THE IMPERATIVES OF THE REVOLUTION OF TECHNOLOGY DEVELOPMENT FOR MODERN EDUCATION - I. BROERE, H.C. GEYSER and M. KRUGER, RAND AFRIKAANS UNIVERSITY

There is a global revolution in technology development raging around us and we should take cognizance of the implications it has for education as a whole, and in particular in the tertiary educational sector. Current trends towards mixed mode institutions can better be realized using modern technology for delivering education.

Traditional Distance Education (paper based supported by limited contact) remains important for South Africa, but by developing technology for teaching and learning we should inter alia:

- expose all learners to technology,
- provide access for all learners to technological facilities,
- develop modern multi-modal offerings with strong learner support enhanced by technology,
- develop and support academics’ technical skills and
- ensure that the development follows an integrated approach, and that offerings are of a high quality.

We will discuss these issues from an educational, technological and managerial perspective.

EFFECTIVE LEARNING AND DISTANCE EDUCATION: THE WAY FORWARD - David F. van der Merwe (Dr)Honorary Professor
School of Mechanical, Industrial & Aeronautical Engineering, University of the Witwatersrand, Johannesburg

THE RECENT REPORT ON HIGHER EDUCATION DISTINGUISHES BETWEEN CONTACT AND DISTANCE EDUCATION AND SUGGESTS A SINGLE DISTANCE EDUCATION INSTITUTION. SPENDING ON EDUCATION HAS REACHED A CEILING AND FREQUENTLY IMPLIES CUTTING STAFF. HOWEVER, LEARNING SHOULD STILL BE AFFORDABLE, GENERALLY ACCESSIBLE AND OF GUARANTEED QUALITY, SO THAT THE SKILLS OF GRADUATES ARE RELEVANT FOR THE LABOUR MARKET.

EFFECTIVE TEACHING TODAY CAN BE ASSISTED BY THE COMPUTER WHICH CAN CATER FOR LARGE STUDENT NUMBERS AND, AT THE SAME TIME, ADDRESS PROBLEMS OF THE INDIVIDUAL STUDENT. THE COMPUTER CAN ALSO ASSIST THE LECTURER IN MONITORING STUDENT PROGRESS CONTINUALLY.

THE TECHNOLOGY BENEFITS BOTH CONTACT AND DISTANCE EDUCATION, SUGGESTING PARTNERSHIPS BETWEEN COMPLEMENTARY AND LIKE INSTITUTIONS, RATHER THAN THE MERGER OF LIKE INSTITUTIONS.

IT IS THEREFORE SUGGESTED TO PLACE LECTURES ON CD ROM (INTERNET-COMPATIBLE) TO ASSIST LECTURERS AND GIVE THEM ADEQUATE TIME FOR GLOBALLY COMPETITIVE RESEARCH. PARTICIPATING AT A CONFERENCE IN BEIJING LAST YEAR, PROVIDED CONFIRMATION OF SUCH A CONCEPT.

EVIDENCE, EXPERIENCES AND LESSONS: THE EDUCATION OF CHARTERED ACCOUNTANTS VIA DISTANCE LEARNING MODE AT THE UNIVERSITY OF NATAL (DURBAN) FROM 1997 TO PRESENT -ANTHONY B. LUMBY, DEAN, FACULTY OF MANAGEMENT STUDIES, UNIVERSITY OF NATAL (DURBAN), SOUTH AFRICA; AND ADRIAN D. SAVILLE, SENIOR LECTURER, SCHOOL OF ECONOMICS AND MANAGEMENT, UNIVERSITY OF NATAL (DURBAN), SOUTH AFRICA
Prior to the political developments of the early 1990s, which paved the way for South Africa's first democratic elections in 1994, the country’s twenty-one universities were obliged to operate primarily along ethnic lines. Further, the accounting profession accredited few of the historically disadvantaged universities, which catered for African, Indian and Coloured students. The inevitable result of this discrimination has been a shortage of qualified African Chartered Accountants (CAs). In addition, there has been a growing shortage of CAs of all ethnic backgrounds, as an increasing number of qualified professionals take up positions overseas. These events have also impacted upon the supply of academic accountants; and the situation has been further aggravated by the fact that academics’ salaries have failed to keep pace with salaries in commerce and industry. Since 1994, however, a number of changes have taken place, which have served to advance the flexibility and fluidity of South Africa’s education system. One such change has involved the National Department of Education granting permission to residence-based universities to engage in the supply of certain distance-learning programmes.

Against this background, in 1996, the University of Natal’s Faculty of Management Studies negotiated an agreement to offer a postgraduate accounting degree via distance learning. The rationale underlying this move was essentially four-pronged. The initiative would widen access to postgraduate studies for those who wished to train as CAs. Importantly, and related to this first point, training would be readily extended to members of previously disadvantaged communities. The programme could also be used to augment the incomes of academic accountants, thus retaining their skills within the University. Finally, the programme would also allow the University to broaden its reputation as a centre of excellence in the training of CAs.

In line with the above, the University’s distance-learning programme has been in operation for the past four years. Through this programme, the University has emerged as the leading educator of African CAs in South Africa. Notwithstanding this success, the programme has experienced difficulties. Set against this backdrop, the purpose of this paper is to explore the pedagogic methodology underpinning the distance-learning programme for the education of CAs at the University; to review the evidence vis-à-vis the programmes success; and to explore possible reasons for the programme’s success (or lack thereof). The paper also attempts to identify steps that might be taken to overcome various difficulties that have been experienced by those involved in the programme over the past four years.

OLD WINE IN A NEW BOTTLE: THE CASE OF GEOGRAPHY TEACHING AT THE UNIVERSITY OF SOUTH AFRICA- Zietsman, S & Vlok, AC, Department of Geography and Environmental Studies, University of South Africa

During the last decade changes in the economic, institutional and educational milieu led to ever-increasing pressure on academic departments (especially in the humaniora) of South African universities. Decreasing student numbers, new and less favourable subsidisation formulae, a decrease in the staff complement of academic departments and (justifiable) demands for higher pass rates are some realities which have to be faced and for which solutions have to be found.

Since 1995 the staff complement and number of first year students of the Department of Geography and Environmental Studies at Unisa decreased by nearly 50 % and 66 % respectively. Shortage of staff and the high input required to maintain our (then) rather clumsy distance teaching model resulted in the department being bogged-down in a 'teaching-only-no-research' mode. The writing was on the wall and we realised that something drastic had to be done.

The incompatibility of a paper-bound, surface-mail, worldwide, distance teaching model and a semesterised system called for an innovative solution to overcome the reality of a study period of effectively three months per semester. This paper will explore the determinants and the rationale of our new teaching model which was implemented in 2000. The whole process and end-product were directed and determined by institutional, subject-specific and departmental determinants. The end result is a modularised, semesterised, integrated and outcomes-based product aimed at self-directed learning. One year after implementation it is starting to show dividends and we are optimistic that we were successful in introducing a student-friendly, standards maintaining teaching model which can be sustained by a shrinking teaching force. We believe that our experience and strategy could stimulate debate and discussion about strategies to improve distance teaching in Geography and related subjects.
A Formative Evaluation of the Masters Degree in Early Childhood Intervention
Offered by The Centre for Augmentative and Alternative Communication
University of Pretoria.

The Centre for Augmentative and Alternative Communication (CAAC) offers a Masters Degree in Early Childhood Intervention to equip multi-professionals rendering services to infants and young children, with specialised knowledge and skills in the field of early childhood intervention, to function optimally in a changing and challenging context.

The course is web-based and offered to students at a distance. The methodology used in this course is problem based and much of the work is problem solving oriented, which demands that students reflect on readings rather than summarise knowledge.

The programme is offered over two years with modules one to four completed in the first year and modules five to seven in the second year.

At the beginning of the course each student is allocated to a multi-professional study group. These groups operate primarily by means of on-line discussions using the discussion tool in the respective modules. The aim of the group discussions is for students to develop in-depth understanding of the perspectives of different professionals and work context to develop a comprehensive understanding of the field.

Evaluation of the course was based on the first module, Theoretical Framework and Issues in Early Childhood Intervention (30 credits), and comprised of two parts; evaluating the instructional design of the web site, and monitoring how learners use the web site and online teaching and learning strategies:

This paper will focus on the second part of the evaluation i.e. how learners use the web site and online teaching and learning strategies. The main thrust of the paper will be on the processes involved in arriving at the criteria and the methodology used for the evaluation.

Workshop based upon workshops run in 2000 at Vista and in 2001 at TSA – Tony Mays, PROMAT/SAIDE

Assessment in DE
1. Is assessment in DE different from assessment in education in general?
   Presentation of main principles derived from ASEESA 2000.
2. Individual reflection and small group discussion around sets of source materials which comprise examples and explanations of current assessment practice at a number of SA and overseas institutions. Groups discuss source documents and try to draw up some principles for good DE assessment.
3. Groups present ideas in plenary and facilitator tries to consolidate a single set of guidelines.
4. Input on the issue of controlled assessment in DE.

THE WAY AHEAD: STRUCTURING DISTANCE EDUCATION PROVISION
Prof. L.A. van Wyk (Chief Director: Telematic Learning Systems, PU for CHE) - Bertus le Roux (Operational Manager: Telematic Learning Systems, PU for CHE) Elize Goosen (Manager: Courseware Design and -Production, Telematic Learning Systems, PU for CHE)

The aim of this case study is to investigate the structure of a Distance Education Centre to utilize the potential of Distance Education in South Africa. In Distance Education provision the following elements have to be considered:
   o Recruitment of students
   o Design, production and distribution of courseware
   o Student support
   o Management services
   o Network services
   o Remote learning centres
In this case study current structures at institutions in Great Britain, Europe, Australia, the USA and Canada will be compared with the trend in South Africa. This case study will aim to make some recommendations on the structure of a Distance Education Centre at tertiary institutions in South Africa.

The implications of the new Educators in Schooling qualifications for teacher education at a distance - Tessa Welch, South African Institute for Distance Education (SAIDE), Braamfontein, Johannesburg.

The paper will present the Educators in Schooling qualifications as revised following public comment during June and July 2001. The qualifications will be contextualised within the current crisis in teacher education in South Africa, and their implications for teacher education at a distance will be drawn out. Examples of existing distance teacher programmes will be used to illustrate directions distance providers might take.

QUALITY MANAGEMENT IN DISTANCE EDUCATION - Ronel Heyns
Assistant Director: Quality Assurance and Development Directorate: South African Qualifications Authority

QUALITY MANAGEMENT SYSTEMS FOR EDUCATION AND TRAINING PROVIDERS: - LINKING EXTERNAL REGULATIONS WITH INTERNAL SELF-REGULATORY MECHANISMS

One of the core criteria for the accreditation as an education and training provider is the development and implementation of a quality management system, as indicated in the SAQA document: Criteria and Guidelines for Providers: 2001. This is the regulatory framework within which the Education and Training Quality Assurance Body (ETQA) will accredit its constituent providers.

Unfortunately, many providers see a quality management system (QMS) as an (expensive) add-on rather than a self-regulatory strategy and a tool to develop and improve the delivery and assessment of learning.

The ETQA Regulations (‘externally imposed regulations’) provide the generic framework to standardize quality assurance activities. To facilitate a common understanding and the role of providers in the quality cycle, SAQA has developed the following documents:

- Criteria and Guidelines for Providers;
- Quality Management Systems for Education and Training Providers
  (This document is still a discussion document, but by August 2001, it will be tabled at the SAQA Authority as a proposed policy document.)

In the latter document, there is a strong emphasis on self-regulation and self-assessment by an individual provider. The self-assessment will take place against the statutory criteria (refer to criteria below), but it is recognized that quality assurance will have to be “context-sensitive”, taking into account the variables within which education and training providers are functioning, including the mode of delivery, i.e. distance education.

Therefore, providers (including distance education providers) are encouraged to help shape and implement appropriate quality management systems that will enhance quality of delivery of learning and assessment, rather than viewing the core criteria for the accreditation of providers as a ‘big stick’, i.e. compliance with externally imposed regulations.

CORE CRITERIA for the accreditation of Education and Training Providers (from ETQA Regulations, No R 1127 of 8 September 1998):

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Elaboration</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Policy statement</td>
<td>The organisation’s aims, objectives and purposes need to be spelt out</td>
</tr>
<tr>
<td>2. Quality management systems</td>
<td>Outline procedures that implement quality management in the organization</td>
</tr>
<tr>
<td>3. Review mechanisms</td>
<td>Outline the ways in which the implementation of policies would be monitored</td>
</tr>
<tr>
<td>4. Programme delivery</td>
<td>Outline how learning programmes would be developed, delivered and evaluated</td>
</tr>
</tbody>
</table>
5. Staff policies
Outline policies and procedures for the staff selection, appraisal and development

6. Learner policies
Policies and procedures for the selection of learners are outlined, and learners are given guidance and support

7. Assessment policies
Outline policies and procedures for forms of assessment that are used and how they are managed

8. Management system and policies
Indicate the financial, administrative and physical structures and resources of the organization, as well as procedures of accountability in the organization

"A Paradox of Pressures: Developing a Writer's Programme for College Lecturers from the North West Province Department of Education - Arlene Walsh, Deputy Director, Research & Innovation at Management of Schools Training Programme

Management of Schools Training Programme (funded by DANIDA, or the Royal Danish Embassy) has been working with the North-West Province Department of Education for a number of years, in the area of education management development. The paper will examine one aspect of the programme, that is, the establishment of a team of writers from Colleges of Education, who will be required to serve the writing needs of the NWPDoE as colleges become EMGD centres. The challenges and successes of the programme will be analysed, and a model for future programmes will be proposed, as a result of the lessons learned during the pilot programme. The proposed model will include suggestions about curriculum and methodology. The position of a service provider, required to address the needs of the Department of Education, the funders and its own organisation, and the sometimes unsatisfactory compromises that are required, will also be examined.

Walking with dinosaurs DE: Evolution or Extinction and the HEP – Tony Mays, Promat

This paper will comprise the following three sections:
Exploring some redundant conceptualisations of DE which still seem to be prevalent.

- T-Rex Concept DE exploits poor learners in a predatory fashion. DE definite second best.
- Diplodocus Concept DE must take twice as long as FT study. DE as a second cousin.
- Pteradactyl concept
- DE as the panacea for education woes. Unrealistic expectations of DE
- Sabre-tooth tiger concept
- Do what you always did, associate it with Open Learning, but don't call it DE!

Making a case for DE to be seen in terms of a continuum of education provision rather than the tendency to create a dichotomy between distance and non-distance provision, and exploring some of the challenges that arise from this.

Considering the challenges raised by the HEP and how we should/could meet them: that is evolve or become extinct.

WHY DID WE THINK IT WAS PASSABLE? - Lampies Cornelius Director B Ed Hons Programme University of Natal Pietermaritzburg.

The paper focusses on the assessment and evaluation methods used in a distance education, mixed mode, B Ed Hons programme. At one stage the programme had more than 200 tutors, 2000 active students, and was offered at 27 geographically widely distributed centres. The paper looks at the structure of the promotion mark, methods employed and systems put in place for the marking of assignments and examination scripts. It gives the reasoning behind the specific structures and methods employed and explains the policies adopted regarding assignments and examination to try and ensure valid, equitable and reliable assessment. With this as background problems concerning assignments, pass rates, remarking, supplementary examinations, role of moderators, examination centres etc. are explored.
The draft funding framework for higher education: implications for distance education and a suggested alternative strategy – Jenny Glennie, South African Institute for Distance Education

The draft funding framework for higher education proposes that the teaching input subsidy for a public distance education full-time-equivalent place be half of that for a contact place. The Vexed Question of Funding. In this paper, the author questions whether a definition can be found to make this costly dichotomous distinction, and why distance education which includes expensive interaction with academic staff should be penalized in this way. She proposes an alternative strategy for consideration.

Dynamic Associations for Excellence in Distance Education - Dr. C.L.Peppler  Principal of SA Theological Seminary.

The paper will explore the concept of dynamic associations between public universities and private distance learning institutions. Not the pseudo accreditation arrangements currently existing between some universities and private higher education institutions, but associations between two independently accredited and registered institutions for mutual growth, quality assurance and academic development.

The paper will present some of the benefits of an existing association between the University of Zululand and the SA Theological Seminary. The basis of the paper will therefore be more experiential than theoretical.

Major issue addressed in the paper will be:

- Recognition of Prior Learning - the beneficial synergy resulting from the institutional approach of the public university and the business model approach of the private institution.
- Quality Assurance benefits for the private distance learning institution through assignment and examination moderation by the public university.
- Undergraduate programme coverage - the ability of the private institution to specialise whilst still being able to offer potential students all or some of the options offered by the public university.
- Postgraduate cooperative tutoring - the ability of suitably qualified faculty members of the private institution to co-tutor/promote Masters and Doctoral candidates and the advantages of this to both the distance learning institution and the student.
- ‘Export of knowledge’ opportunities - private distance learning institutions are well placed to take advantage of the weak Rand to canvas overseas postgraduate students.
- Joint research and publishing.
- Upgrading of the qualifications and academic status of the private institutions faculty members.
- Participation by the private institution in government sponsorship.

ASSESSING THE SIGNIFICANCE OF RESEARCH ON WEB-BASED LEARNING – RITA KIZITO, UNISA

Distance education is undoubtedly the most affordable means for adult learners to specialise and retrain for new tasks and challenges in order to remain competitive in the global economic environment. Many institutions are increasingly considering web-based learning as a flexible distance education delivery alternative. Unfortunately, a growing number of adult learners, particularly in Africa, are continuously being excluded from the benefits of this information technology revolution.

In most under-developed communities, access to networked information technology is limited. Even if access issues were resolved, acquiring the capacity to make meaningful use of this technology is lacking. Unless educators initiate research processes that will reveal constructive and contextualised solutions to accessing and utilising these new technologies, out adult learning communities will remain disenfranchised.
As distance education practitioners, we often find ourselves questioning whether the results from research reports of web-based learning experiences are valid, and whether the solutions can be meaningfully transferred into our own contexts. How then, should we go about assessing current web-based learning research in order to improve our pedagogic practice?

This paper is a preliminary step towards establishing a strategy that could be used to evaluate web-based teaching and learning research in order to support contextualised web-based education delivery implementation.

The rise (and fall) of online learning (e-Learning) as a (single) medium to deliver education and training, both in the private and public sector - Danie J Kok Project Manager e-Learning, SAP AG Corporate Research.

Online learning (e-Learning), to contribute towards solving the education and training crisis in SA, has been introduced and assessed as a learning delivery mechanism by a online learning provider, IthinQ.com, a subsidiary of SAP Africa.

Basic assumption were made regarding the impact online learning could have on education and training, the readiness of the market to accept online learning, open learning and the role online learning could play, learner support, facilitation of learning, online learning as a new breed or natural progression of distance learning, technology based learner management, courseware design and development, marketing, technology developments, and the inherent ability of online learning to respond to market needs. Financial predictions were extremely positive and the return on investment, both from a provider and users perspective very rosy. Learners will have the opportunity to receive relevant, quality education at their place of choice, in their own time, progressing at their own pace.

Did any or of all of the “optimistic” learning and profitability prediction materialise? IthinQ.com, as a case study, will provide some answers.

What does the future hold and how does SAP, a leading provider of e-Learning technologies, see the future of Internet-based (online learning). How will the results of the German Lighthouse Project and the South African DASSIE e-Learning prototype address issues related to the role e-Learning could play in education and training?

This paper will offer various examples of failures and successes, but most importantly, will endeavour to contribute to defining the role e-Learning could play in education and training, both in the private and public sectors.

The interplay between structural conceptions and implementation processes of the Integrated Learner Centred Distance Education Model (ILCDE)Dr Mavundla Thandisizwe & Mr. Netswera Godfrey Senior Researchers: Technikon South Africa

During 1992, Technikon SA (TSA) with all its stakeholders including South African Institute for Distance Education (SAIDE) proposed and implemented the Integrated Learner centred Distance Education model (ILCDE). The intended focus of this model, also seen as the basis for a well functioning distance educational institution was:

- The provision of quality learner support
- The production and provision of quality courseware
- The provision of quality support services

The overall intention of the model was to increase learner throughput level by the year 2000. From the year 1999, the evaluation processes had already began to ascertain the success of the implementation of the model.
Areas of evaluation process included staff perception of the implementation of the model, the second aspect of the evaluation is on the area of tutorial support. These evaluation processes have followed qualitative processes, which made use of individual in-depth and focus group interviews.

From the findings, the following is deduced: that for distance education models to take off, one should align the structural conceptions with the implementation processes. That specific attention should be given to such aspects as organisational communication, awareness and induction processes to the organisational philosophy, establishing trusting relationships and commitment to the given paradigms.

How supportive is ‘support’? A.D. Lelliott and N.A. Corry
School of Education, University of the Witwatersrand, Private Bag 3, Wits, 2050, South Africa.

Support for students enrolled on Open and Distance Learning programmes is of variable quality and quantity. Many institutions are providing opportunities for teachers to upgrade their professional qualifications through open and distance programmes. This paper shows how teachers have been supported in a mixed-mode Bachelor of Education (Hons) programme at the University Of The Witwatersrand in Johannesburg. The teachers enrolled in the Wits programme work in rural or urban-township environments, and have minimal or no access to electronic-mediated learning, hence the programme relies mainly on text-based materials.

The programme managers conducted a survey of the teachers, which focused on their perceptions of how they were supported in the following ways: working with course materials in their own contexts, communication with the university, participating in study groups, and assistance in setting up their own self-study programmes. The paper presents the findings of the survey and makes recommendations regarding how learner support can be improved in such a programme.

ENHANCING TEACHING AND LEARNING FROM A DISTANCE: THE IT CHALLENGE

ABSTRACT

A large scale diffusion, adoption and application of educational technologies can introduce a higher degree of flexibility to both teachers and learners, as well as giving timely responsiveness to the ever changing educational needs of society, especially in those countries where getting an education is still more of a privilege than a right. Expanded access through application of affordable technology could also contribute to a reduction of the glaring gaps between those who have access and those who for various reasons are unable to pursue opportunities for higher learning.

As the interactive distributed technologies of the information highway are brought to schools, colleges and universities, a new trend is emerging: the traditional classroom is assuming importance as a DE teaching and learning site. However, that for many developing countries, and in our context in Southern Africa, availability and use of IT will not come easy or soon.

In our part of the world, availability of educational technologies poses great challenges to DE providers and learners in both the public and private sectors, in terms of cost, acquisition, application, and the ever attendant issues of training and capacity building.

THE FORT HARE DISTANCE EDUCATION PROJECT: SYSTEMS OF DELIVERY AND SUPPORT - Liz Botha (Academic Co-ordinator/Interim Manager) and Cecilia Osei-Agyakwa (umKhwezeli/Educator and School Support Officer)

At present, the main offering of the Fort Hare Distance Education Project is an in-service B.Ed. (Primary), which currently has ± 1300 teacher-learners, spread across the whole of the Eastern Cape. Materials are presented in the form of modules (imithamo), each of which occupies teachers for ± 40 hours. Teachers spend at least a third of this time doing practical classroom-based or school-based activities, and reflecting on them. They also spend about 4 hours a fortnight, on Saturday mornings, in face-to-face sessions, at one of the DEP’s 18 centres which
are spread around the province. At these sessions part-time staff \( (abaKhwezeli) \) facilitate the introduction of imithamo, sharing around the activities which have been done, and peer and self assessment.

The paper will examine the effectiveness of the systems of delivery and support involved in presenting this course. It will focus on centres in the rural EG Kei region, from which the majority of the teacher-learners come. Feedback from teacher-learners, abaKhwezeli and other regional and central office staff will inform the paper. The paper will make some recommendations on how the systems could be improved.

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**SUPPORTING DISTANCE LEARNERS: MEETING THE INFORMATION NEED – NYAMEKA JABANE – (LIBRARIAN)**

This paper seeks to share ideas on how the University of Fort Hare’s Distance Education Project Library is supporting and disseminating information to the learners who are spread throughout the Eastern Province, with the majority of our learners coming from the rural areas. Emphasis will be on the Kokstad region which boasts more than fifty per cent of our enrollment. This paper will therefore focus on the Resources Centres, Resources as well as Access to these resources. Challenges will also be highlighted.

This paper will examine some of the peripheral problems that have made it impossible for the library to operate from a central point resulting to the formation of networks with other information agents. It will also look at the Distance Education Project Library materials collection and how these are made accessible to the learners in all our 18 centres.

Finally the paper will briefly look at the challenges encountered.

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**THE FUTURE OF ENGINEERING TRAINING IN THE MERGED DISTANCE EDUCATION INSTITUTION - CJ DANNHAUSER Commissioning Manager, New Pretoria Academic Hospital. from July 2001, Senior Lecturer: Mechanical Engineering, Technikon SA**

New trends in Distance Education in the Public sector.

In the past attempts were made by UNISA to offer Engineering Degrees but the efforts were not successful and was stopped.

Technikon SA started Engineering training more than 5 years ago and is only now in the position to offer the complete National Diplomas & B Tech degrees in the 6 major Engineering disciplines e.g. chemical, civil, electrical, industrial, mechanical & mining

With the proposed merger between UNISA, Vista University's VUDEC campus and Technikon SA the possibility exists to establish an Engineering Faculty that can offer the full spectrum in Engineering training from Pre tertiary bridging courses, Technical College N1 to N6, Technikon ND & B Tech as well as University B Eng, M Eng & D Eng.

This faculty will have the following advantages:

1. Create mobility between the various education levels in Engineering qualifications and remove the perceived barriers and ceilings that exist at present.
2. Open Engineering training to those potential students that cannot attend residential institutions' Engineering Faculties due to financial constraints, lack of sufficient grade 12 marks or the absence of the required entry subjects at grade 12 level.
3. Offer a backup to students that are forced to leave a residential tertiary institution due to various reasons. The student can continue by means of DE.
4. By means of RPL of working persons education and experience, establish an entry point to better his/her qualifications

The paper will offer a structure for the proposed new Faculty of Engineering that should be established with the merger of UNISA, VUDEC & TSA. It will show how it can provide in the training of engineering & technology students in Africa south of the Sahara by means of DE. It will further show that full mobility can be achieved from N1 to D Eng
Audio Instruction Design In Distance Education – Seeking Quality
K Kabonoki, University of Botswana.

The focus of this paper is on the design of audio learning materials in distance education. The paper argues that the development of learning instructions is a critical activity. Learning instructions largely determine the perseverance and tenacity of the learner, and ultimately therefore the drop-out rate in this mode of learning, which in fact is individualised learning. Sustainability of distance education implies acceptability and being seen as providing appropriate and acceptable alternatives in access to education.

This paper argues that distance education instruction designers must not only target distance learners but must also aim at having their materials spill over to conventional learning systems where similar disciplines are on offer. Sustainability of programmes implies low drop out rates and the ability to serve a larger clientele. To this end, the paper holds that instruction designers must keep abreast with trends and approaches to learning as proposed by educational psychologists. The paper draws on examples from instruction design procedures in use at the Centre for Continuing Education of the University of Botswana in developing audio media learning materials.

Fabulous Freebies on the Internet: Cost-effective online teaching and learning
environments - Ms Linda van Ryneveld (Senior Instructional Designer)
Department of Telematic Education, Technikon Pretoria, South Africa

It has been for some time now that distance learning environments that allow for collaborative learning have been acknowledged as being highly effective in terms of the quality of the teaching and learning outcomes that they pursue. As we are entering the new millennium, the Internet now offers a wide variety of interactive learning environments that emphasize peer interaction in the context of cooperative goals while also allowing for ample collaboration between learners and their facilitators and other specialists in the field.

Many commercial software products, services and authoring tools are available in the educational market today. The problem about these products and services is that the majority of them are so highly priced that they are way beyond the reach the many institutions in South Africa that already suffer from the dire effects of insufficient funding and other financial constraints of various kinds. In South Africa, universities, technikons and other higher education institutions have had to face up to making crucial decisions about their investment in and their commitment to instructional technology.

Lecturers who are enthusiastic about experimenting with the teaching and learning potential of the Internet often become daunted when they are faced with the financial implications involved in selecting and acquiring adequate tools, products and services. Even though the costs for a web-based training program is often lower than that associated with teacher-led training, the biggest obstacle is often the start-up cost when investing in the technology and development time.

This paper will show that there are a substantial number of web-based technologies and tools that are available on the Internet for no charge at all. These technologies are available for the use of distance educators who want to explore the possibilities of an online course and whose learners already have access to Internet-connected computers.

"A Paradox of Pressures: Developing a Writer's Programme from College Lecturers from the North West Province Department of Education" Arlene Walsh, Deputy Director, Research & Innovation at Management of Schools Training Programme
Management of Schools Training Programme (funded by DANIDA, or the Royal Danish Embassy) has been working with the North-West Province Department of Education for a number of years, in the area of education management development. The paper will examine one aspect of the programme, that is, the establishment of a team of writers from Colleges of Education, who will be required to serve the writing needs of the NWPDoe as colleges become EMGD centres. The challenges and successes of the programme will be analysed, and a model for future programmes will be proposed, as a result of the lessons learned during the pilot programme. The proposed model will include suggestions about curriculum and methodology. The position of a service provider, required to address the needs of the Department of Education, the
Interactive video conferencing is no new concept to the people who make use of this technology. However for most training institutions this is still only a dream.

Due to the expense of acquiring video conferencing technology, new models of purchasing and acquiring is needed. The belief is no longer valid that it's management's responsibility to provide these technologies to enhance the teaching and learning environment/experience.

Global competition and collaboration make it a requirement that we find ways of operating better and differently. The big question is: How do we get access to expensive technologies? Who will finance the accessibility to these technologies?

Technikon Pretoria made strategic technology chances in less than two years with national benefit by means of:

- Commitment from Management
- Definite strategies
- Research
- Changing of existing procedures/processes
- Selection of partners/shareholders
- Project management techniques

Application of a blended e-learning approach in a residential institution -
I. Smit Project Manager Centre for e-Learning, Cape Technikon.

Higher education institutions have an obligation to deliver high quality teaching using all means to their disposal. The question is always whether learning has improved by introducing technology, or by using Distance Education for whatever reason. The idea of using Distance Education in a traditional residential institution always sparks interest and sometimes controversy and the National Plan for Higher Education released in March 2001 has again added to the debate.

To ensure that learning takes place, the introduction of a course management system is a necessity and the use of the Intranet, the Internet and electronic tools must be evaluated to ensure that teaching, using technology, leads to learning. To achieve this, the teachers who can liberate themselves from the shackles of their own learning styles find themselves free to enhance their own teaching, adding value to teaching.

Thus the paradigm shift lies more with the teacher than the learner who are less intimidated by technology.

By blending the mode of transfer between web-based interaction and the familiar talk and chalk we have the best of two worlds. Distance Education should therefore include a mixed mode of teaching and if possible direct interaction between teacher and learner can be introduced. This can be achieved by a wide array of electronic means available. Sometimes the direct cost to introduce these method alone dictates whether it is used or not.

Extended:
This paper will address some issues of importance in the debate to Distance Educate or not. The controversy on this issue and the ownership have not been resolved. The changing influence of globalisation and Just in Time Teaching have not been evaluated and utilised yet whilst at the other end hastily designed courses and the incorrect way of transfer by chunking material from incompatible sources have done a lot of damage to a wonderful methods of tuition. By regular discussion and international collaboration, we can find a way to change the way people see Distance Education.

E-Learning has the opportunity to allow students to study anytime, anywhere anyway and we have to embrace it and not discard the influence it may have on the shaping of teaching methodology in this rapidly changing techno-environment.
The Future of Learning for the Future” – A local perspective on the ICDE’s twentieth world conference on open and distance learning

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In April 2001 I participated in the ICDE’s twentieth world conference in Dusseldorf. In this paper I consider some of the key issues raised at the conference in terms of challenges for distance educators and distance learners in a range of Southern African contexts.

Examples of these issues are (i) tensions between competition and co-operation among distance education providers; (ii) benefits and costs to learners of on-line programmes; (iv) appropriate technologies for a range of teaching and learning contexts; (v) globalisation of distance education as a possible new form of colonisation.

Title: Soaring with Eagles and Scavenging with Crabs – Reflections on the TSA / SAIDE Courseware Evaluation and Capacity Development Project

The project aims and actual context into which this participatory project was introduced at TSA will be briefly reviewed. The panel inputs will further share the conceptual and methodological considerations which informed the four-phase design. An account of the processes to date will be presented, focussing on the reflective practitioner insights gained and the lessons learned. A brief description of the diagnostic instruments and quality assurance tools being developed will be included.

Participants to this session are invited to engage in dialogue with the presenting team and contribute to further refining our ideas and practice.

Panel Convenor: Rachel C. Prinsloo
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DISTANCE EDUCATION FOR CAPACITY BUILDING IN DEVELOPMENT POLICY AND MANAGEMENT - ALAN THOMAS SENIOR LECTURER DEVELOPMENT POLICY AND PRACTICE, THE OPEN UNIVERSITY MILTON KEYNES, MK7 6AA, UK.

How can distance education programmes help build capacity for development policy and management? This paper describes an explanatory framework being tested on three programmes in Southern Africa and one based in UK. All are aimed at students who might apply their learning to development through their organizations. Development management is characterised by deliberate interventions aimed at external social goals, relationships between multiple agencies, and value-based conflict. A linear model of knowledge transfer is particularly inappropriate. Instead, knowledge is regarded as socially constructed. Both formally codified and informal, tacit knowledge are valid.

The framework relates four elements: (i) the distance education programme; (ii) the individual student's learning; (iii) organizational capacity building; and (iv) the broader arena of socio-economic development. The middle two are conceived as cycles reinforcing each other at a point representing social ‘learning interactions’. Here individuals apply learning and organizations incorporate individuals’ actions into organizational learning. Here codified knowledge (course materials and curriculum) interacts with tacit knowledge (students’ theories-in-use, routines and pre-existing portfolios of techniques). It is suggested that distance education programmes best promote capacity building by enhancing the quality of these ‘learning interactions’.

E-learning and good learning: The web-based learning environment and lessons for print-based DE Alice Goodwin-Davey, Bureau for University Teaching, UNISA

A common caveat against online teaching and learning in South Africa is that it cannot be a viable option for the majority of our learners. While it is true that many learners in our communities are still without basic amenities, this does not imply that we must give up on trying to provide all learners with proper educational services.
There are many pathways to meet learners' needs through increased access to quality educational materials as laid out in the educational regulations and policies. One of these is by tapping into the potential of online education, where we are reminded of what we should be doing with our mainstream print-based DE.

This paper will outline some of the functions of teaching online in the web-based learning environment; discuss the advantages of online teaching, with web-specific examples of interaction, participation by learners and facilitators, and the establishment of a safe online community of learners where true reflection and internalisation of learning can take place. Then the paper will draw lessons from the web-based learning environment which can feed back immediately into our current print-based distance education.

GIVING YOUR KNOWLEDGE, TIME AND HEART: FACILITATING THE ONLINE LEARNING COMMUNITY - J F HEYDENRYCH EDUCATIONAL DEVELOPER, BUREAU FOR UNIVERSITY TEACHING, UNISA

THIS PAPER HIGHLIGHTS THE NATURE OF CORRESPONDENCE DISTANCE EDUCATION AS DRIVEN BY THE PRESSURES OF ECONOMIES OF SCALE. THE TEACHER AND POSSIBLE INTERVENTION IS DESIGNED OUT OF THE LEARNING EXPERIENCE - THE PERFECT PACKAGE IS PRODUCED AND SOLD TO A NAMELESS MASS. THE ONLINE LEARNING COMMUNITY IS PRESENTED AS THE OPPOSITE - IT IS ABOUT FACILITATING COMMUNITY AND LEARNING IN A COLLABORATIVE ENVIRONMENT. IT FORCES THE CORRESPONDENCE LECTURER TO LEAVE THE COMFORT ZONE OF NON-INTERVENTION AS HE HAS TO TAKE RESPONSIBILITY FOR THE WELFARE OF SMALL GROUPS OF LEARNERS. HE LEAVES THE PODIUM AND JOINS THE LEARNERS IN A HORIZONTAL RELATIONSHIP WHERE HE FACILITATES KNOWLEDGE BUILDING.

Acquiring technologies and support networks . The Potential for distance learning to deliver programmes of study in foundation level science
- Marissa Rollnick (Wits University) and Susan Tresman (Open University, UK)

The College of Science (COS) at Wits University has been running a successful access course to the faculty of Science for nearly ten years. In this time, 245 graduates have been produced from this programme. However, this programme offers access to only 200 students per year. The COS has decided to broaden access to its programmes by making its existing courses in physics, chemistry, biology, earth sciences and mathematics available in open learning format. This paper provides the rationale and description of the project and discusses some ways in which the implementation of the project may be researched.