Even though South Africa spends over 20% of the national budget (640-billion rand in 2015) on the delivery, support and administration of education, the country has not been able to turn the tide on resource-related educational problems typical of poor and developing countries. This is manifested in the shortage of textbooks, equipment and other learning and teaching support material in the classroom. Evidence exists that teachers could be supported using information and communication technologies (ICT) and, in that way, the resource problem that the country faces be obviated. This could further maximise and optimise what limited resources already exist. ICT are central to the changes taking place worldwide. Government’s White Paper on e-Education provides an unambiguous roadmap of introducing ICT resources and services to public schools to create new and exciting ways for learners and teachers to engage in the selection, gathering, sorting and analysis of information to create knowledge. Over and above this, ICT have the potential to enhance the management and administrative capacity of public schools. Technology is changing the way we live, communicate and learn. It also enables teachers to reframe schooling in order to meet the needs of twenty-first century learners. It is on this note that the KwaZulu-Natal Department of Education (KZN DoE) considers ICT in education as central to the realization of the country’s socio-economic development ideals as espoused in the principles of the National Development Plan (NDP).

Free, Compulsory, Universal and Equal Education for ALL

The provincial government, therefore, needs to ensure that every public school has access to a variety of high-quality communication services and products which will benefit learners and teachers, as well as, the communities in which the schools are based. Such services and products are intended to enhance lifelong learning and further provide unlimited opportunities for personal growth and development in line with the third National Skills Development Strategy (NSDS3) of government. Further, this will contribute towards the development of an information society whose members are digital natives and are able to compete globally.

ISSUES FOR DISCUSSION

- Professional development and support for teachers
- Provision of broadband connectivity for public educational institutions
- Provision of ICT infrastructure and resources to public schools
- The establishment of a viable technical support and maintenance infrastructure for ICT resources deployed in public schools
- Research, development and distribution of digital content resources
- Return on investment (ROI) in respect of the communities where the public schools are based

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The Doors of Learning and Culture Shall be Opened!

The provision of telecommunications infrastructure as a platform for learning and teaching is increasing and many educational institutions, including public schools, are exploiting these benefits to heighten the quality of learning and teaching. Government is mindful of the fact that this initiative will require significant investment. We need to facilitate cost-effective and robust public-private partnerships such that government and the private sector collaborate to ensure that our children receive high quality education and further none of our people are excluded from the knowledge economy. Information and communication technologies (ICT) are central to the changes taking place worldwide. Digital media has revolutionised the way we do business and advances in technology have dramatically changed classroom praxis. New learning opportunities have been provided through access to learning and teaching resources and knowledge repositories that exist beyond the confines of the walls of the physical classroom.

Who Should Attend

The Member of the Executive Committee (MEC) and the Head of Department (HoD) for Education in KwaZulu-Natal invite the ICT in Education community to come and dialogue with the KwaZulu-Natal Department of Education on the implementation of Blended Learning and/or e-Education in the province. Among those who should attend this summit are telecommunications service providers; suppliers of ICT resources and infrastructure (gadgets, software & firmware); higher education institutions; publishers of educational content; researchers; policymakers; ICT integration scholars; non-government organisations; organized labour; SMMEs involved in ICT technical support and maintenance; research institutions; educational content distributors; other government departments and corporate South Africa.
If South Africans are to participate in the knowledge economy every effort must be made to prevent digital exclusion. A global revolution is currently taking place in education and training. This revolution is driven by the changing nature of work, the realities of the information age, new global partnerships and an awareness of the need for equal distribution of educational opportunities. The building of South Africa’s institutional and infrastructural capacity to support learners, teachers and administrators in the education sector, is fundamental towards the realisation of the NDP and the country’s socio-economic development.

The KZN DoE is embarking on a social development path that intends to harness the potential of ICT to administer, deliver and support learning and teaching in public schools in the Province. The KwaZulu-Natal Department of Education has developed an e-Education Strategy to be used as a blueprint in respect of a strategically sound and cost-effective implementation plan for the White Paper on e-Education; towards the realisation of schooling 2025.

Principles of a Good e-Learning Platform

The Head of Department for Education is inundated with requests from service providers who wish to present learner management systems and other ICT-based educational solutions to the Department. It therefore becomes important for the HoD to share with the ICT in Education community the principles of a sound and appropriate e-Learning platform which include, inter alia:

- primarily serving teaching and learning
- providing universal access for every learner and every teacher
- full accessibility
- platform independence
- open standards (extensible)
- safety and security
- web-delivered and/or web-based services
- single log on for users on ALL applications and services

A common understanding of what e-Education involves is critical because of the potential impact (both negative and positive) of the use of ICT to support curriculum. Blurton (2002) defines information and communication technologies as a diverse set of technological tools and resources used to communicate, and to create, disseminate, store, and manage information; these technological tools and resources include computers, the Internet, broadcasting technologies (radio and television) and telephony (cellular, satellite, landline and VoIP). Notwithstanding the varying descriptions, there is, convergence in respect of what the inescapable features of e-Education should be. The figure on the right portrays a shorthand representation of a blended learning knowledge network.

“The Bandwidth is the lifeblood of the digital economy... The [South African] regulatory environment in the mid-nineties got it completely wrong…”

HoD for Education: Nkosinathi SP Sishi, PhD

A Blended Learning Knowledge Network
The KwaZulu-Natal Department of Education (KZN DoE) is the largest provincial education department in South Africa. The vision of the KwaZulu-Natal Department of Education is to move South Africa forward through quality education and skills development. The central thrust of the KZN DoE’s long-term vision is to provide all teachers, administrators, education managers and learners with ICT resources and Internet access to ensure that learners in every school will have the opportunity to experience the benefits of ICT use; and teachers are given the support to develop their professional skills which will enable them to use ICT as an effective tool in the learning environment of the school.

The deployment of technology infrastructure and allied resources into public schools must be guided by unassailable e-pedagogical considerations that take into account e-learning frameworks in order to ensure that the technology installed is guided by educational tenets. This is necessary in order to curb the litany of ‘box dropping’ projects that have characterized most ICT deployments and donations to public schools. This has resulted in equipment ‘gathering dust’ because of a lack of teacher ICT skills and proper curriculum integration.

The benefit of any investment in ICT in Education can only be realized by measuring the impact of ICT utilization by society, especially in the areas of ICT human resource skill development. All the different key stakeholders, i.e. politicians in terms of policy promises, financiers in terms of enabling seamless transactions; and ordinary citizens in terms of receiving government services in the comfort of their homes must be informed of the tangible and non-tangible benefits. Central to the operationalisation of any ICT in Education strategy and/or model are collaboration, partnerships and linkages. This has to find expression at all levels viz national, provincial and institutional.

The success of an implementation strategy and/or model depends on the collective commitment and active participation of all stakeholders and all role-players i.e. learners, teachers, parents, donors, corporate South Africa, higher education institutions, non-government organisations etc.

Many ICT in Education initiatives (governmental, private, NGOs, donor) are implemented in isolation and without any provincial coordination, support and management. Most ICT in Education initiatives focus on hardware roll-out without sustainability, teacher development and support, technical and pedagogical support. There is a need for a policy framework to set norms and standards in order to direct the deployment of ICT resources and to optimise the benefits of the use of ICT to support curriculum public schools.