REALITIES VERSUS IDEALS WITH REGARD TO E-LEARNING IN SOUTH AFRICA

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This presentaion discusses the strong **contrast between e-learning ideals** that have been put forward by education policy makers in South Africa, **and the realities** and challenges facing e-learning practitioners in rural and disadvantaged areas of the country.. On the one hand there have been some optimistic statements from official quarters, such as the hope that was expressed in the September 2003 Draft White Paper on E-learning that South Africa could, through appropriate technologies, "leapfrog" into the future. On the other hand, there are many serious challenges to be overcome, including a marked urban-rural digital divide in the country, and some sobering realities regarding education in South Africa. For example, although the education authorities aim to have a PC in every school by 2013, currently only 39.2% of the schools - and 15.9% of the country's population over 16 years of age - have any access to a PC. Only about 6.4% of the population have access to the Internet. Also, although formal education in the country is presently reaching the majority of children between the ages of seven and fifteen years, actual educational attainment is low. According to a large international comparative study, the Third International Mathematics and Science Study, South African learners performed poorly in Mathematics and Physical Science as compared to learners from other participating countries.

This paper will initially give attention to what is called the "dominant theoretical scenario" on the information society, and to the challenges that arise when this scenario is applied in the context of a third world country. Next, some responses to these challenges in the form of specific e-learning initiatives by different local institutions are described. One such initiative will be discussed in more detail as a case study. The country's Draft White Paper on E-education will also be discussed critically. Finally, conclusions will be drawn as to the success of e-learning initiatives.

1 THE DOMINANT THEORETICAL SCENARIO" ON THE INFORMATION SOCIETY

In the literature there are many theories on the development of an information society or the role of information in society (e.g. by Bell, Machlup, Castells, and Freeman & Soete). In this paper the focus is not on individual theories, but rather on the "**dominant theoretical scenario on the information society**" that emerges against the backdrop of these theories. According to this approach, rapid technological advances have lead to increased ICT applications being available world-wide, and the use of such ICT applications will, especially in the developed countries of the North, lead automatically to **positive social benefits** for the societies concerned.

With regard to **developing countries**, the dominant theoretical scenario deals with the possibility of the emergence of an information society. The approach is optimistic about ICT benefits in such societies, but according to Mansell and Wehn (1998), achieving these **benefits depend on the following processes or conditions**:

- Constructing and accessing an **ICT infrastructure.**
- Building **skills** for producing and using ICTs and ICT services.
- Developing and implementing an appropriate **environment** (e.g. policy and economic environments).

Van Audenhove (2001) mentions a few further conditions, inter alia:

- Developing an appropriate "infostructure**"** system**,** i.e. providing **suitable ICT content and applications**.

2 SOME E-LEARNING INITIATIVES (SEE BENAJMIN 2003; SCHOOLNET SA; 2003A&B, GCIS, 2001; USA, 2003)

In response to the challenges facing e-learning in third world countries, there have been a number of large initiatives in South Africa aimed at transforming the country into a "knowledge-based society" through the use of ICTs. Some prominent examples have been attempts to provide **ICT infrastructure and Internet access to schools** throughout the country, e.g. the SchoolNet SA action; the Telkom SuperCentres project; the Thintana i-Learn project, as well as the more regional GautengOnline and Khanya projects. Although these have been relatively successful, many schools cannot afford or are insufficiently skilled to maintain sponsored ICT equipment. Concern has also been expressed about the advisability of accepting donated Microsoft software at all schools.

There have also been government sponsored actions to provide tertiary educational institutions in disadvantaged areas with **e-learning centers,** e.g. the Web Internet Laboratories of the Department of Communication (reality: too few to make a real difference) or Cyberlabs of the Universal Service Agency (reality: progress has been very slow).

Related actions have been the **telecentre** action of the Universal Service Agency (reality: economically unsustainable) and the provision of rural Multi-Purpose Community Centres (MPCCs) by the Government Communication and Information System (reality: promising, but funding and management issues and a lack of coordination between participating Government Departments).

Some **research institutions** (e.g. the CSIR) and tertiary educational institutions (e.g. the University of Pretoria and the Tshwane University of Technology) have also launched some relevant rural research or development actions (reality: good context-specific models, but costly to apply widely).

3 CASE STUDY: "TELETUKS" EDUCATIONAL SATELLITE BROADCASTS TO SCHOOLS

- **What is TeleTuks?**

  To illustrate the practical realities of introducing e-learning to rural areas of the country, this paper describes the results of a case study that focused on one particular e-learning initiative: the University of Pretoria's TeleTuks educational satellite broadcasts to schools. TeleTuks is community-based project that provides free satellite TV educational lessons to grade 11 and 12 learners in secondary schools throughout South Africa. The broadcasts are meant to supplement local teacher's lessons, and are supported by Internet and telephone feedback links for interactivity with the specialist presenters in Pretoria.

- **Overview of investigation**

The case study investigated to what extent a number of rural schools in the Limpopo Province were able to participate in the various ICT-related options available; and what problems they were experiencing. The study also concentrated on the benefits of e-education for schools participating in the TeleTuks project, as perceived by teachers and by learners.

- **Results**

The majority of the learners and teachers stated that the TeleTuks" educational satellite broadcasts were successful in achieving a number of learning benefits, such as teachers being enriched and the learners' school performance improving.

However, several challenges were also identified: e.g. poor conditions and facilities at the schools, as well as the pace, contents and times of the broadcasts.

- **Conclusion**

It was found that satellite TV could be effective in supplementing classroom education by fostering an interactive learning culture, although it had not been utilised and implemented widely enough. Poor local conditions at rural schools were also found to be a major obstacle for e-learning.

4 Draft White Paper on E-education

The Draft White Paper on e-Education of September 2003 contains a ten year plan for promoting e-learning in South Africa. According to this plan e-learning is to be phased in over three stages and eventually (2013) integrated on four levels, namely school administration, teaching, learning, and departmental educational management. Comments on the document have generally been favourable, but the following comments and points of criticism have been made (see Bridges.org, 2004):

- **Access issues**: Bandwidth problems in rural areas are not mentioned. Coordination between Departments supplying electricity, telecommunications and e-services should be a high priority. Municipal libraries could also be used for e-education.
- **Skills/training issues**: The White Paper focuses on schools, but not on other learning environments such as ABET (Adult Basic Education and Training) programmes, research and development initiatives, or staff training by Government, SMMEs or ICT firms. Besides "digital" and "information literacy", other related types of literacy, e.g. "multimedia literacy", need to be addressed.
- **Supporting policy/economic environment issues**: The prohibition of Voice over Internet Protocol (VoIP) is a legal obstacle to cheaper access in disadvantaged areas that is not addressed. There is more talk of a cheaper e-rate for schools, but no implementation date.
- **Content/applications issues**: Translation applications for content in the eleven official languages are needed.

5 Conclusions

It was found that there are large disparities between e-leaning ideals formulated by South African education policy makers and the realities that face e-learning practitioners. This is especially the case in rural or disadvantaged areas, where e-learning benefits depend on a number of specific processes or conditions that first have to take place.

The paper concludes by summarising the reasons why some e-learning initiatives are not working well in disadvantaged areas, and by describing the conditions under which rural e-initiatives are more likely to be successful.

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