AN ANALYSIS OF THE MANAGEMENT OF THE NAMIBIAN INFORMATION COMMUNICATION TECHNOLOGY SCHOOL CURRICULUM PLANNING

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ABSTRACT
The Namibian Educational sector acknowledges the impact that technology bears in education, however, ICTs have not been thoroughly immersed in classroom practice. A policy document which purports for the preparation of all Namibia's learners, students, teachers, and communities was drafted but its implementation has not provided much fruition. The chief tenet of this article is that proper planning, organisation, supervision and communication leads to proper implementation of policies. If the Namibian education sector is to achieve the above, significant improvement in immersing ICTs in the classroom would be achieved. The paper begins with a discussion of the current status quo of ICT in the Namibian education sector. Then, it explores the importance of thorough planning, organisation, supervision and communication of the implementation of the ICT curriculum in the Namibian education sector.

Keywords: management, communication technology, Namibian

INTRODUCTION

Namibia, like many other developing countries is working towards economic emancipation and this can only be achieved by identifying education as a driving force in this developmental endeavour; therefore it was found fitting that education should take a pivotal role as it is 'the foundation of all knowledge'. In order for the education sector to play an effectively role; it identified ICT as one of the tools that could be utilized to enhance teaching in primary, secondary and tertiary institutions. With the advent of ICT, it is hoped that schools would benefit greatly if technologies are optimally utilised. The principal analysis is that proper planning, organisation, supervision and communication leads to proper implementation of policies. If the Namibian education sector is to achieve the above, there should be significant ICT improvement implementation. The paper begins with background information about ICTs in the Namibian educational sector; explains the current status quo of ICTs in the sector. Then, it analyses the importance of thorough planning, organisation, supervision and communication of the implementation of the ICT curriculum in the Namibian education sector. This is followed by recommendations or suggestions on the management of the Namibian ICT School Curriculum planning.

BACKGROUND INFORMATION

The Economic Commission for Africa (ECA)'s policy document on National Information and Communication Infrastructures (NICI) set the following guidelines to be addressed by African countries:

> *Providing equitable remote access to resources in support of both distance education and the strengthening of local educational capacity; connecting schools, universities and research centres to national and international distance education facilities, national and international databases, libraries, research laboratories and computing facilities; reducing communications and administrative costs by building communications networks linking all educational establishments; promoting and supporting collaboration among teachers and researchers; extending the reach of educational facilities in informal learning.*

In response to the regional guidelines, the Namibian government crafted the road map which is Vision 2030, in which the use of ICT is clearly spelt out. Vision 2030 incites the use of ICTs in all sectors of development in the country in order for Namibians to be productive in a knowledge based economy. According to Office of the president (2004, p.77),

> *Advanced micro-electronics-based Information and Communication Technologies ICT's) are at the heart of recent social and economic transformations in the industrialized and much of the developing world. These technologies are now being applied to all sectors of the economy and society… Greater use of ICT's opens up new opportunities for Namibia and other developing countries to harness these technologies and services to meet their developmental goals.*

At the inception of the ETSIP and ICT policy documents, the two ministers of Education echoed the sentiments of Office of the President and said "as we move towards a knowledge–based development paradigm, as stipulated in Namibia's Vision 2030 'Integrating ICT education and training into education and training system' issues of access to the local and global pool of knowledge and information become paramount" (GRN, 2001, p. i). It can be inferred that the main objective of ICT integration as a tool across curriculum in Namibian schools is to promote the most effective use of technology to enhance teaching. The national authorities recognize the need for the integration of ICT into school curriculum delivery. ICT standards have been produced, developed and published directly relating to curriculum standards. The education sector saw it befitting to implement a policy in support of ICT integration in schools. In support of vision 2030 the Ministry of Education embarked on drafting an ICT policy for the education sector. Ministry of Education, Sports and Culture (MBESC) and the Ministry of Higher Education Training and Employment Creation (MHETEC)(2004), define ICT as a generic term that encompasses: computers, audio visual systems, broadcast receiving systems, telecommunication systems, compact discs, video discs, microcomputer-based laboratories, the internet, virtual learning centres, local and wide area networks, instructional software, printed media, educational television, voice mail, e-mail, satellite communication, VCRs, cable television, conventional and interactive radio. For the purpose of this paper ICT is defined as all technologies used in handling and communication of information and their use specifically in education.

According to the MBESC and the MHETEC (2004), ICT assists in the delivery of equitable and quality education; this would thus increase productivity and accelerate economic development. It seems as though empowering learners to engage in meaningful, challenging and enlightening tasks is the main aim of the Ministry of education. The mission of the Namibian ICT policy for Education, according to Republic of Namibia (2005), is to pronounce the relevance, responsibility, and effectiveness of integrating ICT in education with a view of meeting the challenges of the 21st century. To this end, the policy draws on worldwide knowledge and experience to describe and realise the possibilities of ICT for education, constrains for turning this potential into effectiveness and scenarios of applying these capacities in different environments."The purpose of this policy is

to prepare all Namibian learners, students, teachers, and communities of today for the world economy of tomorrow" (GRN, 2005 p.7). It appears as though ICT will be rapidly integrated throughout the education sector to enhance learning and administration. The curriculum will be revised to make ICT a cross curricular tool as well as a subject. According to Republic of Namibia (2005), staff will be trained and ICT services and support structures developed, so that technology can be deployed and maintained. According to the MBESC and the MHETEC (2004) the overall goals of this policy are as follow:

> *Produce ICT literate citizens; produce people capable of working and participating in the new economies and societies arising from ICT and related developments; leverage ICT to assist and facilitate learning for the benefit of all learners and teachers across the curriculum; improve the efficiency of educational administration and management at every level from the classroom, school library, through the school and on to the sector as a whole; broaden quality educational services for learners at all levels of the education system; and to set specific criteria and targets to help classify and categorise the different development levels of using ICT in education.*

These are very broad and complex goals that need unconditional commitment from all stakeholders in order to achieve them. All stakeholders in this venture need to devote their energies and resources if ICT integration in Namibian schools is to be realised by the year 2030. According to the MBESC and the MHETEC (2004) there are three aspects to the role of ICT in the curriculum: Firstly, ICT skills and knowledge, secondly, ICT as a curriculum subject and thirdly, the usage of ICT as a cross curricular tool. With this last aspect, the Ministry of Education intends to implement a guidance document on the general use of ICT in all curriculum activities. Individual subjects curriculum will also be adjusted to reflect the role of ICT in teaching the subjects. The cause of poor school improvement program implementation in Namibia has necessitated this evaluation of the management of the Namibian school curriculum planning. Since mere development of a new ICT school curriculum policy, does not necessarily guarantee an improvement in the country's education system. As Fullan (2001, pp. 71-75) highlights several factors at play. These include the involvement of local role players such as teachers, school principals and district officials, as well as the contribution of external role players, such as the national and provincial governments, other organizations and consultants. Yet proper implementation of curriculum does depend on stakeholders only but on planning, organization, supervision and communication.

ICT CURRICULUM CURRENT STATUS QUO NAMIBIA

A comprehensive ICT policy was officiated in 2006 and in 2006, another official document; ICTs in Education Implementation Guide Plan was compiled by the Ministry of Education. These documents were meant to spearhead and guide the integration of ICTs in the education Sector.Besides the drafting of the above documents, several agencies are and were in support of this move of the Republic of Namibia. Extending wires and cables in ICT integration is deemed critical in the journey towards full integration of ICT in schools, these are the initiatives of dot-EDU in Namibia. Dot CoMments (2007) claim that since 2001, USAID has supported three successive initiatives related to the integration of information technology in education in Namibia: the Computer Assisted Teacher Trainer Activity (CATT), under the LearnLink program, and more recently; the Initiative for Namibian Education Technology (iNET), under dot-EDU; and The Alliance to Promote Information and Communication Technologies in Namibian Schools, under dot-EDU as well. As a whole, according to Dot CoMments, these three initiatives have provided teachers and Primary Teachers' College (PTC) instructors with the on-going human, technical and

curricular support necessary to help teachers effectively use and integrate ICT into instruction. However these teachers require on-going support in integrating ICT in the instruction delivery. Dot-CoMment (2007) further postulates that initiatives such as LearnLink's CATT and iNET realised early on the importance of this regular follow-up support. In addition to face-to-face and online professional development, pre-service teacher educators in Namibia's four primary teachers' colleges also had on-going access to an online coach and site visits from iNET facilitators, who assisted these pre-service teacher instructors in using ICTs to deepen content, curriculum, and instruction in meaningful ways. But, the human support did not end there.

Moreover, Dot-CoMment (2007) points out that through partnerships with organizations such as the International Foundation for Education and Self-Help (IFESH) PTC instructors received regular on-going technology training, troubleshooting and integration help from local IFESH volunteers. And through the creation of local Teacher Resource Centres (TRCs) by the Namibian Ministry of Education, staffed with a full-time resource person, PTC instructors, as well as primary and secondary school teachers, can now enhance their acquired technical skills with assistance from a TRC support person.

The National Institute of Educational Development (NIED), with assistance from dot-EDU, created the Educational Development and Support Network (EdsNet), an online repository of curricular and content materials, syllabi, readings, and resources. This gateway, created by Namibian educators for Namibian educators, is available in English and in some Namibian primary local languages. It seems that iNET has been of great assistance in the integration of ICT in the Namibian education sector, therefore the efforts of this agency are briefly viewed below. According to Republic of Namibia (2005) there have already been initiatives to integrate ICT in school curricular, these include: the Polytechnic of Namibia and the University of Namibia which offer courses online and SchoolINet which offers an indigenous infrastructural solution to schools including the provision of affordable 24/7 internet access. Another initiative is the initiative for Namibian Education Technology (iNET). "iNET supported MBESC in the establishment of physical, online, and human resources within the ministry, as well as policy development in relation to ICT, education, and training" (The initiative for Namibian Education Technology (iNET), 2006). This initiative began in 2003-2006. It seems that it somewhat managed to assist the education sector with training some teachers and teacher educators in the implementation of ICT as a cross curriculum tool. The iNET report (2006) claims that iNET undertook training activities with college faculties, education planners, and teacher resource centre staff since June 2004. The report postulates that iNET has provided more technology to schools and that it made a significant contribution in assisting the Ministry of Education in developing a national ICT and education strategy and strategy implementation plan. However, according to the report, the project encountered obstacles in implementing its plans effectively. These include: a weak Namibian dollar, delays in the ministry's rollout of equipment to colleges of education and ministry's difficulties in filling counterpart posts for the project. Furthermore, according to the report, the iNET project ramped up its activities related to the online course with Harvard Graduate School of Education. Fifteen additional participants undertook the course "Teaching to Standards with New Technology". In addition, three Ministry colleagues began serving as "coaches in training", which will eventually allow them to be coaches on future Harvard courses.

The project is said to have moved forward with a relationship with a second university, this time Wayne Patterson University in New Jersey. This relationship had student teachers in New Jersey and Namibia (3 students) taking an online course together. The Wayne Patterson professor and the iNET Chief of Party co-wrote and published an article on technology and education in Namibia.

Furthermore, the report claims that connectivity has now been established at all four colleges of education and the project's work to support the development of a technology in education policy for Namibia has been concluded with the draft policy being delivered to the then Ministers (Nahas Angula and John Mutorwa) of education for consideration by cabinet. Finally, the Technology Across the iNET report (2003) explains that the Curriculum course was completed by 4 student teachers. 100% pass rate was achieved. The Teaching to Standards with New Technology (Harvard) was completed by 15 Namibian participants and 3 NIED apprentice coaches. The ICT Policy for Education was finalised. It seems that Namibia, with the assistance of this external agency is on the right track on ICT integration. With this kind of assistance maybe this goal of Vision 2030 might be realised. SchoolNet Namibia was a local hands-on ICT deployment, training and support organization, established in February 2000 to empower youth through the Internet and provide sustainable low-cost technology solution for Internet to all Namibian schools. SchoolNet Namibia was officially dissolved by its Trustees and membership at a general meeting on 17 July 2009. According to Dot-CoMment (2007) through the efforts of SchoolNet Namibia, one of the more innovative and successful SchoolNet programs in Africa, the Alliance to Promote Information and Communication Technologies in Namibian Schools tackled this issue of technical support from both a demand and supply perspective. First, it attempted to reduce the demand for technical support by providing a thin client, open source-based approach to partner schools. Since all network and computer services are centralised, all maintenance and upgrading is done at the server—versus client— location. Since it is constantly improved upon by programmers, open source software is regarded by many as more technically stable, thus reducing the need for technical support. SchoolNet is also reported to have increased the supply of technical support by training 600 out-of-work youth— "Kids on the Block"—and placing many of them in the populated northern regions of the country to assist with technical support, trouble shooting and computer management responsibilities. This merge of human and technical networks according to Dot-CoMment (2007) offers teachers more support in their quest towards ICT integration and has done much to help distribute computers in some parts of the country and through the Namibian educational system. This was a setback for the effective and efficient ICT integration in Namibian schools.

PLANNING

The creation of curriculum requires appropriate and conscientious planning. According to Victoria state government, Department of Education and Early Childhood Development (2006) curriculum planning comprises of five stages which are: understanding the context; planning and resourcing, implementation; continuous monitoring and evaluation and review. When it comes to introducing ICTs in schools, or taking an existing process forward, planning is very important. Planning is important because if there is no integrated plan, properly agreed upon by interested stakeholders, then there is likely to be disagreement, dissension, and even disintegration, as various groups implement different plans, or do what they please, without any over-arching co-ordination or alignment to a broader vision. In agreement of the assertion are Earley and Bubb (2004) who advance that curriculum implementation plans are important as they create a common understanding among implementers of the required curriculum practices, as these plans become benchmarks for identifying obstacles and ways to overcome such obstacles during the implementation phase so as not to abandon the implementation as is the case in Namibian situation. In this subsection, the ICT school policy is analysed to ascertain if it has the following strategies plan in place: The inclusion of documents/frameworks in the basic curriculum components; and the inclusion of plan of action which indicates decision to be taken, planning tasks which need to be performed and who (including functional roles) will be involved in the planning will be carried out. The current situation in Namibia and maybe the world at large is of learner performance and their

ability to perform efficiently in a knowledge based economy; i.e. what they learn in school should be congruent with what will be required of them in the workplace. Therefore curriculum planners are naturally tasked with the planning of curriculum that would enable a Namibian learner to be highly effective citizens.

ORGANISATION

There is an urgent need to set up a system for the effective management of the ICT curriculum in the Namibian Education Sector. Middlewood (2003, pp. 66- 68) assigns the primary responsibility of planning, managing and overseeing the curriculum implementation process to the School Management Team (SMT). To hold Namibian SMT accountable, the paper analyses the following: the establishment of decision-making, organizational and communication structures; the provision for democratic (participation/representation) participation of stakeholders in the planning process, identification of qualified persons in the planning structures and the compatibility of cost of planning with available resources. It cannot be denied that teachers, in particular, play a central role in the implementation of a school curriculum. Fullan (2001, p. 117) underscores the importance of the teacher as a central change agent, as the teacher is the one who is primarily responsible for the successful implementation of a new curriculum. However, teachers' roles are at the micro level (classroom), therefore, involvement and commitment of those at the macro level and other factors are important. In concordance are Rogan and Grayson (2003, pp. 1172 – 1195) who add on that successful implementation is affected by the nature of the particular school's physical and human resources, the quality of teacher and learner support, and in general, the ability of the school management teams (SMTs) to support the implementation process through proper planning and subsequent management of the implementation.

SUPERVISION

Supervision is an essential part of the curriculum management planning process. It refers to the effective procedures to collect and use information about progress of the planning, functioning of structures and performance of personnel, their needs and the provision of relevant training. It helps to modify plans and structures, to take remedial actions or to relocate personnel and put plans into action towards the accomplishment of curriculum goals. The success of a country's curriculum committee depends upon effective supervision. The importance of communication cannot be denied. Since using effective communication skills is crucial to successful management of curriculum planning. Communication helps to assess whether there is effective and open communication channels to give and get feedback about the progress of the planning (in relation to a time schedule), the actual planning progress, and the various structures. It also helps to monitor if there is continuous refinement or revision of the action plan and structures being undertaken. Compact Oxford English Dictionary (2008) defines the verb implement as "to put a decision, plan, or agreement into effect" (p.507). Therefore for the purpose of this paper Curriculum implementation is the actual use of the ICT curriculum in classroom practice. All aspects of ICTs for education initiative, including ICTs purchased and installed, curricular and content developed, training conducted, provisions for user support, and maintenance and technical support, should all be driven by the overall educational objectives. Furthermore, it is imperative that continuous assessment and evaluation are conducted on all aspects of the initiative to ensure that educational objectives are being met (TECH/NA, 2006, p.15).

POSSIBLE CHALLENGES IN INTEGRATING AN EFFECTIVE ICT PROGRAMME IN NAMIBIAN SCHOOLS

According to the Office of the President (2004), Namibia lacks trained and skilled ICT human resources, thus the dependence on imported skills and technical knowledge. There is a lack of focus on ICT development by government, thus inadequate investment in this area. In the researcher's view, there are several challenges that the Education sector should over-come before ICT is fully integrated into the sector. Amongst others, there seem to be a scarcity of resources, both physical and financial. These challenges could be the availability of energy resources (power supply) and services, teacher training in ICT, infrastructure and technological resources.

RECOMMENDATIONS

Teacher training should be an on-going process. It does not end upon the completion of a teacher training course or a workshop. In addition to this, teachers still need additional professional development that addresses integration of technology into the curriculum and that demonstrates how ICTs really do improve student learning. To do this, teachers will need access to long-term professional development that focuses on improving their knowledge and application of curricula, instruction and assessment not just computers. The education sector should see to it that funds are directed into improving and building classrooms in order to integrate ICT in schools as a cross curricular tool that enhances learning. According to Dot-CoMment (2007), classrooms need to be revamped in order to accommodate ICT equipment and resources. In addition to the above, Namibia should come up with alternative energy supply mechanisms that would assist in powering ICT resources. The above recommendations would culminate into an effective and efficient management of the Namibian ICT School Curriculum planning.

CONCLUSION

Once ICT becomes an integral part of student learning, teaching styles and classroom organisation cannot remain unchanged. Therefore, teachers should be guided on how to integrate ICT in their teaching activities. Furthermore, classrooms should be revamped in order to accommodate all peripherals that accompany ICTs. All stakeholders in the education sector should actively participate in this long-term strategy. ICT integration in the education sector is not an easy task therefore financial, human and physical resources should be invested in this venture. It is only through these efforts that by 2030, ICT might be fully integrated in the education sector. It is difficult for one to conclude that by 2030 every Namibian learner would have access to a computer, for the challenges that need to be overcome before this vision is realised are enormous if not complex. As alluded to in the "Introduction", proper planning, organisation, supervision and communication leads to proper implementation of policies. If the Namibian education sector thoroughly works to achieve the above, significant improvement in immersing ICTs in the classroom would be achieved.

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