



TASK TEAM 5:

Technology Enhanced
Teaching, Learning and Student
Support

STLSC 10 May 2010

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1 INTRODUCTION

Unisa is in the process of developing a higher order open distance learning (ODL) model. This implies the pervasive use of information and communication technology (ICT) throughout the organisation. In this context ICT can be defined as the study, design, development, provisioning, management, maintenance and support of hardware, software, information and data (structured and unstructured). This includes the processing, storage, security and flow of the data via wired, wireless and satellite networks.

Owing to the disparities in technology literacy within the general Unisa academic body and among students, it is suggested that technology be rolled out according to three categories: augmented, blended and online. Technology usage should be viewed as gradients within each of the three broad categories and should be determined by the technology readiness of each college, school, department or subject specialist. There is usually a progression from technology augmentation to online teaching and learning.

Augmented: In the Unisa context this refers to the use of technology to **extend** existing paper-based courses by using audio CDs, multimedia DVDs, audio and video conferencing, satellite broadcasting or the basic functionalities of *myUnisa* such as resource uploading and discussion forums. Some academics even use externally hosted Web 2.0 tools such as Facebook and Blogger. Staff using the latter must, however, be wary of the following associated institutional risks: copyright, identity and information harvesting; academics must provide all technical and non-technical support themselves; the providers' right to terminate or change the service at will; higher levels of technology literacy among students, etc.

Blended: In the Unisa context this refers to the **replacement** of components of the existing paper-based distance education programmes with technology. These may include using the more advanced tools of *myUnisa*, podcasting, e-portfolios, etc. It could also refer to extending face-to-face interaction with students both physically and via bidirectional synchronous technology such as video conferencing and Skype.

Online: Technology entirely replaces paper-based and face-to-face education. Unisa currently has the capability to provide fully online programmes through *myUnisa*, *myLife* and associated Web 2.0 technologies. However, courses will have to be redesigned from the ground up and academics as well as support staff will have to acquire new skills to reap the full benefits of online teaching and learning.

Although it is noted that an organisation-wide holistic approach must be followed when deploying technology solutions for Unisa, this document will focus on the use of technology in teaching, learning and student support. Care will, however, have to be taken to ensure alignment with the institution's technical architecture.

2 CURRENT STATE OF USAGE OF TEACHING AND LEARNING TECHNOLOGY AT UNISA

More than 4 000 personal computers and laptops have been deployed throughout Unisa (main campuses and regional offices), and all academic and core support staff have access to networked computers. The ICT Department tries to replace these computers on a three-year cycle and to upgrade operating systems as soon as they prove to be stable. From a higher education (HE) organisational point of view, Unisa has some of the best-resourced staff in the country.

In 2009, two very important milestones were reached with regard to broadband connectivity for HE in South Africa:

1. In July 2009, the SEACOM broadband undersea cable, connecting SA with the rest of the world, was commissioned. TENET (HE's internet service provider), secured 10 Gb international connectivity on this cable for exclusive use by HE and research institutions.
2. During December 2009, the Meraka Institute at the CSIR completed the installation of the SANReN, 10 Gb broadband backbone, on behalf of the Department of Science and Technology. This infrastructure will also be managed by TENET on behalf of HE and interconnects the following six cities in South Africa:
 - Pretoria (CSIR), with Unisa as backup site
 - Johannesburg (Wits)
 - Bloemfontein
 - Durban
 - Cape Town
 - Port Elizabeth

The Meraka Institute is currently connecting the Muckleneuk, Sunnyside, Skinner Street East and West and Little Theatre campuses. This work, funded by the institute, is expected to be completed by May 2010. In addition, Unisa Management and Council have approved substantial funding to connect the Florida campus and regional offices. Muckleneuk, Sunnyside and Florida campuses will all receive 10 Gb connectivity. Florida should be connected by August 2010 and regional connectivity will progress in phases, depending on ownership of property, size, geography and ability to provide students with access to broadband connectivity in computer centres. Regional hubs using Unisa-owned property will be connected to the SANReN first.

myUnisa was launched in January 2006. This platform is based on the Sakai community source technology and is continually customised to provide students with a single point of reference for primarily academic, but also support and administrative

services. Many tools are available, ranging from simple document uploading facilities and resource provisioning, to sophisticated collaborative tools (discussion forums, wikis and blogs) and online assessment tools (assignment submission, automated online assessment and e-portfolios). The infrastructure furthermore provides the capability to link academic staff and students with tutors, irrespective of their geographical distribution or time zone.

At the end of 2009 there were 197 653 on active students *myUnisa*. By 16 March 2010, the numbers had reached 160 757, and figures are expected to surpass those of 2009 after the second registration. Although there are currently many students actively using *myUnisa*, the total potential of this resource is very underutilised by academic and student support staff, as well as students. Utilisation by students invariably relies heavily on active participation of Unisa staff. Staff training is provided individually or in groups if requested and weekly sessions are held every Wednesday morning on the Muckleneuk campus. Students are supported via the Unisa Contact Centre where dedicated call centre agents attend to their queries.

In 2009 the Unisa *myLife* project was initiated. The first phase was to provide all students with a Unisa email postbox with all the online functionality currently provided by Microsoft Exchange. All access is centrally coordinated via *myUnisa*. There are currently approximately 180 000 email addresses that are actively being used by students. Phase two consists of providing students with three additional services:

- a hosted 25 Gb disk space that allows selected data to be kept private, or be shared with selected parties, or be made public
- a social networking space with many features similar to commercial sites such as Facebook and MySpace
- an office productivity toolset similar to MSOffice where students can create, edit, store, share and collaborate on various document types

Four more projects require mentioning:

- 1) The first project is the Onscreen Marking Project, which allows students to submit assignments online via *myUnisa* or at regions for scanning into the online assignment workflow system. Assignments are routed to relevant academics (and in the future external markers) where they can download the assignment to their local computers/laptops for offline marking, ie the computer does not have to be connected to the internet during the marking process. Connectivity is only required again when the marked assignment needs to be uploaded to the Unisa systems for automatic mark extraction and rerouting back to the students. The onscreen marking toolset consists of three components: the marking tool for allocating and calculating marks, a commenting tool with differential allocation of marks (which is fully integrated with the former) and a sophisticated rubric (or marking framework) tool. This tool is designed for outcomes-based assessment and, like the former, is fully integrated.

- 2) The second project is the upgrading of the Unisa video conferencing facilities and the implementation of an additional satellite broadcasting studio. The latter is planned for 2011. Most of the regional offices are now equipped with high definition (HD) capable video conferencing equipment. The HD capability will, however, only become apparent once the regional offices are connected to the SANReN broadband network. Table 1 below indicates a marked increase in the use of the video conferencing facilities by colleges during 2008-2009.

Table 1: Usage of video conferencing facilities by colleges

| 2008-2009 TOTALS COMPARISONS | | | |
|-------------------------------------|-------------|-------------|--------------|
| | 2008 | 2009 | TOTAL |
| Decision Sciences | 4 | 1 | 5 |
| Economics | 1 | 1 | 2 |
| Bureau for Marketing Research | 3 | 24 | 27 |
| Chemistry | 7 | 30 | 37 |
| Criminology | 5 | 4 | 9 |
| Private Law | 5 | 23 | 28 |
| Jurisprudence | 2 | 1 | 3 |
| Mercantile Law | 9 | 6 | 15 |
| Public, Constitutional Law | 1 | 15 | 16 |
| African Languages | 7 | 16 | 23 |
| Afrikaans | 7 | 14 | 21 |
| English Studies | 8 | 3 | 11 |
| Further Teacher Education | 11 | 14 | 25 |
| Development Studies | 1 | 5 | 6 |
| Health Studies | 3 | 18 | 21 |
| History | 21 | 1 | 22 |
| Practical Theology | 6 | 2 | 8 |

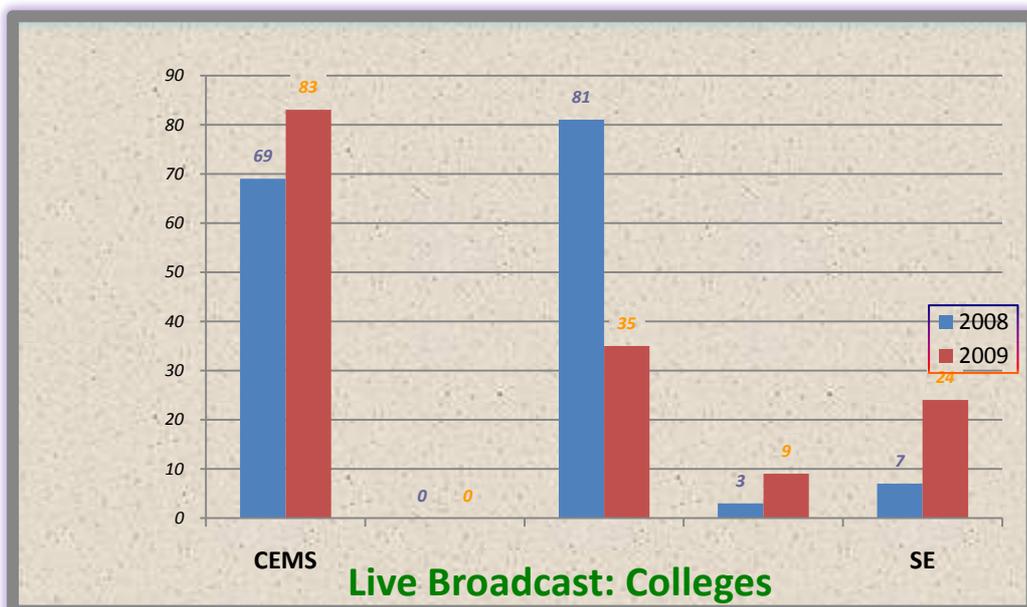
| | | | |
|-----------------------------------|------------|------------|------------|
| Psychology | 4 | 2 | 6 |
| Religious Studies & Arabic | 7 | 2 | 9 |
| Social Worker | 34 | 48 | 82 |
| Sociology | 2 | 2 | 4 |
| Agriculture, Animal Health | 8 | 34 | 42 |
| Life & Consumer Science | 3 | 10 | 13 |
| Environmental Science | 5 | 1 | 6 |
| Geography | 10 | 24 | 34 |
| TSDL | 78 | 190 | 268 |
| Electrical & Mining Engineering | 7 | 0 | 7 |
| Criminal & Procedural Law | 10 | 0 | 10 |
| Art and Musiology | 5 | 0 | 5 |
| Centre for Corporate Citizenship | 7 | 0 | 7 |
| Communication Science | 4 | 0 | 4 |
| ICLD | 4 | 0 | 4 |
| BCCADD | 3 | 0 | 3 |
| Classic & World Languages | 2 | 0 | 2 |
| Information Science | 1 | 0 | 1 |
| Finance and Investments | 1 | 0 | 1 |
| Arts, Languages and Communication | 1 | 0 | 1 |
| Dept of Linguistics | 1 | 0 | 1 |
| TOTAL | 298 | 491 | 789 |

Table 2 indicates the number of video conferences held during 2009, as well as the number of students served during this period.

Table 2: Video conference sessions and students served in 2009

| Month | Number of video conferences | Single point connections | Multipoint connections | Number of students served | Total hours |
|--------------|-----------------------------|--------------------------|------------------------|---------------------------|--------------|
| Jan | 27 | 16 | 11 | 129 | 84 |
| Feb | 61 | 7 | 54 | 711 | 148 |
| Mar | 91 | 59 | 32 | 957 | 248 |
| Apr | 25 | 11 | 14 | 860 | 179 |
| May | 57 | 28 | 29 | 758 | 152 |
| Jun | 44 | 27 | 17 | 458 | 150 |
| Jul | 36 | 23 | 13 | 530 | 188 |
| Aug | 99 | 61 | 38 | 998 | 343 |
| Sep | 123 | 73 | 50 | 1 480 | 314 |
| Oct | 108 | 57 | 51 | 1 632 | 296 |
| Total | 671 | 362 | 309 | 8 513 | 2 102 |

There was an overall increase of 38% in the number of students attending satellite broadcast sessions from 2008 to 2009. 4 975 DVDs of broadcasts were produced and sent to regions for students to view and to Unisa Press to be sold to students. Between January and April 2010, 52 live broadcasts and 24 rebroadcasts were conducted and 989 DVDs were distributed. 48 academics have been trained thus far in satellite broadcasting. The number of live broadcasts and rebroadcasts per college is indicated in figures 1 and 2 below. **Figure 1:** Live broadcasts in 2008-2009 per college



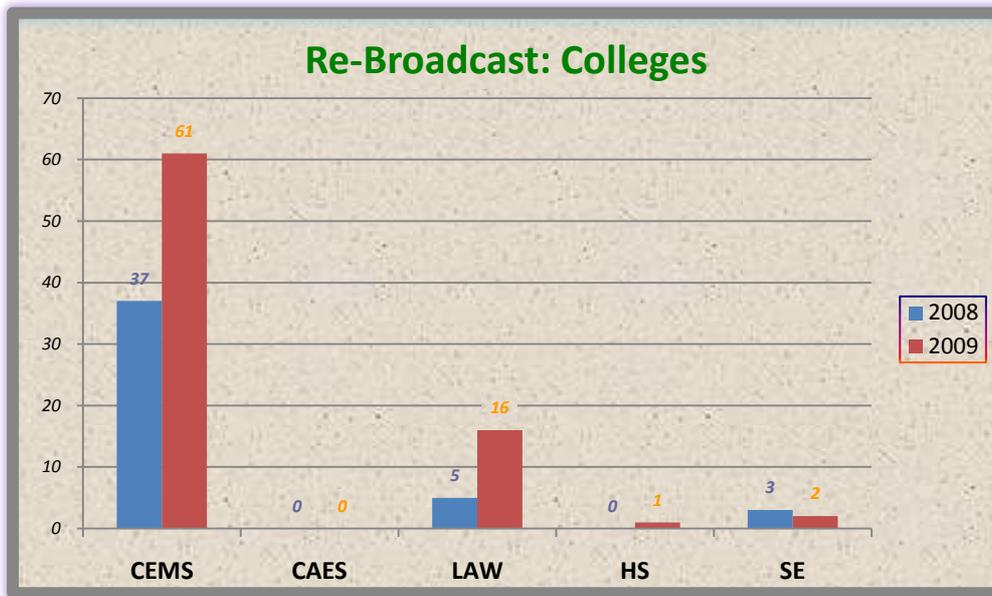


Figure 2: Rebroadcasts in 2008-2009 per college

- 3) The third project is to provide students with computing devices. This project was previously attempted but was never actually implemented. The project scope has been revisited and a request for service providers will soon go to tender. In short, the intention is to provide interested students with a selection of affordable mobile computing devices through a funding or supplier subscription scheme. The computers must have broadband internet connectivity and suppliers must be able to provide nation-wide technical and help desk support. Unisa's only roles in this venture will be to validate students, promote the suppliers to students and provide ODL services to students.

- 4) The final project is the commissioning of the Unisa podcasting infrastructure in June/July 2010. The hardware and software have been installed and are undergoing final configuration and technical testing. The current infrastructure can support 2 000 concurrent students, ie 2 000 students can simultaneously download (or receive streamed) podcasts. The infrastructure is very scalable and will be expanded if and when the need arises.

Academic staff will be able to prepare both audio and video podcasts using either Windows or Apple Mac computers. Academics who are committed to using podcasts in their teaching practices will, however, be encouraged to use Apple computers as the necessary software is packaged with the Apple Operating System and the process of authoring, publishing and distributing podcasts is extremely simple and seamless in this environment. A few academic staff have already received training in the use of Apple technology

for video and audio production and feedback is very positive. ICT technical staff will be trained to support Apple platforms.

Unisa staff and students currently receive technology support through the following mechanisms:

Table 3: Unisa technical support mechanisms

| Support unit | Primary support target | Type of support |
|---|-----------------------------|--|
| Unisa Contact Centre (1 permanent ICT member + 15 agents) | Students | General queries and routing of enquiries regarding <i>myUnisa</i> and <i>myLife</i> systems |
| Student Admin support (<i>myUnisahelp</i>) | Students, Unisa staff | Administrative issues |
| ICT help desk | Unisa staff | General ICT issues, systems, networks and desktop related issues |
| <i>myUnisa</i> team (bugmaster) 24/7 technical team | Staff & students ICT | <i>myUnisa</i> technical issues, staff training and issues pertaining to the usage of various technologies in teaching, learning and student support Technical support of hardware and software |
| ICT implementation specialist | Academic staff (faculty) | Change management and staff training (pedagogic & usage of various technologies in teaching, learning and student support) |
| DCLD | Academic staff (faculty) | Online teaching, courseware development & staff training (pedagogic & usage of various technologies in teaching, learning and student support) |

| | | |
|-----|------------------|--|
| CCM | All online users | General communication & enterprise content, public relations & faculty web pages |
|-----|------------------|--|

3 SUMMARY OF BENCHMARKING VISITS

Members from several departments from Unisa visited Athabasca University in 2007 and the University of Southern Queensland (USQ) and Deakin University in 2008 to encourage a more blended approach to teaching, learning and assessment. The teams' findings were documented in the following reports:

- Report on benchmarking visit to Athabasca University (1 – 4 October 2007)
- Report on benchmarking visit to the University of Southern Queensland (USQ) and Deakin University (March/April 2008)

This section highlights some salient points from the two reports that pertain to technology enhanced teaching, learning and student support. Unisa should consider exploring similar initiatives.

1. USQ has a **technology enhanced learning laboratory (TELL)**. This is a physical space where staff can explore the pedagogical aspects of learning and teaching technologies. It also provides an ICT-enabled environment for supporting academic staff in the effective use of electronic learning aids to link USQ staff and students at remote locations, to create a visible and high profile environment for ICT innovation and exploration and to provide a proof of concept space for future USQ learning and teaching environments.

According to the TELL staff

- academics are very willing to test and use new technology
- academics must be active in the student online system
- a formal training programme is needed to train staff more constructively
- a reward system is needed to encourage the participation of academics

Instructional specialists at Athabasca University are given space and competence to experiment in the field of multimedia. They also do R&D and experiment at the cutting edge, rather than always working in the same way.

2. The **Distance and e-Learning Centre (DeC)** at USQ resorts under **Academic Information Services** and consists of specialist sections that design, develop, produce, replicate and distribute learning materials. Specialist staff from these sections are allocated to course teams. DeC is also responsible for developing and processing computer-marked assessments and assignment processing. Student support is given via the Web, email, telephone, letters, fax and in person by using

USQ Assist. Their video studio is used not only for video productions, but also for streaming directly to a dedicated internet satellite. Deakin University has a similar initiative where the **Knowledge Media Division** develops study material, and online engagement with students and staff is provided through a range of technologies, including a learning management system, virtual classrooms, evaluation and assessment tools and social networking software via **Deakin Studies Online**.

Athabasca found that a 300-page study guide could be reduced to about 30 screens online because of links to readings, etc. Each unit differs in length, typically between 2 and 20 screens. They prefer to use material that is not copyrighted as it slows the process to obtain rights. Lecturers often use photographs they have taken themselves.

3. Athabasca University uses Alfresco (open source software) as a content management system which publishes to Moodle, their open source learning management system. USQ has an integrated content environment (ICE) that is used to handle documents for print, online use and CD delivery, through the application of templates and standards. Learning objects are archived as per faculty. An initial 3 to 4 hours' training is necessary to use ICE. Athabasca staff are expected to check that the required learning objects are not already available elsewhere, preferably as open courseware, before they develop new ones. They use learning object repositories such as Merlot. Many designers at Athabasca are making extensive use of Flash to build objects. Designers must check that objects integrate with the courses and their outcomes.

It is recommended in the 2007 report that Unisa investigate the use of Alfresco as a content management system.

4. USQ is part of the Open Courseware Consortium (OCW) and integrates open courseware into flexible education. OCW identifies ways to improve effectiveness, reduce costs and increase productivity.
5. Athabasca University is piloting putting print courses online and all new courses have to be developed for online. The university policies also encourage the inclusion of multimedia in print and online packages. All courses at the Business School and for Nursing are completely online. The assumption is therefore that all students that engage with these courses have access to the internet. It is compulsory for students to have internet access at both USQ and Deakin University.
6. The ALIVE project is a Web3D learning environment similar to SecondLife (DX Studio is the play out) to improve innovative learning experiences for students. Avatars can be created by the user to move around in a virtual world to experiment and take part in learning activities.

7. All students at Deakin are issued with a software toolkit and all assignments are submitted electronically.
8. Athabasca University makes use of Elluminate, a synchronous, online drop-in tutorial system used for distance delivered Chemistry courses. It uses online whiteboards, chat, audio and direct messaging and allows for multiple participants.
9. The 2007 report suggests that DCLD staff complete an online module in the Master's in Distance Education at Athabasca – MDDE619: Trends and issues in instructional design; lecturer Richard Kenny – if they have not experienced an online course before or if they wish to increase their competence in the field of instructional design.
10. The 2007 report also recommends that courseware developers at Unisa change their mental models and ask questions, like these listed below, each time they are assigned to a project:
 - *Have I considered multimedia?*
 - *Have I looked for multimedia learning objects in open source repositories?*
 - *Do I have materials (photographs, for example) that could be digitised without copyright?*
 - *Have I considered online?*

3 A MODEL FOR TECHNOLOGY ENHANCED TEACHING, LEARNING AND STUDENT SUPPORT

There are three main drivers that affect the selection, implementation and maintenance of optimal ICT support platforms: learner and consequent business needs, technological drivers and the availability of resources in terms of people, funds and infrastructure.

User needs (both students and staff) are probably the most important driver and include aspects such as educational models, strategic and business drivers, access and usability of the various technologies, attitudes and training/staff development. Technological innovation by itself is also a very important driver and although the old adage of “not deploying technology for the sake of technology” still applies, global trends and best practices cannot be ignored if the institution wants to remain competitive in a world where technology is becoming ubiquitous.

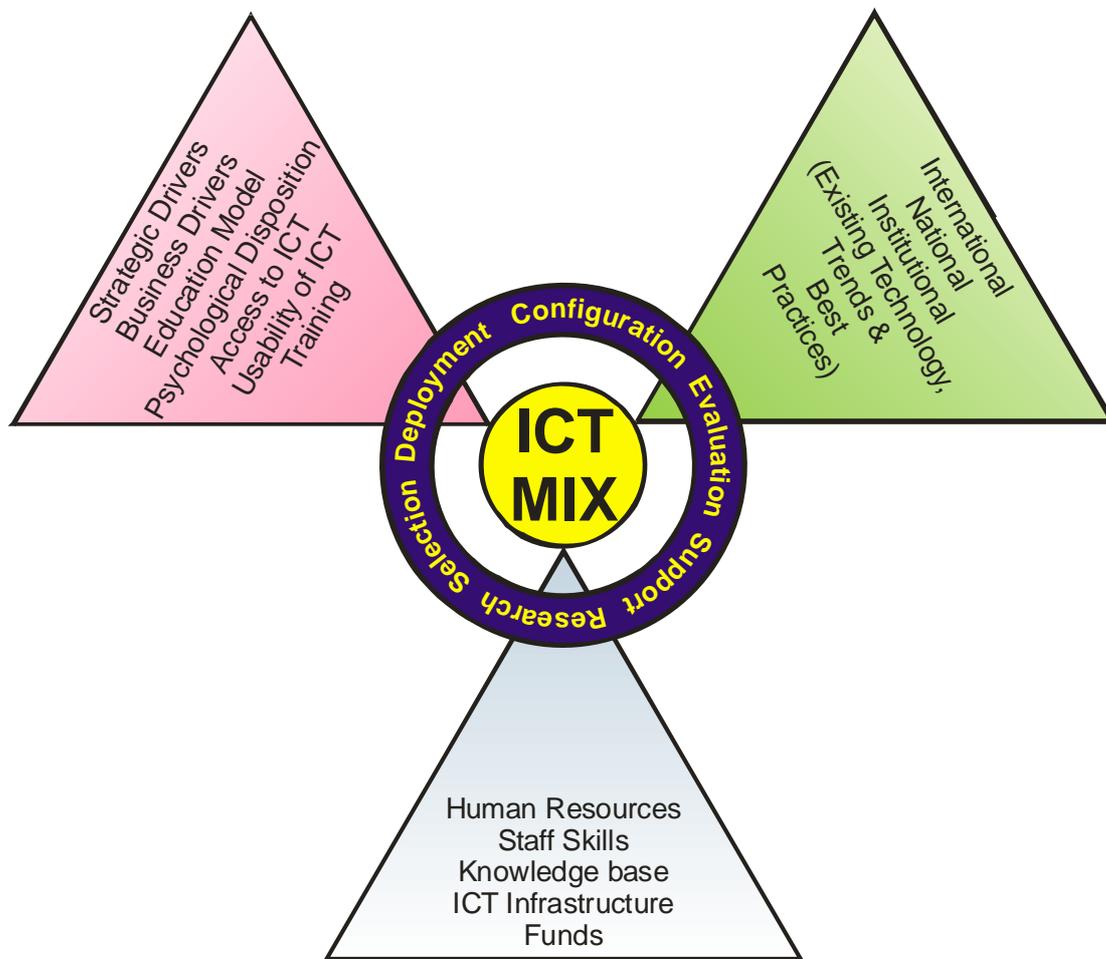


Figure 3. Factors affecting the technology mix to support ODL

No business process or technology infrastructure can be sustained without the necessary investment in resources (intellectual, physical, financial and human). These often prove to be the most constraining in the deployment of any initiative, technological or not.

The above drivers play a crucial role during all stages (research, selection, deployment, configuration and evaluation) of technology introduction, as well as post-deployment maintenance, support and advancement.

All the components of the technology model should not be seen in isolation but as different dimensions supporting the core function of Unisa, namely to provide learners with an exceptional learning experience, leading to a successful qualification and developing citizens who can make a valuable contribution to the community and the economy of the country.

The above is a holistic model and does not provide a detailed view of drivers that have a direct impact on technologies that can be utilised in teaching, learning and student support. These are depicted in figure 4 below.

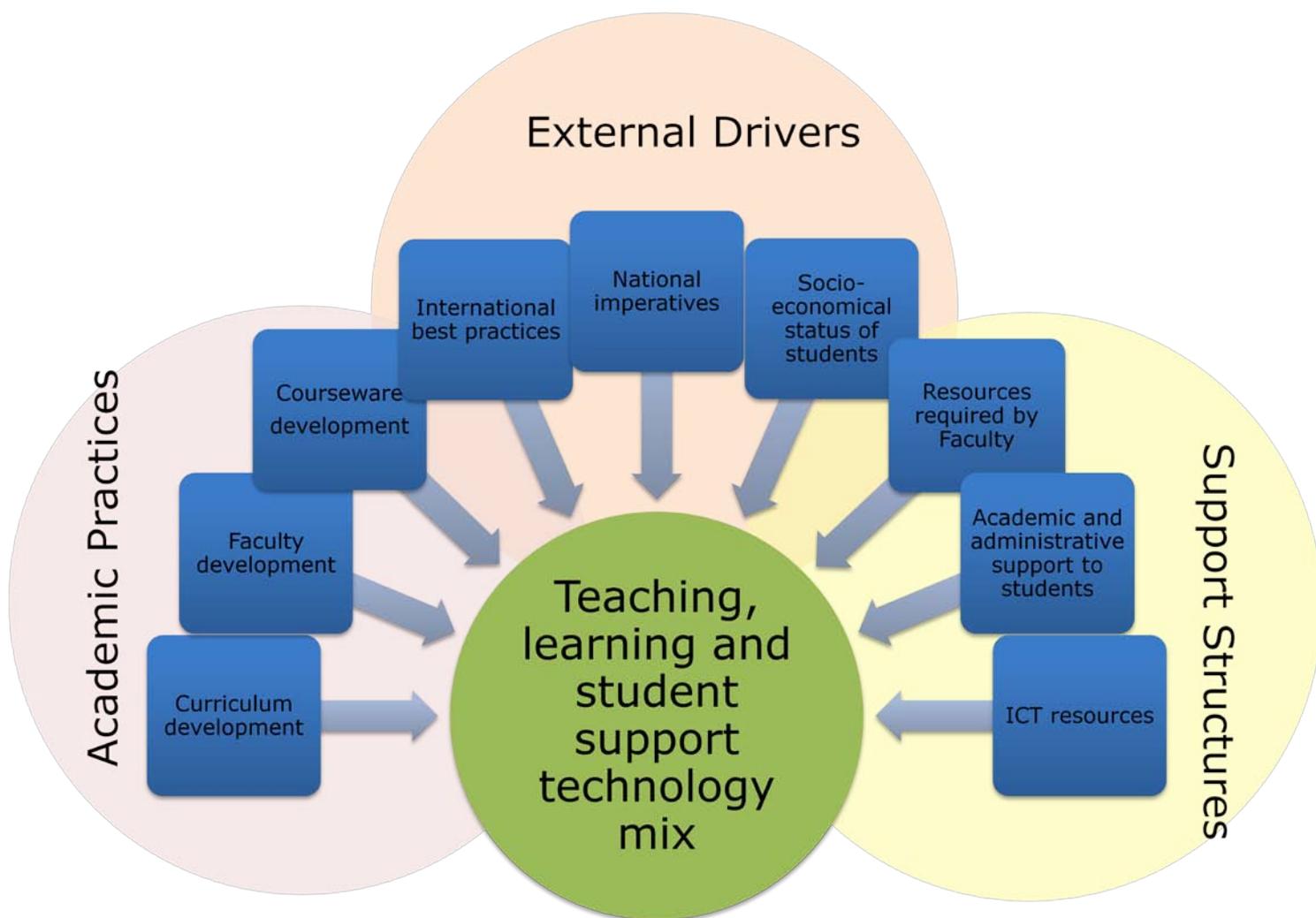


Figure 4. Drivers that impact on the technology mix for teaching, learning and student support

A significant amount of flexibility should be possible to enable Unisa to accommodate the wide range of needs by a diverse student body, and to cater for diverse learning needs and styles, access to specific technologies, geographic distribution, etc. A range of technologies could be deployed to address these needs.

An extensive list detailing technologies that can be used by Unisa during all the stages of engagement with students is attached as appendix A. The list provides some insight into technologies used in the past, those that are currently available and technologies that are envisaged for use in the near future.

It must be noted that the list not exhaustive and will be updated from time to time.

5 CONCLUSION AND RECOMMENDATIONS

An attempt was made in this document to provide a very brief overview of technology enhanced teaching, learning and student support at Unisa. It by no means covers all the initiatives underway within ICT, nor the broader Unisa community. Technology, and its potential to be used in teaching, learning and student support, is developing at such a fast rate that any static document such as this has a very short shelf life. It is, however, imperative to take decisive action and use the appropriate technologies where possible to ensure that Unisa is not left behind the rest of the world. The following recommendations may assist Unisa in reaching its goal to become a leading ODL institution:

RECOMMENDATIONS

1. Academics *must* make use of the wide range of technologies already available within Unisa. Every academic staff member has to take responsibility for teaching and facilitating learning by actively engaging with students using these technologies. The use of technology should become part of every academic staff member's performance agreement and staff that excel in this should be rewarded. It is recommended that an incentive scheme be devised for implementation in 2011.
2. Unisa should make extensive use of the many possibilities technology presents for new and innovative ways to assess students, especially for formative assessment. Many alternative ways of assessment are already available, or could easily be deployed within Unisa.
3. 24/7 access to broadband internet connectivity should be a prerequisite for employment of tutors. This will not only ensure better service delivery to students, but also remove geographical and time barriers when considering the employment of tutors.
4. Unisa must assist students to gain access to technology-based teaching and learning opportunities, electronic resources and online student support. This can be facilitated through the student computer initiative, national partnerships (eg multipurpose community centres), the provision of computer centres at regional centres, enhancing mobile capabilities of existing Unisa ICT infrastructures, etc.
5. Differential (lower) pricing should be available for students who do not receive paper-based courseware or submit paper copies of assignments.

6. Unisa must establish a centre of excellence to research, develop and deploy innovative technology solutions for teaching, learning and student support. In addition, the centre must provide opportunities for academics to experiment with new technologies, teach them how to use existing and newly deployed technologies and provide reliable support (technical and pedagogical).
7. Unisa must take a firm stance in terms of the usage of and the contribution to open educational resources (OER) and open source software (OSS).
8. Unisa must establish a well-indexed e-learning object repository, such as Alfresco. This repository must form part of the enterprise content management (ECM) system that is currently under investigation by ICT.
9. Unisa should deploy a synchronous online whiteboarding system that can facilitate collaboration through application sharing, chat, audio, video etc. Athabasca University and many others, including the Open University of the UK (which went through a very extensive selection process), are using Elluminate. Preliminary trials done by ICT and DCLD, as well as experiences of staff participating in conferences conducted via Elluminate, were very positive.

APPENDIX A

List of technologies that can be used during engagement with students

Keys:

| | |
|-----------------------|--|
| Technology: | Note: In many cases old technologies are retained to augment new technologies e.g. Telephonic services are not replaced by Online services. |
| OLD | |
| EXISTING | |
| NEW /ENVISAGED | |

| |
|---|
| Transactional processes: |
| <ul style="list-style-type: none">• Student - Institution (S/I)• Student – Lecturer/tutor (S/L)• Student – Material (S/M)• Student – Peers (S/P)• Lecturer – Tutor (L/T) |

| Best Practice | Academic Solutions | Description |
|-----------------|--|---|
| Enquiry | | |
| OLD | PROVIDES INFORMATION TO THE BROADER COMMUNITY | |
| EXISTING | <p>Unisa Corporate Web Page (S/I)</p> <ul style="list-style-type: none"> • General Information: <ul style="list-style-type: none"> ○ About Unisa ○ Library ○ News ○ Contact detail ○ Study at Unisa ○ Registration ○ News and events ○ SRC ○ FAQs • Information on Institutional structures: <ul style="list-style-type: none"> ○ Management and portfolios ○ Colleges ○ Departments ○ Centres and Bureaus • Teaching and learning information: <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News ○ Resources ○ Support • Targeted Information for: <ul style="list-style-type: none"> ○ Current student ○ Prospective students ○ Research ○ Alumni ○ Media | <p>The corporate web pages provide prospective students and the broader community with general information regarding Unisa.</p> |

| | | |
|-----------------|--|---|
| EXISTING | Brochure Cart (S/I) | Allows prospective and current students to create their own electronic brochure by selecting the courses and programmes of their choice. |
| EXISTING | myUnisa Home Page (S/I) Provides students information on: <ul style="list-style-type: none"> • Teaching and learning <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News and others • Resources aimed at students <ul style="list-style-type: none"> ○ Calendars ○ Bursaries and Loans ○ Dean of Students and other related links • Support for student <ul style="list-style-type: none"> ○ International students ○ Students with disabilities ○ HIV/AIDS ○ Online tools • Displays announcements of importance to students • Help desk services • Provide Facebook and Twitter access | The myUnisa Home Page provides students with academic and learner support information. |
| EXISTING | Multimedia (CDs & DVDs) (S/I) | Provides information augmented by high levels of interactivity based on user needs. In addition other media such as audio, video and animation is used to enhance the user's interaction with the information. This media also cater for the provision of the necessary software and supportive documentation to facilitate a total learning experience |
| EXISTING | Mobile Technology (S/I) | This technology enables the seamless migration of key information and on the Unisa web site to mobile hand held devices such as cell phones, PDAs and iPhones |

| | | |
|------------------------|--|---|
| <p>EXISTING</p> | <p>Unisa Corporate Web Page (S/I)</p> <ul style="list-style-type: none"> • General Information: <ul style="list-style-type: none"> ○ About Unisa ○ Library ○ News ○ Contact detail ○ Study at Unisa ○ Registration ○ News and events ○ SRC ○ FAQs • Information on Institutional structures: <ul style="list-style-type: none"> ○ Management and portfolios ○ Colleges ○ Departments ○ Centres and Bureaus • Teaching and learning information: <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News ○ Resources ○ Support • Targeted Information for: <ul style="list-style-type: none"> ○ Current student ○ Prospective students ○ Research ○ Alumni ○ Media | <p>The corporate web pages provide prospective students with general information regarding Unisa.</p> |
|------------------------|--|---|

| | | |
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| <p>EXISTING</p> | <p>myUnisa Home Page (S/I) Provides students information on:</p> <ul style="list-style-type: none"> • Teaching and learning <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News and others • Resources aimed at students <ul style="list-style-type: none"> ○ Calendars ○ Bursaries and Loans ○ Dean of Students and other related links • Support for student <ul style="list-style-type: none"> ○ International students ○ Students with disabilities ○ HIV/AIDS ○ Online tools • Displays announcements of importance to students | <p>The myUnisa Home Page provides students with academic and learner support information.</p> |
| <p>EXISTING</p> | <p>Multimedia (CDs & DVDs) (S/I)</p> | <p>Provides information augmented by high levels of interactivity based on user needs. In addition other media such as audio, video and animation is used to enhance the user's interaction with the information. This media also cater for the provision of the necessary software and supportive documentation to facilitate a total learning experience</p> |

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| | <ul style="list-style-type: none"> ○ News ○ Contact detail ○ Study at Unisa ○ Registration ○ News and events ○ SRC ○ FAQs <ul style="list-style-type: none"> ● Information on Institutional structures: <ul style="list-style-type: none"> ○ Management and portfolios ○ Colleges ○ Departments ○ Centres and Bureaus ● Teaching and learning information: <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News ○ Resources ○ Support ● Targeted Information for: <ul style="list-style-type: none"> ○ Current student ○ Prospective students ○ Research ○ Alumni ○ Media | |
| <p>EXISTING</p> | <p>myUnisa Home Page (S/I)</p> <p>Submit of application for registration online</p> <p>Provides limited online registration facilities</p> <ul style="list-style-type: none"> ● Provide e-mail account services <p>Provides students information on:</p> | <p>Online registration facilities are not available for students registering the first time at Unisa as supporting documents are required for the registration process. Currently the online registration process only caters for straight forward registrations where the intervention of councillors are not required.</p> <p>All students have <i>myLive</i> e-mail addresses. Delivery of all Unisa communication will be delivered to these mailboxes. The onus is however still with the student to access the mailbox and read the mail. The technology will be browser based so no specialized software will be required on the student's computer. The computer must just have access to the World Wide Web (WWW).</p> <p>The myUnisa Home Page provides students with academic and learner support.</p> |

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| | <p>Teaching and learning</p> <ul style="list-style-type: none"> ○ Assignments ○ Examinations ○ Library ○ Learner support ○ News and others <ul style="list-style-type: none"> ● Resources aimed at students <ul style="list-style-type: none"> ○ Calendars ○ Bursaries and Loans ○ Dean of Students and other related links ● Support for student <ul style="list-style-type: none"> ○ International students ○ Students with disabilities ○ HIV/AIDS ○ Online tools <p>Displays announcements of importance to students</p> | |
| NEW/ENVISAGED | New Enterprise Portal (S/I) | Provide general registration information and direct the students to myUnisa where registration facilities are available |
| NEW/ENVISAGED | <p>Information via myUnisa Home Page (S/I)</p> <ul style="list-style-type: none"> ● As facilities advance - Provide information on fully online application/registration | <p>Application and registration fully online:</p> <ul style="list-style-type: none"> ● Online completion and submission of application and registration forms ● Immediate confirmation of receipt of application/registration form ● Confirmation on completion of application/registration process (48 h) ● Immediate feedback on further steps to follow after registration – e.g. registration on myUnisa <p>Access to print friendly application and registration documents</p> |
| NEW/ENVISAGED | <p>Mobile Technology Units (S/I)</p> <ul style="list-style-type: none"> ● Enhance mobility and just in time dissemination of information <ul style="list-style-type: none"> ○ Immediate confirmation of receipt of application/registration form ○ Confirmation on completion of application/registration process (48 h) ○ Immediate feedback on further steps to follow after registration – e.g. registration on myUnisa | The mobile units will enable self help online registration by students anywhere, anytime. The advantage of such a facility is that councillors can accompany the mobile units and normal real time registration (similar to on-campus) can also be accommodated in deep rural areas |

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| NEW/ENVISAGED | SMS and Mobile Instant Messaging | SMS's to welcome students and provide regular updates to inform them on the progress of the registration process. Mobile instant messaging will provide a bi-directional text messaging channel between Unisa agents and students. |
| Study package | | |
| OLD | SOL & COOL (S/I, S/L, S/M) <ul style="list-style-type: none"> Limited access to learning and teaching materials | |
| EXISTING | Online publication of most study material on myUnisa (S/I, S/L, S/M) <ul style="list-style-type: none"> Tutorial Letter Study Guides Supportive Resources <ul style="list-style-type: none"> Previous examination papers | <ul style="list-style-type: none"> Tutorial letters are uploaded via academic departments Study guides are automatically linked to modules and uploaded as part of the courseware production process The "Additional Resources" tool in myUnisa caters for the uploading of a diverse range of supportive content such as: <ul style="list-style-type: none"> MS Word and .PDF documents with additional information i.e. case studies, additional reading material, example exam papers, online self assessment, feedback, supportive information for assignments, assignment feedback etc. Excel spreadsheets with data for assignments, statistics PowerPoint presentations of tutorials and discussions that were held at regional offices and/or via satellite broadcast and video conferencing, instructional text, etc. Other documents generated by specialized software such as mind maps, project management files, documents generated by mathematical programs, GIS maps, etc. Multimedia such as images, video clips, audio clips, simulations and animations. Links to internal and external web pages such as the library, learner support and externally to any web page relevant to the course. Links to full text e-articles hosted on various data bases facilitated through library services. Applications developed by faculty such as engineering, sciences and agriculture to support students in constructing their own learning through simulations and drill and practice activities. |
| EXISTING | Podcasts | <ul style="list-style-type: none"> In addition to the possibility of down loading audio or audio visual podcasts the facility also exists to asynchronously stream podcasts on demand. This enables students to view for example, assessment and other feedback, explanations illustrations and short presentations, anywhere, any time. |
| NEW/ENVISAGED | Online publication of ALL study material on myUnisa (S/I, S/L, S/M) | <ul style="list-style-type: none"> Tutorial letters are uploaded via academic departments Study guides are automatically linked to subjects and uploaded as part of the courseware production |

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| | <ul style="list-style-type: none"> • Tutorial Letter • Study Guides • Supportive Resources <p>Audio and possibly video steaming/downloading via myUnisa (S/I, S/L, S/M, S/P)</p> <p>Electronic Books</p> <p>Open Courseware (OCW)</p> <p>Print</p> | <p>process</p> <ul style="list-style-type: none"> • The “materials” tools in myUnisa cater for the uploading of a diverse range of supportive content such as: <ul style="list-style-type: none"> ○ MS Word and .PDF documents with additional information i.e. case studies, additional reading material, example exam papers, online self assessment, feedback, supportive information for assignments, assignment feedback etc. ○ Excel spreadsheets with data for assignments, statistics ○ PowerPoint presentations of tutorials and discussions that were held at regional offices and/or via satellite broadcast and video conferencing, instructional text, etc. ○ Other documents generated by specialized software such as mind maps, project management files, documents generated by mathematical programs, GIS maps, etc. ○ Multimedia such as images, video clips, audio clips, simulations and animations. ○ Links to internal and external web pages such as the library, learner support and externally to any web page relevant to the course. ○ Links to full text e-articles hosted on various data bases facilitated through library services. ○ Applications developed by faculty such as engineering, sciences and agriculture to support students in constructing their own learning through simulations and drill and practice activities. • Majority of modules use technology enhanced study packages designed according ODL principles, supported by: <ul style="list-style-type: none"> ○ myUnisa teaching and learning tools (see learning and teaching) • In addition to the possibility of down loading audio and video clips the facility to asynchronously stream media on demand. This will enable students to view lectures, presentations, satellite broadcasting activities and video conferencing sessions anywhere, any time. The technology allows the viewing of media that is too large to download and has robust copy protection capabilities. • E-books that are hosted by external parties such as the African digital library, or internally by the library. The possibility also exists for students to purchase their own electronic copies of text books and prescribed books. Electronic books could also be converted to audio files for downloading and use on mobile devices (this could be a important feature for students with disabilities) • More and more educational institutions worldwide are making their courseware available on the internet, free of charge. This global phenomenon is fuel by the growing awareness that information is so pervasive on the internet that institutions cannot stay competitive be trying to protect their courseware through copyright laws. It is of more benefit to the institutions (and the global community) to make their content available and generate income through value added services, learning facilitation and certification. OCW is furthermore creating many collaboration opportunities for educationalists, industry and even amateurs with special interests, to improve the quality of courseware worldwide. • The printed media will remain an important part of the study package. Unisa could consider facilitating |
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| | | the purchasing of printed resources from suppliers such as Kalahari.net, Amazon.com and publishers via the internet. |
| NEW/ENVISAGED | Mobile Technology Units (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> The mobile units will provide a distributed point of dissemination of digital courseware. |
| Orientation – Preparation for learning | | |
| OLD | Unisa Corporate Web Page (limited) (S/I) | <ul style="list-style-type: none"> Access to limited resources |
| EXISTING | Unisa Corporate Web Page (limited) (S/I) | <ul style="list-style-type: none"> Access to myUnisa and other resources to facilitate orientation and preparation |
| EXISTING | Satellite Delivery (S/I, S/L) | <ul style="list-style-type: none"> This service is not currently being used |
| NEW/ENVISAGED | New Enterprise Portal (S/I) | <ul style="list-style-type: none"> Customized access to myUnisa and other resources to facilitate orientation and preparation Link to “Managed Open Access” tools which will probably be hosted on the myUnisa home page. |
| NEW/ENVISAGED | myUnisa Home Page & Course pages (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> Orientation and preparation page(s) for students on orientation and preparation for learning – guided by best practices. These services will be provided and maintained by learner support. |
| NEW/ENVISAGED | Satellite Delivery (S/I, S/L, S/M) | <ul style="list-style-type: none"> Orientation sessions will be provided to new students. |
| NEW/ENVISAGED | Video Conferencing (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> Orientation sessions will be provided to new students. Video conferencing provide a high level of real time interaction which could be very beneficial to students with special needs. |
| NEW/ENVISAGED | Multimedia (CD, DVD & online) (S/I, S/L, S/M) | <ul style="list-style-type: none"> Multimedia provides a rich interactive environment that can greatly enhance the existing modes and facilities provided. The use of audio and video clips combined with a query engine can provide personalized information to students in a user friendly way. |
| NEW/ENVISAGED | Audio and possibly video steaming/downloading (S/I, S/M) | <ul style="list-style-type: none"> Orientation and preparation page(s) for students on orientation and preparation for learning – guided by best practices |
| Learning and teaching | | |

| OLD | SOL & COOL (limited) (S/I, S/L, S/M) | <ul style="list-style-type: none"> Access to limited resources |
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| <p>EXISTING</p> | <p>myUnisa module pages and toolsets (S/I, S/L, S/M, S/P, L/T)</p> <ul style="list-style-type: none"> Student administrative toolset <ul style="list-style-type: none"> myAdmin Assignment Academic record Exam results Parcel tracking Examination timetable, and so on Lecturer administrative toolset <ul style="list-style-type: none"> My Students Assignments File manager Student list My Workspace <ul style="list-style-type: none"> Schedule Preferences Teaching and learning toolset <p>Generic Tools</p> <ul style="list-style-type: none"> Announcements Discussion Forum Materials | <ul style="list-style-type: none"> Each module has a module page comprising of administrative and teaching and learning functionalities: <ul style="list-style-type: none"> To facilitate a total learning experience a number of supportive administrative tools are available on myUnisa. These tools cater for the most frequent administrative requirements for academic staff and students. A similar facility to the above has also been provided to academic staff for uploading and maintaining their online teaching and learning environments. Currently my Workspace provides a secure point of access where general information and scheduling are displayed. <ul style="list-style-type: none"> Announcements can be added when needed. Lecturers can post announcements on events or activities that are of interest to students. Lecturers can also send attachments to students via this tool. When a lecturer posts an announcement an e mail is automatically sent to the students informing them about the new announcement. A discussion forum is the most basic collaborative tool available. It is however a very powerful teaching and communication tool that facilitates interactivity (synchronous or asynchronous) between students and their peers as well as lecturers/tutors and students. A general forum is generated by default for each subject module. This forum is focused on the student and provides a platform for general discussion. The software provides the ability to create any number of additional discussion forums where lecturers can facilitate interactive teaching and learning. The content addressed in these forums can range from assignment support, solving problems, learning guidance and subject related debates to information regarding group visits, acquisitions of text books and general administrative issues. The “materials” tools in myUnisa cater for the uploading of a diverse range of supportive content such |

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| | <ul style="list-style-type: none"> ○ Schedule ○ Prescribed Books Optional tools ○ Course Contact ○ FAQs ○ Blogger | <p>as:</p> <ul style="list-style-type: none"> ○ Official study material which is automatically uploaded as part of the production process. ○ MS Word and .PDF documents with additional information i.e. case studies, additional reading material, example exam papers, online self assessment, feedback, supportive information for assignments, assignment feedback etc. ○ Excel spreadsheets with data for assignments, statistics ○ PowerPoint presentations of tutorials and discussions that were held at regional offices and/or via satellite broadcast and video conferencing, instructional text, etc. ○ Other documents generated by specialized software such as mind maps, project management files, documents generated by mathematical programs, GIS maps, etc. ○ Multimedia such as images, video clips, audio clips, simulations and animations. ○ Links to internal and external web pages such as the library, learner support and externally to any web page relevant to the course. ○ Links to full text e-articles hosted on various data bases facilitated through library services. ○ Applications developed by faculty such as engineering, sciences and agriculture to support students in constructing their own learning through simulations and drill and practice activities. <ul style="list-style-type: none"> ● Each module has a dedicated schedule. These schedules are aggregated on the home page to provide the student an overview of all schedules activities for the year. Exam dates, assignment due dates are automatically added to the schedule from the Unisa student system. The schedule tool however provides a very powerful tool for the lecturer to facilitate teaching and learning. As a pacing tool the lecturer can provide students with learning progress milestones and reminders for submission of assignments. Lecturers can also schedule events such as tutorial sessions, satellite broadcasting and video conferencing information and scheduled feedback dates. ● This is the official book list management system for prescribed books for modules which is kept updated on a yearly basis. ● The tool allows students to send e-mails from within myUnisa to the lecturer. These e-mails are logged and the activity could be recorded in the tracking system. ● Provide and interface for lecturing staff to answer typical and recurring questions from students. The availability of answers on pressing questions can significantly reduce the number of queries (via e-mail and telephone) that academic staff need to answer on a daily basis. Creative use of this tool can teach students independent problem solving skills through exploration. ● A blog is (short for weblog) is basically a journal (or newsletter) that is available on the web. Blog scripting allows someone to directly post and organise information to a Web site (the activity of updating a blog is "blogging" and someone who keeps a blog is a "blogger"). Blogs are frequently updated (usually daily). Blogs often reflect personal views and opinions of individuals with an interest and/or expertise in a particular subject field. Members who have access to the blog can post replies to |
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| | <ul style="list-style-type: none"> ○ Drop Box ○ Learning Units ○ News ○ Self Assessment ○ Web Content ○ Wiki ○ Help and support site | <p>the above. Blogs were initially used as a reflective tool, but is increasingly being used in other creative ways such as feedback on draft documents, gathering information and soliciting input and views from other participants.</p> <ul style="list-style-type: none"> • For private file sharing between lecturer and student. • myUnisa makes use of the “Melete” Lesson Builder. This tool can be used to create interactive learning material with the ability to guide students through pre-determined learning sequences. It provides templates for the use of multimedia and a wide range interactive formative activities. • The <i>News</i> tool provide summaries of detailed content that is hosted on specialist servers and uses RSS (Rich Site Summary) feeds to retrieve the latest content from these remote and/or internal sites. The content is maintained and continuously updated by the owners of the information and can range from general news to subject specific topics. In some cases subscription fees need to be paid to access the feeds. • Currently the self assessment tool is in an experimental phase and includes a number of assessment options such as multiple choice/correct questions, true and false, filling in missing words, numerical response, matching items and paragraphs. Feedback is immediate and can be context sensitive. • External websites can be catalogued and accessed via this tool. • A wiki is a multi-layered collaborative document creation tool that allows the incorporation of a wide range of multimedia and features. Students and lecturers can collaboratively add, edit or change pages in the wiki. All changes are versioned and the participation of individuals can be viewed. Students can work on projects/activities, share knowledge and construct a shared understanding of the subject. Outcomes can be achieved through a continuous reiterative growth process where all participants provide input and learn from their peers. A good example of the potential of a wiki can be seen at www.wikipedia.com • Academic staff can acquire myUnisa help and support documentation as well as other teaching and learning resources from the site. |
| EXISTING | Satellite Delivery (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> • Unisa possesses state of the art broadcasting studios that can broadcast audio and video to 21 centres distributed across South Africa. These facilities are used to provide real time lectures, demonstrations and examination preparation support. All sessions are recorded for later distribution via video tapes and DVDs. |
| EXISTING | Video Conferencing (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> • Video conferencing provide a high level of real time interaction similar to face to face classes. |
| EXISTING | E-mail (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • All students have <i>myLive</i> e-mail addresses. Delivery of all Unisa communication will be delivered to these mailboxes. The onus is however still with the student to access the mailbox and read the mail. |

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| | | <p>The technology will be browser based so no specialized software will be required on the student's computer. The computer must just have access to the World Wide Web (WWW).</p> |
| <p>NEW/ENVISAGED</p> | <p>myUnisa module pages and toolsets (S/I, S/L, S/M, S/P, L/T)</p> <ul style="list-style-type: none"> • Student administrative toolset <ul style="list-style-type: none"> ○ myAdmin ○ Assignment ○ Academic record ○ Exam results ○ Parcel tracking ○ Examination timetable, and so on • Lecturer administrative toolset <ul style="list-style-type: none"> ○ My Students ○ Assignments ○ File manager ○ Student list • My Workspace <ul style="list-style-type: none"> ○ Schedule ○ Preferences • Teaching and learning toolset <p>Generic Tools</p> <ul style="list-style-type: none"> ○ Announcements ○ Discussion Forum ○ Materials | <ul style="list-style-type: none"> • Each module has a module page comprising of administrative and teaching and learning functionalities: • To facilitate a total learning experience a number of supportive administrative tools are available on myUnisa. These tools cater for the most frequent administrative requirements for academic staff and students. • A similar facility to the above has also been provided to academic staff for uploading and maintaining their online teaching and learning environments. • Currently my Workspace provides a secure point of access where general information and scheduling are displayed. ○ Announcements can be added when needed. Lecturers can post announcements on events or activities that are of interest to students. Lecturers can also send attachments to students via this tool. When a lecturer posts an announcement an e mail is automatically sent to the students informing them about the new announcement. ○ A discussion forum is the most basic collaborative tool available. It is however a very powerful teaching and communication tool that facilitates interactivity (synchronous or asynchronous) between students and their peers as well as lecturers/tutors and students. A general forum is generated by default for each subject module. This forum is focused on the student and provides a platform for general discussion. The software provides the ability to create any number of additional discussion forums where lecturers can facilitate interactive teaching and learning. The content addressed in these forums can range from assignment support, solving problems, learning guidance and subject related debates to information regarding group visits, acquisitions of text books and general administrative issues. • The "materials" tools in myUnisa cater for the uploading of a diverse range of supportive content such |

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| | <ul style="list-style-type: none"> ○ Schedule ○ Prescribed Books Optional ○ Course Contact ○ FAQs ○ Blogger | <p>as:</p> <ul style="list-style-type: none"> ○ Official study material which is automatically uploaded as part of the production process. ○ MS Word and .PDF documents with additional information i.e. case studies, additional reading material, example exam papers, online self assessment, feedback, supportive information for assignments, assignment feedback etc. ○ Excel spreadsheets with data for assignments, statistics ○ PowerPoint presentations of tutorials and discussions that were held at regional offices and/or via satellite broadcast and video conferencing, instructional text, etc. ○ Other documents generated by specialized software such as mind maps, project management files, documents generated by mathematical programs, GIS maps, etc. ○ Multimedia such as images, video clips, audio clips, simulations and animations. ○ Links to internal and external web pages such as the library, learner support and externally to any web page relevant to the course. ○ Links to full text e-articles hosted on various data bases facilitated through library services. ○ Applications developed by faculty such as engineering, sciences and agriculture to support students in constructing their own learning through simulations and drill and practice activities. <ul style="list-style-type: none"> • Each module has a dedicated schedule. These schedules are aggregated on the home page to provide the student an overview of all schedules activities for the year. Exam dates, assignment due dates are automatically added to the schedule from the Unisa student system. The schedule tool however provides a very powerful tool for the lecturer to facilitate teaching and learning. As a pacing tool the lecturer can provide students with learning progress milestones and reminders for submission of assignments. Lecturers can also schedule events such as tutorial sessions, satellite broadcasting and video conferencing information and scheduled feedback dates. • This is the official book list management system for prescribed books for modules which is kept updated on a yearly basis. • The tool allows students to send e-mails from within myUnisa to the lecturer. These e-mails are logged and the activity could be recorded in the tracking system. • Provide and interface for lecturing staff to answer typical and recurring questions from students. The availability of answers on pressing questions can significantly reduce the number of queries (via e-mail and telephone) that academic staff need to answer on a daily basis. Creative use of this tool can teach students independent problem solving skills through exploration. • A blog is (short for weblog) is basically a journal (or newsletter) that is available on the web. Blog scripting allows someone to directly post and organise information to a Web site (the activity of updating a blog is "blogging" and someone who keeps a blog is a "blogger"). Blogs are frequently updated (usually daily). Blogs often reflect personal views and opinions of individuals with an interest and/or expertise in a particular subject field. Members who have access to the blog can post replies to the above. Blogs were initially used as a reflective tool, but is increasingly being used in other creative |
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| | <ul style="list-style-type: none"> ○ Drop Box ○ Learning Units ○ News ○ Self Assessment ○ Web Content ○ Wiki ○ Instant Messaging (IM)/ Chat groups | <p>ways such as feedback on draft documents, gathering information and soliciting input and views from other participants.</p> <ul style="list-style-type: none"> • For private file sharing between lecturer and student. • myUnisa makes use of the “<i>Melete</i>” Lesson Builder. This tool can be used to create interactive learning material with the ability to guide students through pre-determined learning sequences. It provides templates for the use of multimedia and a wide range interactive formative activities. The toolset makes it easy for the lecturer to build very complicated interactive online courses without having to have technical skills. In the future more courseware creation tools will be added to best suit learning styles and course requirements. • The <i>News</i> tool provide summaries of detailed content that is hosted on specialist servers and uses RSS (Rich Site Summary) feeds to retrieve the latest content from these remote and/or internal sites. The content is maintained and continuously updated by the owners of the information and can range from general news to subject specific topics. The spectrum of available news feeds increases daily. In some cases subscription fees need to be paid to access the feeds. • Currently the self assessment tool is in an experimental phase and includes a number of assessment options such as multiple choice/correct questions, true and false, filling in missing words, numerical response, matching items and paragraphs. Feedback is immediate and can be context sensitive. The number and complexity of available assessment options will be increased. Text based assessment tools will be integrated with copyright monitoring tools, such as Turnitin. • External websites can be catalogued and accessed via this tool. • A wiki is a multi-layered collaborative document creation tool that allows the incorporation of a wide range of multimedia and features. Students and lecturers can collaboratively add, edit or change pages in the wiki. All changes are versioned and the participation of individuals can be viewed. Students can work on projects/activities, share knowledge and construct a shared understanding of the subject. Outcomes can be achieved through a continuous reiterative growth process where all participants provide input and learn from their peers. A good example of the potential of a wiki can be seen at www.wikipedia.com. It is foreseen that wikis will not only be used to provide collaborative learning environments, but as the technology matures and academics start using the tool, many new uses will be found for the wiki such as learning support, resource collections and cross discipline interest groups. • Instant Messaging (IM) in a synchronous (real time) text based chat facility the facilitates one-on-one and one-to many discussions. The IM software also caters for dynamic grouping. The advantage of this technology is that quick real time discussion and/or meetings can be called at short notice between two or more people. The disadvantage is that all participants must have access to a internet linked computer at the same time, they must be able to use the technology well and they must have good typing skills or they will be left behind. The use of voice, video and even real time document sharing is possible in high bandwidth environments. It will however be a while before the latte will be |
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| | <ul style="list-style-type: none"> ○ e-Portfolios ○ Help and support site | <p>feasible in South Africa. The myUnisa Team is also busy investigating the possibility to developing a desktop to mobile chatting facility in collaboration with Mxit. It is envisaged that lecturers will be able to use a myUnisa interface on their computers to chat with students using mobile devices such as their cell phones.</p> <ul style="list-style-type: none"> • Most countries in the developed world are promoting the use of student portfolios as a means to record educational progress, experience and achievements. In many cases the portfolios span the students whole educational (or higher education) career and aggregate information across subjects, disciplines and even include social and community activities. In South Africa portfolios are extensively used in secondary education as part of the new OBE based curriculum. These school leavers will be entering higher education in 2009. The myUnisa team will introduce an e-portfolio tool to the Unisa academic community during 2008. This tool is however very complex and will require proper training to use. It may however become the core of the students learning activities at Unisa where all artefacts as proof of achievement will be housed. The portfolio may make final summative assessment redundant. • Academic staff can acquire myUnisa help and support documentation as well as other teaching and learning resources from the site. The help and support site may be enhanced by adding multimedia tutorials in the future. |
| NEW/ENVISAGED | Satellite Delivery (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> • Unisa possesses state of the art broadcasting studios that can broadcast audio and video to 21 centres distributed across South Africa. The studios are equipped with all the necessary tools to provide students with lecture-like tuition. It is however possible to link to additional video feeds such as pre-recorded material to illustrate key principles. The facilities cater for synchronous (real time) lectures, demonstrations and examination preparation support. The sessions are, however, recorded and can be rebroadcasted. The recorded sessions can also be distribution via DVDs and video tapes directly to the students or to regional centres where they can be viewed upon request. |
| NEW/ENVISAGED | Video Conferencing (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> • Video conferencing provide a high level of real time interaction similar to face to face classes. The facilities cater for presentation media such as PowerPoint, movie clips, etc. Unisa's video conferencing facilities cater for multiple connections i.e. more than two cites can partake in a session. Video conferencing lends itself to small group discussions where participants are geographically separated (even internationally). It also makes it possible for students to gain exposure from invited subject specialists and experts from around the world without having to bring them physically to South Africa. |
| NEW/ENVISAGED | Multimedia (CD, DVD & online) (S/I, S/L, S/M) | <ul style="list-style-type: none"> • Multimedia provides a rich interactive environment that can greatly enhance the students current learning environment. Virtually any form of electronic medium can be packaged on a modern CD or DVD-ROMs. This includes the traditional multimedia learning experience with interactive quizzes, audio and video material, simple modeling and simulations, to very sophisticated role playing, simulations and educational "game-like" lessons. Audio and Video can also be made very interactive. |

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| | | <p>Provided a large bandwidth is available, many of the above rich environments can be available via the internet. Multimedia and the online environment can also be combined to provide the best of two worlds in low bandwidth environments, i.e. the rich media associated with CD/DVD-ROMs and up to date information, peer interaction and collaborative learning provided by the Internet.</p> |
| NEW/ENVISAGED | Audio and possibly video steaming/downloading (S/I, S/M) | <ul style="list-style-type: none"> Great advances have been made in the compression of audio and video data. This makes it possible to provide voice and moving image files that are small enough to download or stream via the Internet. Students can therefore at a time and place that suits them, gain access to these media, using computers or even mobile devices. Audio and video files are usually downloaded when they are relatively small, i.e. to illustrate salient points or when a student want to listen/view them at a later stage offline. Streaming is usually used for long lectures/discussions/presentations where the student has stable (preferably broadband) access to the Internet. It also provides a measure of protection against copyright infringements as the data is not stored on the recipients device (it's a bit like radio or TV on demand). |
| NEW/ENVISAGED | Mobile (SMS, Mxit?, mobile portal) (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> In many cases mobile devices such as Cell phones, iPhones, PDAs, etc. have reached a technical level of sophistication where they nearly have similar functionalities as desktop or laptop computers. It is therefore not inconceivable that mobile devices may provide the channel for teaching and learning in the future. In the near future Unisa could make use of these devices to communicate to students via SMS, IM, telephonically and audio & video conferencing. Students could access most of the information currently displayed via our corporate portal and myUnisa via their mobile devices. They could also download text, images, audio & video files and even simple simulations. As connectivity, data storage capability, computing power, input devices and display mechanisms improve, it will be possible to provide exactly the same services via hand held mobile devices as are currently possible via desktop and laptop computers. |
| NEW/ENVISAGED | Google education for social networks (S/I, S/P) | <ul style="list-style-type: none"> Most of the current generation of school leavers and pre-grad students (millennials) in the developed world and even at residential universities in South Africa are active participants in technology based social networks such as Facebook, mySpace, Second Life, Flickr, uTube, etc. Those without access to the internet use SMS and/or Mxit using mobile devices. Tertiary education institutions worldwide are trying to grapple with this phenomenon and are trying to find way to reach students in the environment where they feel comfortable. Most of these social network environments have reached a very high level of sophistication and allow for a high level of interaction. They have the potential to provide a media rich environment for teaching and learning while at the same time support the student's need for social interaction. In a distance education environment such as Unisa where students usually feel very isolated, these social environments may foster a sense of belonging. The latter may have an positive influence on attrition and even throughput (this field still requires much more research before any conclusions can be made). While the Sakai Community is busy investigating the possibilities of integrating the system into some of these social networks, we are persuing discussions with Google to make use of their educational collaboration infrastructure to create an online social environment for Unisa students. The tools will allow students to interact, communicate and develop areas of common interest. I also provide them with chat facilities, will integrate with their e-mail boxes (if we use Google |

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| | | to host it for us) and has collaborative word processing and spreadsheet tools. The latter can even be used on computers without office software on them. |
| NEW/ENVISAGED | MPCCs (Multi-Purpose Community Centres) (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> As part of an effort to give students access to Unisa's online facilities, arrangements are made with numerous MPCC to provide students with Internet access. Lecturers using online based teaching must take into account that most of the students using these facilities will have sporadic access to the Internet and methodologies must be adjusted accordingly. |
| Formative Assessment | | |
| EXISTING | <p>MCQs via myUnisa (limited) (S/M)</p> <p>Online submission of assignments via myUnisa (S/M)</p> <p>Online scoring via myUnisa (S/M)</p> <p>Self assessment</p> | <ul style="list-style-type: none"> Online submission and electronic marking of MCQs. Assignments submitted online, routed electronically or printed and send to lecturer for marking Assignment submitted online, routed electronically to lecturer, lecturer marks and gives feedback online, submit marks online, marked assignment e-mailed back to student Academics upload online test and quizzes with feedback. Students work through the self assessment activities and receive immediate feedback. |
| EXISTING | Video Conferencing (S/L, S/M) | <ul style="list-style-type: none"> Not currently being used for assessment |
| NEW/ENVISAGED | <p>Advanced myUnisa assessment toolsets (S/I, S/L, S/M, S/P, L/T)</p> <ul style="list-style-type: none"> Discussion Forum | <ul style="list-style-type: none"> The online environment allows for a great variety of way to assess a student's knowledge and progress on an individual basis and as part of a team. It allows for a high level of interactivity and innovation. Immediate feedback is possible in many cases and in some cases automation can be used to relieve academic workload and allow students the opportunity for "repetition and practice". It furthermore cater for self, peer, primary lecturer and tutor evaluation and third party moderation. Various forms of formative evaluation can be built in to any of the myUnisa tools listed below. Some of them have been designed for formative assessment or include assessment features; others need some creativity on the part of the lecturer. In Discussion forums, individual students can be assessed based on participation (quantitative), quality if inputs and success to attain learning objectives (qualitative), group participation, leadership, etc. Students could also be asked to do peer-evaluation or the lecturer could give an overall mark for the whole group. |

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| | <ul style="list-style-type: none"> ○ Materials ○ Blogger ○ Drop Box ○ Self Assessment ○ Wiki ○ Instant Messaging (IM)/ Chat groups ○ e-Portfolios | <ul style="list-style-type: none"> • Material can contain in-text exercises that could be submitted for marking or used as self assessment exercises. If an courseware authoring such as Melete is used, automated interactive assessment can be incorporated into the courseware, that provide immediate feedback. These instruments can also be use for pre- and post assessment of certain sections of work. The latter can programmed to act as a prerequisite for progress. Obviously case studies, simulation and rich media can also be incorporated and used as assessment tools. Materials may also contain integrated assessment tools such as online logbooks, task lists, skill check lists and mentor reports. • As a collaborative tool, the assessment methodologies used in this environment is very similar to those used in discussion forums, as discussed above. • As a collaborative tool, the assessment methodologies used in this environment is very similar to those used in discussion forums, as discussed above. • Self Assessment provide a whole array of assessment tools. Currently the self assessment tool is in an experimental phase and includes a number of assessment options such as multiple choice/correct questions, true and false, filling in missing words, numerical response, matching items and paragraphs. Feedback is immediate and can be context sensitive. The number and complexity of available assessment options will be increased. Text based assessment tools will be integrated with copyright monitoring tools, such as Turnitin. • As a collaborative tool, the assessment methodologies used in this environment is very similar to those used in discussion forums, as discussed above. • IM can be used as a one-on-one quizzing tool, or could be used for group discussion in which case inputs from individuals or the group as a whole could be evaluated. • Typically a e-portfolio will contain all the evidence and artefacts of formative a student collected throughout a study period (semester, year, etc.). The portfolio could be used as a part of a final summative mark or it could even make the use of summative assessment redundant. In some cases subject specific, or even project portfolios can be used as a formative assessment tool. |
| <p>NEW/ENVISAGED</p> | <p>Submission of assignments via e-mail (S/I, S/L, S/M, S/P, L/T)</p> | <ul style="list-style-type: none"> • This method is currently being used extensively worldwide. Online submission of assignment at Unisa uses e-mail technology. Assignments are printed out, marked on paper and sent back to students via snail mail. Marks are captured separately. This process is cumbersome and not cost effective. It is envisaged that the process will be streamlined in the near future by providing an easy to use online marking toolset that will not only reduced turnaround times, enable lecturers to increase marking quality and simplify mark capturing, but will also significantly reduce costs. |

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| NEW/ENVISAGED | Video Conferencing (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> As a collaborative tool, the assessment methodologies used in this environment is very similar to those used in discussion forums, as discussed above. It can also be used as a medium for oral exams, especially at a post graduate level and in cases where students are overseas or otherwise geographically separated from the examiner/s. |
| NEW/ENVISAGED | Multimedia (CD, DVD & online) (S/I, S/L, S/M) | <ul style="list-style-type: none"> Multimedia can make use of all the modes of assessment discussed in the self assessment section above. If linked with online self assessment, marks can be captured directly and lecturer/tutor assistance can be solicited when needed. |
| NEW/ENVISAGED | Mobile (SMS, Mxit?, mobile portal) (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> From a practical perspective, only simple MCQs can be done via SMS. Mxit provides slightly more sophisticated assessment, but the use is still limited. As online and mobile technology advances, most of the online assessment currently used on the internet will be available on mobile devices. |
| Examination | | |
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| NEW/ENVISAGED | Technology based assessment toolsets (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> All the tools and methodologies used in the “Formative assessment” section above can also be used for examination purposes. In many cases summative assessment may be redundant if the formative assessment was done adequately. Online (self) assessment tools can be used for examinations under conditions where supervision is required. e-portfolios, if used correctly will probably reflect a student’s ability, skill levels and mastery of a subject much better than a single (rote learned) final exam. |
| Results | | |
| OLD | Corporate website (S/I) | <ul style="list-style-type: none"> Access results via corporate website |
| EXISTING | Corporate website (S/I) | <ul style="list-style-type: none"> Access results via corporate website |
| EXISTING | Publication via myUnisa home page (S/I) | <ul style="list-style-type: none"> Results are also available via the myUnisa home page, access to exam dates |
| NEW/ENVISAGED | Corporate Portal (S/I) | <ul style="list-style-type: none"> As internal marking and mark capturing processes get streamlined the online publication of marks will be sped up. In the future students will probably be rerouted to the myUnisa home page for results. |

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| NEW/ENVISAGED | Publication via myUnisa home page (S/I) | <ul style="list-style-type: none"> Results available via the myUnisa home page. Immediate access to supplementary exam date and venues may be provided if applicable and if the information is available |
| NEW/ENVISAGED | SMS on request (S/I) | <ul style="list-style-type: none"> Results could be SMSed to students as a general service or upon request. |
| Communication | | |
| OLD | Unisa Corporate Web Page (S/I) | <ul style="list-style-type: none"> Passive dissemination of information, primarily in text form i.e. prospective students, active students and other interested parties must access the website to read the necessary information. |
| OLD | e-Mail (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> e-Mail is a active bidirectional communication toll that is the dominant electronic communication tool worldwide. E-mail is usually used asynchronously and could be one-to-one or one to many. Automation is possible and a high level of security/confidentiality can be attained if necessary. |
| EXISTING | Unisa Corporate Web Page (S/I) | <ul style="list-style-type: none"> Passive dissemination of information, primarily in text form i.e. prospective students, active students and other interested parties must access the website to read the necessary information. |
| EXISTING | myUnisa (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> High levels of bidirectional communication through collaborative toolsets and e-mail functionality. myUnisa also have the capability of bulk emailing to selected groups of students. All e-mail addresses of students using myUnisa are verified. |
| EXISTING | e-Mail (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> e-Mail is a active bidirectional communication toll that is the dominant electronic communication tool worldwide. E-mail is usually used asynchronously and could be one-to-one or one to many. Automation is possible and a high level of security/confidentiality can be attained if necessary. |
| NEW/ENVISAGED | New Enterprise Portal (S/I) | <ul style="list-style-type: none"> Largely passive dissemination of information, primarily in text form i.e. prospective students, active students and other interested parties must access the website to read the necessary information. A certain amount of interactivity will be present though query engines, customizability and tailored information packages. |
| NEW/ENVISAGED | Enhanced myUnisa Home Page (S/I) | <ul style="list-style-type: none"> Passive dissemination of information, primarily in text form i.e. prospective students, active students and other interested parties must access the website to read the necessary information. This is the only part of myUnisa that is accessible to the general public. A certain amount of interactivity will be present though query engines, customizability and tailored information packages. |

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| NEW/ENVISAGED | myUnisa (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> High levels of bidirectional communication through collaborative toolsets and e-mail functionality. myUnisa also have the capability of bulk emailing to selected groups of students. All e-mail addresses of students using myUnisa are verified. A SMS engine, IM tools and other synchronous communication tools will be incorporated into myUnisa in the near future. Audio and video streaming will also be possible. All activates are logged and can be accessed for reporting. |
| NEW/ENVISAGED | SMS Enquiries (S/I) | <ul style="list-style-type: none"> Most students posses cell phones. SMSs are therefore currently the electronic communication medium with the highest level of penetration. The amount of information that can be communicated is however very limited. The SMS interface is an easy to use bulk messaging system with automation capabilities. SMSs provide an active communication medium that pushes information to the user and a certain level of interactivity can be attained through bi-directional SMS facilities. |
| NEW/ENVISAGED | e-Mail (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> e-Mail is a active bidirectional communication toll that is the dominant electronic communication tool worldwide. E-mail is usually used asynchronously and could be one-to-one or one to many. Automation is possible and a high level of security/confidentiality can be attained if necessary. |
| NEW/ENVISAGED | Mobile Portals (S/I) | <ul style="list-style-type: none"> With the use of mobile portals virtually all functionally available on the corporate website will and some of the functionality on myUnisa will be available via a mobile device. |
| NEW/ENVISAGED | Satellite Delivery (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> Satellite broadcasting provide one directional synchronous communication to a number of venues throughout South Africa |
| NEW/ENVISAGED | Video Conferencing (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> Video conferencing provide a high level of real time face –to –face interaction among participants geographically separated (even internationally). |
| Production | | |
| | Online publication of most content on myUnisa (S/I, S/M) | <ul style="list-style-type: none"> Online publication of most content on myUnisa |

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| NEW/ENVISAGED | Online publication of all content on myUnisa (S/I, S/M) | <ul style="list-style-type: none"> • All official study material available on myUnisa • Multi modal delivery of learning and teaching • Some courses using technology enhanced study packages designed according ODL principles, using: <ul style="list-style-type: none"> ○ Print ○ myUnisa toolsets ○ Multimedia (CD, DVD & online) ○ Interactive courseware |
| NEW/ENVISAGED | Audio and possibly video streaming/downloading via myUnisa (S/I, S/L, S/M, S/P, L/T) | |
| Distribution | | |
| OLD | Online via SOL & COOL (limited) (S/I, S/L, S/M) | |
| EXISTING | Online via Corporate website & myUnisa (S/I, S/L, S/M) | <ul style="list-style-type: none"> • Information, and documentation can be downloaded. |
| EXISTING | Via e-mail (S/I, S/L, S/M) | <ul style="list-style-type: none"> • Currently all students that use myUnisa have verified e-mail addresses. Information and documentation, including study material be distributed via e-mail. |
| EXISTING | Satellite Delivery (S/I, S/L, S/M, S/P) | |
| EXISTING | Video Conferencing (S/I, S/L, S/M, S/P) | |
| NEW/ENVISAGED | Enhanced e-mail (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • Higher levels of automation. All students will have e-mail addresses, delivery is therefore guaranteed. It is however up to the student to read the email. Information and documentation, including study material be distributed via e-mail. |
| NEW/ENVISAGED | Satellite Delivery (S/I, S/L, S/M, S/P, L/T) | |
| NEW/ENVISAGED | Video Conferencing (S/I, S/L, S/M, S/P, L/T) | |

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| NEW/ENVISAGED | Text based documents and multimedia (CD, DVD) via snail-mail (S/I, S/M) | <ul style="list-style-type: none"> • Even though distribution via the postal services can be tedious. Distribution costs are significantly lower than printed material and large volumes of information can be placed on a single disk. |
| NEW/ENVISAGED | Audio and possibly video steaming/downloading (S/I) | |
| NEW/ENVISAGED | Distribution to mobile devices (SMS, Mxit?, mobile portal) (S/I, S/L, S/M, S/P, L/T) | |
| NEW/ENVISAGED | Mobile Technology Units (S/I, S/L, S/M, S/P) | <ul style="list-style-type: none"> • Mobile units make it possible to distribute satellite and internet based content to rural areas. |
| Access to material | | |
| OLD | Anywhere, any time with Internet connectivity (S/I, S/M) | |
| EXISTING | Anywhere, anytime via Internet connectivity to myUnisa (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • All parties can get 24/7 access to information from anywhere in the world where there is Internet connectivity. Currently most students access the internet for work, followed by home. Unisa has arrangements with a number of MPCCs to provide students with Internet access. |
| EXISTING | Telematic delivery points (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • |
| EXISTING | Video conferencing facilities at regions and elsewhere (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • Most of Unisa's large regional centres have video conferencing g facilities. |
| NEW/ENVISAGED | Anywhere, anytime with internet and/or mobile connectivity via myUnisa (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • All parties can get 24/7 access to information from anywhere in the world where there is Internet connectivity. Unisa has arrangements with a number of MPCCs to provide students with Internet access. The number of MPCCs will be increased. Students will be able to purchase computers trough a Unisa student loan scheme. Access will be increase at Unisa regional centre and through collaboration with the government and the public and private sector. |
| NEW/ENVISAGED | Extended telematic delivery points (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • Unisa in collaboration with Stellenbosch University provide students access to broadcasted satellite material at 21 venues across South Africa. More venues will be added over time. |

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| NEW/ENVISAGED | Mobile Technology Units (S/I, S/L, S/M, S/P, L/T) | <ul style="list-style-type: none"> • Mobile units make it possible for students to access satellite and internet based content in deep rural areas. |
| Interaction: Student/Institution | After each technology listed in this column, the type of interactions supported by the specific technology are indicated between brackets | <ul style="list-style-type: none"> • Student – Institution (S/I) • Student – Lecturer/tutor (S/L) • Student – Material (S/M) • Student – Peers (S/P) • Lecturer – Tutor (L/T) |
| Interaction: Student/Lecturer | | <ul style="list-style-type: none"> • Student – Institution (S/I) • Student – Lecturer/tutor (S/L) • Student – Material (S/M) • Student – Peers (S/P) • Lecturer – Tutor (L/T) |
| Interaction: Student//Material | | <ul style="list-style-type: none"> • Student – Institution (S/I) • Student – Lecturer/tutor (S/L) • Student – Material (S/M) • Student – Peers (S/P) • Lecturer – Tutor (L/T) |
| Interaction: Student/Peers | | <ul style="list-style-type: none"> • Student – Institution (S/I) • Student – Lecturer/tutor (S/L) • Student – Material (S/M) • Student – Peers (S/P) • Lecturer – Tutor (L/T) |
| Interaction: Lecturer/Tutors | | <ul style="list-style-type: none"> • Student – Institution (S/I) • Student – Lecturer/tutor (S/L) • Student – Material (S/M) • Student – Peers (S/P) • Lecturer – Tutor (L/T) |
| Formative assessment | Formative assessment was discussed in detail in the section above | |
| Summative assessment | Formative assessment was discussed in detail in the section above | |

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| Tracking | | |
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| EXISTING | | <ul style="list-style-type: none"> All events on myUnisa are currently being tracked. Rudimentary MIS is available via myUnisa. |
| NEW/ENVISAGED | Institutional tracking system | <ul style="list-style-type: none"> An institutional tracking system is planned where all the activities of a student is logged, tracked and analysed throughout their period of study with Unisa. This will enable Unisa to identify potential problems even before they register. It will furthermore identify students that find it difficult to cope with their studies and interventions can be tailored to address each student's unique needs. Obviously the system will also provide high levels of management information. It will also provide imperial data to assess the effectiveness of interventions and provide evidence of student activity for funding purposes. Unfortunately many student activity and learner support intervention events are not captured electronically. Without this crucial information accurate tracking will not be possible. It is therefore imperative that the necessary processed and technology infrastructure be put in place to capture the necessary data. |