

Key Resource: Using new technologies

New technologies, often in educational contexts meaning information and communication technologies (ICTs), offer huge potential for classroom use. Although the availability of such technologies is limited in many African countries, that situation is changing rapidly. New forms of ICTs are appearing all the time. The experience of those with some knowledge of ICTs is not always a guide to the way in which new forms of ICTs can be most effectively used for learning.

This key resource, therefore, suggests how you, as a teacher, approach new technologies, rather than acting as a guide as to how they can be used. Here are ten points to help you establish a good approach to the potential of new technologies:

- The use of new technologies, like any other teaching and learning strategy, needs planning for: you need to understand the potential of any specific form of ICT (a computer with Internet access, for example) before incorporating it into your daily teaching.
- Get advice about how different equipment and applications work. The introduction of computers into schools is usually linked to some sort of training. Computers also have plenty of 'self help' systems, so make sure that you understand how these work.
- Pupils may need some help in acquiring basic skills: it is important to establish good class routines and positive attitudes to the use of ICTs.
- ICTs allow the use of 'software' that can significantly help the learner, individually or in a group, but some software is better than others. As the teacher, you need to think carefully about which ICT applications are useful, in the same way that you might decide that some books are more useful than others.
- The most expensive technologies are not always the most effective! Audio clips or radio instruction, which has been around for a long time remains highly effective – but now you can deliver it using mobile phones and computers as well as radios and tape players.
- The presentation of pupils' work through the use of word processing packages can be very good, but it is important to remember that good presentation is not the same as good learning. Just using new technologies for 'presentational purposes' fails to exploit their potential for learning.
- New technologies can help speed up tedious processes and make learning more interesting. For example, mathematics or science investigations can move more rapidly if some calculations are done electronically.
- Some new technologies can really transform learning opportunities. The use of simulations in science teaching, for example, allows pupils to investigate things that it would be impossible to experiment with in the classroom. It is important for you, as the teacher, to think about how such technologies really do transform the learning experience.
- New forms of technology may have greater potential for use in the African context than older established technologies. Mobile or cell phones, for example, are now becoming like mini computers. Teachers and pupils can use the skills they develop in using mobile technologies for teaching and learning and this should be kept under review.
- Community awareness of the use of new technologies is also important. The resources that are likely to become available for schools and teachers could also provide useful support for the community.

For more ideas about using new technologies, look at the TESSA website.



TESSA (Teacher Education in Sub-Saharan Africa) aims to improve the classroom practices of primary teachers and secondary science teachers in Africa through the provision of Open Educational Resources (OERs) to support teachers in developing student-centred, participatory approaches. The TESSA OERs provide teachers with a companion to the school

textbook. They offer activities for teachers to try out in their classrooms with their students, together with case studies showing how other teachers have taught the topic, and linked resources to support teachers in developing their lesson plans and subject knowledge.

TESSA OERs have been collaboratively written by African and international authors to address the curriculum and contexts. They are available for online and print use (<http://www.tessafrica.net>). The Primary OERs are available in several versions and languages (English, French, Arabic and Swahili). Initially, the OER were produced in English and made relevant across Africa. These OER have been versioned by TESSA partners for Ghana, Nigeria, Zambia, Rwanda, Uganda, Kenya, Tanzania and South Africa, and translated by partners in Sudan (Arabic), Togo (French) and Tanzania (Swahili) Secondary Science OER are available in English and have been versioned for Zambia, Kenya, Uganda and Tanzania. We welcome feedback from those who read and make use of these resources. The Creative Commons License enables users to adapt and localise the OERs further to meet local needs and contexts.

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As well as the main body of pedagogic resources to support teaching in particular subject areas, there are a selection of additional resources including audio, key resources which describe specific practices, handbooks and toolkits.



**TESSA Programme
The Open University
Walton Hall
Milton Keynes, MK7 6AA
United Kingdom**

tessa@open.ac.uk

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