

Executive Summary

Introduction

This report summarizes the results of a research project conducted by the South African Institute for distance education (SAIDE) into the feasibility of establishing a dedicated educational broadcasting service.

In this report, we examine the potential roles of broadcasting in education and how it can play these roles most effectively. We also locate this examination in the context of technological convergence. We locate all of this within a detailed description of education in South Africa, as well as potential roles for educational technologies in different contexts and the lessons learned from application of different technologies for these purposes around the world.

The Proposals in Brief

Using this platform, we propose that government establish an educational technology network, which incorporates four core functions:

- Content acquisition and dissemination;
- Communication;
- Administration and management;
- Network rollout and maintenance.

Notwithstanding clear trends of convergence in functionality of information, telecommunications, and broadcasting technologies, there will remain a vibrant and distinct terrestrial broadcasting sector in South African communications for the foreseeable future. We propose that the SABC television and radio services continue to 'nest' a range of educational and educative programming within existing channels and stations as they do currently, expanding and augmenting these services as money becomes available to do so. Thus, while there is a growing focus on supporting structured education, in areas such as schooling and adult education, there is also a wealth of informal educative programming on both radio and television that harnesses many of the greatest potential strengths of educational broadcasting.

We propose that educational broadcasting investments, as summarized above, be augmented by judicious investments in open and flexible computer networks that will link a wide range of teaching and learning sites in the country. In this regard, we envisage the system harnessing the potential of a range of satellite, telecommunications, and information technologies to provide various forms of support to different elements of the education and training system. These will include many functions, ranging from resource delivery to communication and administrative services.

We believe a key strength of harnessing converging technologies is that it allows slower growth in use of resources being delivered using such platforms. Such resource delivery mechanisms generally grow quickly, but off a low base, making it unaffordable to maintain the infrastructure to the point where it can achieve economies of scale through mass use. The costs of rolling out this infrastructure can be offset by applying such technologies in a range of innovative ways, as is illustrated in the following section, thus allowing evolutionary

growth in use of the system for resource delivery and other similar educational functions to take place over five or six years.

The concept of an educational technology network implies a need to roll out technological infrastructure on a large scale. In brief, we propose judicious investments in networking teaching and learning sites (including schools, adult learning centres, health clinics, multi-purpose community centres, and a range of other potential sites) around cluster hubs. Via a wide area network, these hubs will provide access to network servers for the teaching and learning sites connected to them. They will provide connected teaching and learning sites with the full functionality of a distributed computer network, including access to web sites, e-mail facilities, and centrally stored database systems. We anticipate that this distribution network will be connected nationally via a combination of satellite bandwidth, telephone lines, and wireless technologies. Each network server will be equipped with the hardware capability to serve its teaching and learning sites as if they were thin clients. This will provide individual teaching and learning sites with maximum flexibility in terms of deciding what equipment they wish to use to connect to the network. This flexibility will be facilitated by ensuring that everything that is sent via satellite to the cluster hub is developed using Internet protocols, which will ensure that all engagement by individual sites can take place using web browsers.

Strengths of the Model

The model proposed above, incorporating the four core functions we have outlined, has various key strengths in addition to those already mentioned. These are:

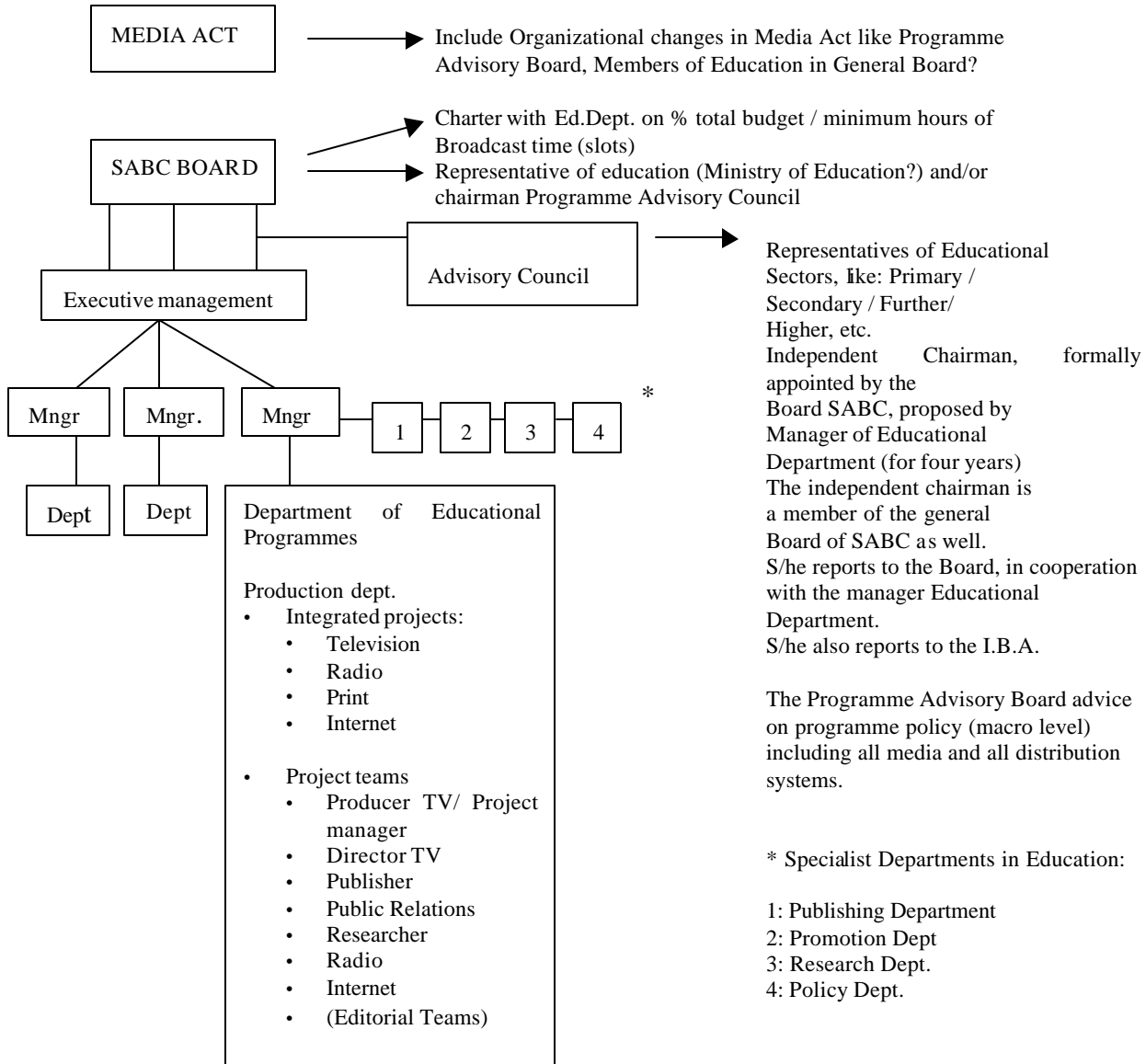
- *Multiple applications.* Such a technological network has a wide range of applications, both in terms of the functions it can support and in terms of the different education and training sectors that might harness its potential
- *Technological flexibility.* The technological model proposed is based strongly on flexibility and open standards. This means that investments already made can be incorporated into the network as it grows. In this way, the model does not constitute a 'new' investment in traditional terms. In many ways, it will consolidate and build on investments already made and infrastructure in place. In addition, this technological flexibility will accommodate a range of directions within different aspects of the education and training system, thus not forcing people to accept any particular constraints in deciding to connect their teaching and learning sites to the broader distribution network.
- *Linking to existing initiatives.* The proposed technological model will link a range of existing initiatives rather than constituting a single new initiative.
- *Enhancing productivity.* A central strength of the model proposed above is its capacity to enhance productivity in basic ways. We provide one simple illustration of this in chapter seven in the example of school timetables, but will also provide further examples as part of building our financial models.

Implementation

In terms of implementation, we propose the creation of two new agencies:

- A Multimedia Education Unit; and
- An Educational Network Agency.

The first should emerge from a merger between the educational television and radio units at the SABC. The second could incorporate the organizational infrastructure of Schoolnet SA and – potentially – the centre for Educational Technology and Distance Education at the Department of Education. Below we present organizational maps for each.



- Production office / facilities } all general SABC
- Human Resources } all general SABC
- Transmitting office } all general SABC

Requirements for project manager (producer): Educational background / management skills

All project managers (producers) are integral responsible for the multimedia projects.

Project managers report to the manager of Ed. Dept, who has the final responsibility.

Editorial shadow-teams from education: feed back on programme proposals / feed back on programmes and use in class room.

Independent Human Resource Policy from SABC in general, because of specific requirements.

