conference, following the publication of a joint statement reflecting the results of the meeting, a several CAPA member institutions expressed an interest in working collaboratively to draft a template or standard framework for institutional policies to underpin the introduction and management of distance education in a polytechnic setting, including, where relevant, policies governing the use of ICT in distance offerings in TVET. In response to this stated interest, CAPA asked for COL's support to launch a project that would engage identified staff members and their institutional leadership in an ICT/ODL in TVET policy development initiative.

As a first step, at the end of August, 2007, the CAPA Secretariat and COL circulated a questionnaire to the CAPA member institutions, requesting that those who wanted to participate in the policy development process for ICT/ODL and TVET indicate their interest by completing and submitting the questionnaire by mid-September 2007.

Polytechnics in Kenya, Zambia, Sierra Leone and Ghana responded to the invitation. The facilitator recruited to assist in the policy development process – who had facilitated the Freetown consultation - was located in Jamaica. Given the fact that the institutions and the facilitator were physically located so far apart – West Africa, East Africa, Southern Africa, Vancouver and Jamaica – the stakeholders agreed that it was neither possible nor cost-effective to bring the participants to a central location to develop the policy framework face to face. Therefore, they agreed that the initiative would be constructed in two phases. The initial phase would link the participating polytechnics, the CAPA Secretariat, the COL Learning and Livelihoods Specialist and the facilitator virtually to draft the policy framework. Participants would draft the wording of potential ODL policies addressing ICT and e-learning issues specific to TVET institutions planning to or already engaged in offering their programmes by distance and critique each other's contributions. In the second phase, Heads of the polytechnics engaged in the process would meet in a central location to review, reach consensus on and adopt the agreed policy framework on behalf of their institutions.

COL and CAPA initiated the policy development process in February 2008; the project was anticipated to be completed in mid-May 2008 with the Heads of institutions' formal acceptance of the policy framework.

**OBJECTIVES OF THE POLICY DEVELOPMENT PROJECT**

The objectives of and activities in the joint policy development initiative were articulated in the facilitator's Terms of Reference:

- o ...Establish a Bellanet discussion forum with… the four participating institutions, the CAPA Secretariat and other designated stakeholders… to enable them to… draft an institutional policy for ODL and the use of ICTs in teaching and learning that is relevant to their respective circumstances and planned use … in the next five years.

- o Review and discuss with the Forum participants through regular … posts [on the Forum] policies of similar countries and documentation from each of the four institutions posted in the Resources Section of the discussion forum…

- o Moderate a time-bound virtual discussion on "Issues and Considerations in the Development of ICT Policy for TVET Institutions", providing hyperlinks to other information on the web and answering related questions prompted by the discussion.

- o Assist participants to draft ICT and ODL policy for their respective institutions by providing models for them to examine and adapt for their use.

- o Assist the representatives of the four polytechnics to prepare a final draft of the ICT/ODL policy for their respective institutions for signature during the May consultation in Tanzania.

- o Prepare a presentation for the 5th Pan-Commonwealth Forum in London, in July 2008, on the policy development experience with the possibility of sharing it with one representative of each Polytechnic in a roundtable presentation of the process…

As a secondary objective, the facilitator anticipated that having the participants collaborate and achieve success in this virtual setting would build a supportive community that would last far beyond the project and encourage pan-African consultation among CAPA members on the policy-related implementation challenges and other issues as they arose.

To facilitate the conversation and policy development process, the Heads of institutions identified designated staff members to be enrolled in a virtual discussion forum established specifically for the purpose at the end of February 2008.

**THE BELLANET DGROUP PHENOMENON**

Although similar types of Forum are available in Yahoo and Google, the facilitator recommended the selection of Dgroups as the most suitable discussion forum for the project because of her previous experience with the platform and the fact that Dgroups is a dedicated development-oriented platform.

One of the largest development discussion vehicles in the world, Dgroups offered the most appropriate vehicle for enabling communication among the polytechnics in the project. On its website [www.dgroups.org](www.dgroups.org), Dgroups describes itself as:

> …the starting point for fostering groups and communities in international development… a partnership which caters to both individuals and organisations by offering tools and services that bring people together.

Addressing its virtual visitors directly, the website explains its development mandate as follows:

> …Whether you are trying to support a team, a group, a network, a partnership or a community, we hope to provide you with the capacity to do this in an environment which is simple, non-commercial, respectful of privacy, and targeted at low bandwidth users in the South.

At the end of March 2008, Dgroups reported that it was supporting 2462 groups world-wide "…containing 103,033 members and 38,639 resources." The Dgroups partnership, which guides and governs the operation of all of the Dgroups, includes international funding institutions like The Consultative Group for International Agricultural Research (CGIAR), The Canadian International Development Agency (CIDA), The Danish International Development Agency (Danida) The Department for International Development (DFID), The Food and Agriculture Organisation (FAO), The International Development Research Centre, The International Institute for Communication and Development (IICD), The Joint United Nations Programme on HIV and AIDS (UNAIDS) and the World Bank. Many international NGOs working in the fields of health, social policy, agriculture and ICT development are also members of Dgroups.

Explaining what is special about the Dgroup phenomenon, the website says that,

> Dgroups attempts to bring international development groups together as an online community to facilitate dialogue among key stakeholders in international development… By using e-mail as the core of its operations, Dgroups is targeted specifically at non-profits and low bandwidth users in the South, making it easier for their voices to be heard.

The provision of access for low bandwidth operations through e-mail messages was a particularly important feature of the Discussion Forum, since Sierra Leone, as a post-conflict country, for example, had little available bandwidth to allocate to the discussion.

**BEGINNING THE VIRTUAL DISCUSSION**

Since the Dgroup discussion was facilitated through e-mail messages, it was mandatory that all participants have an e-mail address and be comfortable using e-mail. The expression of interest questionnaire submitted to CAPA asked for the e-mail addresses of the designated institutional members. In cases where an e-mail address for a designated participant was not provided, the facilitator wrote to the Head of the institution requesting these addresses.

As each institution identified the staff members designated to participate in the project and provided their e-mail addresses, the facilitator added them to the Dgroup. Such registration resulted in an automatic "Welcome" message being sent to the participants' e-mail address, notifying them of their inclusion in the Dgroup, and providing both a password to access the Forum and a hyperlink directly to the site.

Each time any member of the group wrote an e-mail, it was automatically sent to all of the other participants; each reply was also distributed the same way, as were notifications of resources (such as articles and policy drafts) posted in the Resources section.

The facilitator searched the web for useful tertiary ICT policies, distance education and e-learning policies, reports, articles and policy frameworks, and posted these to the Dgroup Resource section of the Dgroup for the information of the participants, inviting feedback on her contributions as well as reports on the ongoing work being done in each institution. Each posting, whether from the facilitator or members of the group, was automatically sent to every other member's e-mail inbox.

However, initially, the participants seemed willing to be "lurkers" on the Forum: to receive the messages without responding to them. The silence was of concern to the facilitator because time for developing the policies ticked away without participants' contributions.

The silence of the majority of members of a Dgroup community is not peculiar to this group: a study of the Dgroups conducted in 2007 found that most Dgroup members responded to e-mails only when the topic under discussion was of immediate interest to them. The challenge for the facilitator then became to elicit responses form the members so that the virtual conversation could begin. The one-way communication from the facilitator to the other members did not really represent the building of consensus around the policy framework.

**REPORTED AVAILABILITY OF ICTS, CONNECTIVITY AND ICT POLICIES AT THE PARTICIPATING POLYTECHNIC INSTITUTIONS AT PROJECT INCEPTION**

To initiate discussion about the necessity for ICT policies, the facilitator summarised the information provided by the respective polytechnics in their expressions of interest in joining the policy development initiative and posted these in the Resources section of the Forum, along with questions stimulated by the institutional reports. The expressions of interest submitted by the polytechnics documented their current ICT capability, involvement in distance learning, connectivity capacity and existing ICT policies. A comparative summary of the infrastructure in the participating institutions reveals that there were significant differences in ICT capacity among them.

**Ho Polytechnic, Ghana**
Ho Polytechnic reported that it has 200 computers, a campus-wide wireless internet connection, two specialist computer laboratories (for Statistics and Accountancy) and an institutional ICT policy, "To integrate ICT into all programmes of the Polytechnic." The

polytechnic reported offering two brokered (overseas) programmes by distance, but did not elaborate on the distance modes employed.

### Kenya Polytechnic University College, Kenya
The Kenya Polytechnic University College reported that it has 14 servers, a fibre optic backbone, a website, 300 PCs on a local area network (LAN), 512 kps connectivity, and an institutional ICT policy (due for review). The College reported offering a Diploma by "…asychronous hybrid mode," but did not elaborate on the modalities it employs.

### Eastern Polytechnic, Sierra Leone
Eastern Polytechnic reported that it has three computer laboratories with 100 computers and accessories, and an institutional policy requiring all students to pursue a course in ICT  of a one year's duration (three terms). The polytechnic reported offering a two-year Teacher education programme by distance, but did not identitfy the modality used for the distance offering.

### Technical and Vocational Teachers' College, Zambia
The Technical and Vocational Teachers' College reported that it has a direct V-Sat dedicated connection of 256 kbps, 61 PCs with internet connectivity, a 30 PCs laboratory without internet connection, TCP/IP configuration of Local Area Network, a Cisco router, a sonic firewall and a network printer.  The college reported that it did not have an ICT policy.  The College is offering two teacher training programmes by distance; however, it did not elaborate on the modalities employed for offering them.

## THE DISCUSSION PROCESS

### Discussion challenges
The challenge for the facilitator was three-fold: how to encourage participants to take part regularly in the e-mail discussion; how to stimulate the design of a framework that would be useful and relevant to all four institutions, and how to get them to work together to draft this comprehensive policy framework that they could all use within a designated time frame.  Since the work was occurring in virtual space, encouraging participants to make the policy development process a priority among the daily competing priorities in their immediate environment required innovative approaches.  The facilitator relied on the Dgroup platform and resources to meet these challenges.

### Unanticipated infrastructure challenges
As Murphy's Law states, "Anything that can go wrong will."  As it turned out, the virtual discussion was also challenged by the infrastructure of Dgroups, which re-located its "home" during this period. Between mid-February and late March, the Dgroups service centre repeatedly announced an imminent shutdown of all Dgroups to facilitate its re-location from Bellanet to another service centre.  When the shift was finally completed in late March, a number of the groups (including the COL_CAPA Dgroup) did not get all of the features of the Dgroup back for some time.  The facilitator posted messages to the participants that, the software told her, had been sent to members; however, the messages did not appear in the Messages site of the Forum, and she received no responses to her queries of the participants.  While she could add members and post resources, neither she nor the members could receive or respond to messages.  Working against a mid-May completion deadline, this loss of communication was significant, and has resulted in a disruption of the projected completion date for the draft of the policy framework (late March).  While there is still time to meet the mid-May deadline for the signing of the policy document, the submission of a paper on the achievements of the virtual consultation process has been compromised beyond salvation.

**Plan "B"**

Since the presentation of this initiative at the PCF5 in July 2008 has been accepted for development, and since COL and CAPA both believe that this initiative is an important one to share with the wider ODL communities of practice, the paper has not been withdrawn.  Instead, the format of its presentation has been revised to accommodate the infrastructural glitch.

Since the initiative is scheduled for completion in mid-May 2008, (in time for the results and lessons learned to be presented at PCF5), the facilitator proposes that the presentation of the initiative be conducted as a roundtable of all stakeholders, as originally planned.  However, instead of including the achievements of and lessons learned from the project in the paper submitted at the end of March 2008 (currently an impossible feat), these be circulated in point form as a one page hard copy handout to those attending the roundtable at PCF5.  The discussions in the roundtable will have a dual focus: analysis of the contribution of and lessons learned from the infrastructure and communication processes employed to achieve the objectives of the policy development process, and presentation of the resulting policy framework itself.

**SUMMARY**

The urgent need for a policy framework addressing the use of ICTs and Distance learning to improve access to TVET is recognised by international funding institutions, donors, and other stakeholders in the national and international communities.

The use of a virtual communication space to develop policies for ICT use in ODL and TVET offers a significant opportunity for cost savings and collaboration across institutions, countries and continents.  The case study of CAPA member institutions using such a virtual space to develop a policy framework has dual results: the emergence of the policy framework, and the evaluation of the communication system employed to agree on that framework.  Both of these will be presented for discussion in a roundtable format at PCF5.