PanAfrican Research Agenda on the Pedagogical Integration of Information and Communication Technologies

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My goal is to **introduce you to IDRC’s ongoing PanAf research - supporting societal progress and human well being through access to knowledge, and improved teaching and learning.**
outline

• partners
• research question
• challenges / PanAf responses
• methodology
• results
• ongoing outputs
• [www.observatoiretic.org](http://www.observatoiretic.org)
• outcomes
• discussion
partners

• International Development Research Centre (IDRC, Canada)  www.idrc.ca

• Educational Research Network for West and Central Africa (Bamako)  www.ernwaca.org

• Université de Montréal  www.crifpe.ca

• infoDev (World Bank)  www.infodev.org

• UNESCO (Institute for Statistics)  www.uis.unesco.org
• **South Africa**: School of Education, University of the Witwatersrand
• **Côte-d’Ivoire**: Ecole Normale Supérieure, Abidjan
• **Congo**: École Normale Supérieure, Brazzaville
• **Kenya**: School of Continuing and Distance Education, University of Nairobi
• **Cameroun**: Département de Sciences de l’Education, Ecole Normale Supérieure, Université de Yaoundé
• **Ghana**: University College of Education, Winneba
• **Mali**: Département des Sciences de l'Éducation, Institut Supérieur de Formation et de Recherche Appliquée, Bamako
• **Mozambique**: Department of Evaluation & Research, National Institute for Education Development, Maputo
• **Uganda**: School of Adult Education & Communication Studies, Makerere University, Kampala
• **République Centrafricaine**: École Normale Supérieure, Bangui
• **Sénégal**: Faculté des Sciences et Technologies de l'Éducation et de la Formation, Université Cheikh Anta Diop de Dakar
• **The Gambia**: Science and Technology Department of the University of the Gambia, Banjul
partners

- **117 schools**, 71% public, 42% secondary
- **8 940 educators**, 84% public, 56% secondary
- **242 873 learners**, 90% public, 52% secondary
research question

How, for whom and under what circumstances can the pedagogical integration of information and communication technologies (ICTs) substantially improve the quality of teaching and learning at all levels and scales of African education systems?

Improving Life!
challenges

• Past research on ICTs in Africans schools inadequate (weak evidence) given the importance of the issue for socio-economic development

• Research on the issue lacked harmonized communication facility

• Researchers would benefit from capacity building
PanAf responses

• Collect and analyze new qualitative and quantitative school-scale data
• Create an innovative open-access data base for knowledge sharing
• Provide learning opportunities for those involved
methodology

• School-scale questionnaires completed and interviews recorded
• Summary analysis by national experts uploaded to www.observatoiretic.org
• Sharing examples of leadership, best practices and challenges among researchers, practitioners and policy decision-makers
Methodology

- Strength of this research is producing qualitative data – detailed and persuasive
- Adapted to the challenges of education research in Sub-Saharan Africa
- ICTs both the subject of study and the instruments of research, efficient and transparent – open access data!
results

• ICTs offer the potential to render quality educational outcomes in otherwise under-resourced contexts

• Learning through access to new knowledge and capabilities - educators take an essential role as facilitators and interpreters

• Young learners do not need to be taught how to use the computer, rather what to do with it
results

- ICTs change power dynamics in classrooms and beyond – gender, ecological knowledge...
- ICTs can be a social equalizer – and equity is a better predictor of human well being than income
- Studying the pedagogical integration of ICTs in African schools presents examples of leadership - progressive, interdisciplinary approaches to education
ongoing outputs

• 20 000 data-points for **180 indicators**!
• 12 major categories (**Policy, Access, Training, Use, Impact, Management, Gender...**)

[www.observatoiretic.org](http://www.observatoiretic.org)
www.observatoiretic.org
6.2.2 Impact des TIC (indiqués par les éducateurs) sur l'accès à la connaissance (150 mots)

6.3 Documentation produite par les apprenants en utilisant les TIC

6.3.1 Impacts des TIC

Avec l'utilisation de l'ordinateur, l'Internet facilite les recherches pour faire des exposés de PC,
Institution details

Only institutions qualifying for these characteristics will be shown.

- [X] Vocational
- [X] Non-vocational
- [X] Trains teachers
- [X] Does not train teachers
- [ ] Public
- [ ] Private
- [ ] Urban
- [ ] Semi-urban
- [ ] Non-urban

Students' gender

- [X] Mixed
<table>
<thead>
<tr>
<th>Continent</th>
<th>Region</th>
<th>Country</th>
<th>Institution</th>
<th>4.2 The frequency of ICT use by learners for academic purposes</th>
<th>4.5.4 The percentage of courses taught using ICT</th>
<th>7.1 The number of institutions with ICT integration plans</th>
</tr>
</thead>
<tbody>
<tr>
<td>Africa</td>
<td>Central Africa</td>
<td>Cameroon</td>
<td>Lycée Bilingue de Yaounde</td>
<td>1.5</td>
<td>45.45 % (10 / 22)</td>
<td>Yes</td>
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<tr>
<td>Africa</td>
<td>Central Africa</td>
<td>Cameroon</td>
<td>Lycée Général Leclerc</td>
<td>2.0</td>
<td>64.71 % (11 / 17)</td>
<td>No</td>
</tr>
<tr>
<td>Africa</td>
<td>Central Africa</td>
<td>Cameroon</td>
<td>Lycée Joss</td>
<td>Data not available</td>
<td>100.00 % (22 / 22)</td>
<td>Yes</td>
</tr>
</tbody>
</table>
4.2.1 Average ICT use by learners for academic purposes (hours per week)

- Mixed, urban, public secondary institutions with an ICT integration plan (n9): 2.7
- Mixed, urban, public secondary institutions with no ICT integration plan (n16): 3.1
- All private secondary institutions with an ICT integration plan (n6): 2.3
- All private secondary institutions with no ICT integration plan (n8): 1.4
4.5.4 The percentage of courses taught using ICT

- Mixed, urban, public secondary institutions with an ICT integration plan (n9): 31.7%
- Mixed, urban, public secondary institutions with no ICT integration plan (n16): 21.0%
- All private secondary institutions with an ICT integration plan (n6): 18.5%
- All private secondary institutions with no ICT integration plan (n8): 20.8%
Indicator 4.9.1 - challenges to ICT use

• “The students lamented that if one does not take computer option then he/she has no access to the computers.”

• “...no time given to us for practice yet computer is a practical subject, restrictions to access the computer lab which even discourage students from using it even when they have some free time...”

• “The main barrier in the use of ICT is the computer room fee charge.”
Indicator 6.2.2 – impact of ICTs on access to knowledge

• “...as a result of the presence of the Internet. They can ably now surf new information [...] they can read for themselves new information, compare what they have been taught...”
outcomes

• Stronger research capacity in partner institutions
• Greater access to research results
• Multi-stakeholder policy dialogue sessions linking research to recommendations
discussion

• Education means learning not teaching
• ICTs are means not ends
• Teachers remain integral parts of the educational process