5. Set up **incentive plans** for teachers and students to use ICT.

A number of incentive programs can be set up to encourage and facilitate the technopedagogical integration of ICT. Some countries give promotions to teachers and students, or extend low-interest credit so they can buy equipment. Others organize school competitions for funding or grants to implement technopedagogical projects. These measures are effective only insofar as they are explicit and egalitarian. In other words, they should apply equally across the entire education system according to fixed rules and criteria.

6. Set up **spaces for collaborative dialogue** (e.g., forums, annual conferences) on the pedagogical integration of ICT.

To ensure that all education stakeholders assume responsibility for the pedagogical integration of ICT, it would be worthwhile to set up regular collaboration sessions between schools, ministries, teachers, training institutions and industry. Through forums, conferences, round tables and committee meetings held monthly or annually, the efforts and initiatives of all stakeholders could be made visible, organized and shared.

7. Identify the **academic competencies** to which ICT can be applied for teaching and learning.

To relevantly and authentically apply ICT to education, it is critical to relate them specifically to subjects and competencies when integrating them into school curriculums and programs. This would provide teachers with guidelines for the pedagogical integration of ICT.

8. Establish **public–private partnerships**.

In order to mobilize as many material and financial resources as possible, it can be useful to establish partnerships between the public and private sector. The terms and conditions of such partnerships must be explicitly stated and formalized to ensure that all pedagogical decisions remain the purview of education stakeholders.

**Need more information on these recommendations?**

Visit our Web site and find out what our researchers have to say!

africaict.org
1. Develop a **national policy for the pedagogical integration of ICT**.

A national policy will encourage, orient and harmonize local initiatives. So that teachers throughout the country can adopt ICT and use them efficiently, it would be critical to develop a national policy for the pedagogical integration of ICT.

2. Develop a **national policy for teacher training** in the pedagogical integration of ICT.

To enable widespread and efficient use of ICT in education, teachers have to be properly trained in this area. It would therefore be critical to include in initial teacher training programs one or more courses on the pedagogical integration of ICT, and to assess technopedagogical competencies during their teaching internships.

3. Provide **ongoing training** for school staff.

In addition to initial training programs, it is important to provide ongoing training in the pedagogical integration of ICT to practicing teachers. To make the training more relevant, it would be preferable to hold training sessions in the schools and classrooms, using on-site ICT equipment.

4. Develop **technopedagogical resource banks** for different education levels.

The Internet provides access to a vast quantity of materials on which teachers can draw to improve the quality of their work and refresh the learning process. Unfortunately, teachers do not always have time to search for and assess these materials. An efficient method would be to select the most relevant technopedagogical resources and compile resource banks so that teachers could find them in one place.

---

As researchers, educators, administrators and trainers, it is up to us to manage the changes that information and communication technologies (ICT) have wrought in teaching, learning and society as a whole. Given its current rate of development, Africa cannot escape this imperative. The PanAfrican Research Agenda on the Pedagogical Integration of ICT (PanAf) aims to contribute to this effort. PanAf is the first continent-wide network of African researchers to document pioneering initiatives for ICT integration into education. It has received widespread international recognition for this bold and innovative effort to develop scientific capacities, and for establishing the ICT Observatory (http://www.observatoiretic.org/default/use?locale=en) as a hub for collecting and sharing information. The Observatory hosts a freely accessible database of over 20,000 documents submitted from across the African continent, with contributions from about fifty African researchers who have conducted studies with over 300,000 students as well as 9,000 teachers and other education staff in some 140 schools, based on recognized scientific indicators. PanAf will soon be completing its mandate, and the recommendations presented here are meant as a summary of the outcomes of this ambitious, five-year scientific undertaking. The recommendations were developed collaboratively, drawing on the empirical findings of the national research teams from 13 participating countries. In order to provide some practical implications, each recommendation is accompanied by a brief explanation and a videotaped interview with a researcher that can be accessed online.

We hope that these recommendations will prove helpful in orienting and facilitating the pedagogical integration of ICT in Africa.

The PanAf Team