E-Learning Implementation Strategy and Plan for the University of Zululand

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Executive Summary

Vision
E-learning is a broad term loosely used to describe the addition of Information and Communication Technology (ICT) to the academic process of teaching and learning. E-Learning will be used to facilitate the creation and dissemination of knowledge and the innovative use of technology for teaching, learning, research, and outreach. This is in line with the University's Vision and Mission

The use of educational technologies to improve services, quality, and opportunities for learning has been evolving steadily over the last three decades. E-learning has grown remarkably in the diversity of technologies and variety of pedagogies used within the 21st century. The development and integration of new models and tools for learning have brought about fundamental changes in the way educators approach teaching and students approach learning. Faculty, students, content designers and other practitioners are using a number of new ICT technologies to improve learning outcomes, create new teaching and learning models, and place more responsibility for learning on the learners themselves in an integrated learning centred approach.

Several e-learning initiatives are already functioning on campus. Over the years they have prospered and grown. However, enhancement and better coordination of centralized support could advance e-learning as a primary resource to the overall academic community. The e-learning task team recommends that centrally administered human and financial resources, associated with e-learning, should be incorporated into a single organizational unit and the leadership of that unit be charged with the rollout of an adopted implementation strategy. This document serves as that plan.

The plan examines the needs and vested interests of a broad constituency of stakeholders comprising resident students, lecturing staff, support staff, academic leaders and policymakers. This document describes how e-learning is supported and delivered today, how the University of Zululand would be better served in the future, and how to alleviate the gaps between where the university currently stands and where it would like to be.

The University of Zululand's current bottom up approach to e-learning is not robust enough nor organized effectively enough to meet the proposed Vision above. An important component of this plan is strengthening the collaboration between Management and Faculties. The ultimate goal of this plan is to support credit courses and programmes by providing academically sound resources and services to all Faculties.

Five Critical Success Factors serve as the foundation for this e-learning Strategy's goals, outcomes, objectives, tasks and benchmarks.

- **CRITICAL SUCCESS FACTOR 1:** A cohesive vision and services across faculties and service departments to support e-learning.
- **CRITICAL SUCCESS FACTOR 2:** Funding for and investments to support the implementation of e-learning.
- **CRITICAL SUCCESS FACTOR 3:** Policies and procedures conducive to offering

e-learning.
- **CRITICAL SUCCESS FACTOR 4:** Student access to e-learning resources and support.
- **CRITICAL SUCCESS FACTOR 5:** Technology infrastructure to support a mission critical e-learning programme.

Within this plan, an e-learning unit is proposed, reporting to the Deputy Vice-Chancellor and supporting 3 functional activities:

1. Business Services
2. Design and Development
3. Support

The Unit mirrors the major activities that make up the e-learning "supply chain," and comprises programme planning (integration of e-learning into programmes and modules), instructional design and development of learning objects (content), quality assessment (quality and user satisfaction) and user support (students and lecturing staff). The Unit is built on the premise that it will be able to closely interface with the ICT department and existing university structures like Academic Development.

A budget will need to be calculated and allocated for a transitional investment to build and staff the central e-learning Unit (2 years), which, in turn, will work with its advisory e-learning committee to identify and solicit additional funds to roll out a comprehensive solution (3 to 5 years). The budget would reflect the costs associated with launching a coordinated effort to support the full spectrum of e-learning activities.

Many of the tasks listed in the "Implementation Plan" section of this report do not require funding, but the commitment of knowledge, time and energy of dedicated lecturing and ICT staff, i.e. the e-learning Task Team. Others do need funding, requiring both annual and initial set up fees. The budget items directly align with the tasks required to meet this e-learning strategy and the plan's goals, outcomes and objectives. To fully implement a full-spectrum e-learning operation, it will take an additional three to five years. This plan should be revisited annually to reflect the transition of new roles and responsibilities of a coordinated and cohesive e-learning effort.

1. The e-learning Task Team Recommendations (February 2009 to November 2009)

The University of Zululand has been wrestling with the concept of "e-learning" for the last eight years. E-learning is a term loosely used to represent the use, application and integration of ICT in an educational environment. At the University of Zululand it started with the supplemental use of technology in the classroom in 2000, mostly through blended uses consisting of a mix of face-to-face and online course material.

This struggle is evident from the number of groups and task teams who have been tasked with finding solutions to how best apply technology to assist teaching and learning. Although these

groups did contribute to the establishment of some of the current ICT infrastructure on campus like Learning Management System (LMS) Moodle and an e-learning portal (http://elearn.uzulu.ac.za), none of them implemented a comprehensive and cohesive e-learning programme to date.

In 2006, the WUZULU project established an E-learning group, and tasked it with establishing programmes for improving and advancing e-learning at the University of Zululand. The group submitted a detailed proposal for funding but severe staff shortages prevented anything from materializing on the ground. In 2008 an e-learning Task Team was established to revive the WUZULU e-learning projects. Several aspects of e-learning at the University have been investigated and discussed in the meetings held, which have culminated in the production of a SWOT analysis, a road show presentation, a budget for an e-learning laboratory and the current document.

The Task Team found that the University is already using technology in many ways to enhance teaching, learning and research. However, if Unizulu is to move forward, greater cohesion and centralized support will need to be provided.

The Task Team concluded, therefore, that Unizulu needs to bring an institutional focus to the use of technology in teaching and learning in order to deliver quality education that properly prepares students to work within our knowledge economies of the 21st century. The Task Team proposes a phased approach to implementing an e-learning programme.

1.1. Phase I – Requirements analysis

a) Conduct interviews with Faculty Deans, lecturing staff, academic development, and any other stakeholder of e-learning to determine the:
- Expectation of an e-learning system
- Requirements of an e-learning system
- Training needs
- Policy and procedural changes needed to support e-learning.

b) Acceptance of a conceptual e-learning model
This would act as a mechanism to put the vision into practice. An initial conceptual model was proposed with the following objectives:
- Provide faculty with tools that facilitate the teaching and learning process (i.e. podium computers and digital projectors in venues, a LMS and an e-learning laboratory).
- Target successful opportunities—and minimize the "shotgun approach".
- Emphasize the core asset of the university (faculty knowledge), not the emergence of new delivery mechanisms.
- Integrate operations with the three major university areas; teaching and learning, research, and outreach.
- Use technology to bring teaching and learning, research and outreach closer together within an integrated blended hybrid model.

1.2. Phase II – Handling Organizational Change

The Task Team fully agreed that while there are a number of successful online endeavours at Unizulu, the university lacks comprehensive institutional and organizational mechanisms to facilitate the development and growth of e-learning. The Task Team believe that the most direct way to develop a strategic plan for e-learning at Unizulu is to address these organizational issues. The Task Team thus recommends the following:

- **Recommendation 1:** The Task Team advises Senate that centrally administered human and financial resources associated with e-learning should be incorporated into a single organizational unit. The purpose of this unit would be to provide leadership and support to faculties and the university community in the areas of content design and technology, student services, and business planning related to e-learning.

- **Recommendation 2:** The Task Team advises Senate to appoint an Advisory Committee to revisit strategy, policies and procedures developed over the past few years regarding intellectual property and copyright law and develop additional strategy, policies and procedures associated with Institutional Repositories (IR) and e-learning.

- **Recommendation 3:** The Task Team advises Senate to direct resources to the development of an IR and to promote the online publication of theses, dissertations research output and learning objects. This recommendation seems to be progressing with the recent establishment of an IR steering committee together with the infrastructure to host D-space.

While this e-learning Implementation Plan is responsive to recommendations put forth in both phases, it specifically addresses recommendation 1 in phase 2.

- The Task Team advises Senate that centrally administered human and financial resources associated with e-learning should be incorporated into a single organizational unit. The purpose of this unit would be to provide leadership and support to faculties and the university community in the areas of content design and technology, student services, and business planning related to e-learning.

2. How is e-learning Supported and Delivered at Other Universities Today?

The current state of e-learning at other South African Universities is best understood in the broader context of e-learning worldwide, within the borders of South Africa, among Unizulu's peer institutions and within Unizulu itself. Looking at the full spectrum of e-learning, almost every college and university in the nation - regardless of size or ranking, public or private, historically disadvantaged or historically advantaged - has invested in some level of learning

technology support for their campus community. Most have chosen to take advantage of economies of scale and build and support centralized units while others advocate a distributed model that matches specialists within the disciplines.

Most institutions have a central support unit for e-learning. However many of the Universities have internal support units like Academic Development, Continuing Education and Technology Assisted Development, which also offer teaching and learning support.

Almost all higher education institutions offer lecturers some form of incentive to transform existing course materials onto online environments and to explore innovative teaching methods. Incentive grants fund everything from faculty release time to professional support. These include Innovator Grants (IG), Courseware Development Grants (CDG) and Technology in Instruction Programme Grants (TIPG). These incentive funds are supported through a variety of sources, including central administration, and technology fees.

South Africa's academic community's interest in and use of e-learning has climbed steadily over the last couple of years. While attending the two workshops at the University of Johannesburg and listening to the other participants' input (Cape Peninsula University of Technology, Central University of Technology, North-West University, Stellenbosch University, University of Fort Hare, University of Johannesburg, University of KwaZulu-Natal, University of Limpopo, University of Pretoria, University of the Free State, and University of the Western Cape), which was compiled into the combined report (Boere and Kruger, 2008) it became clear that the University of Zululand was significantly behind other participants in most of the twelve (12) lenses of review.

- Lens 1: A description of your Curriculum Design and Development (focusing on macro, meso and micro level) and the TAL integration in this.

- Lens 2: The Quality Management processes in place to ensure the enhancement of learning through TAL.

- Lens 3: Initiatives and approaches to the Professional Development of staff for the implementation of integrated TAL.

- Lens 4: Structures in place for the technical and system support, guidance and working with pre-determined standards

- Lens 5: Structures in place for client support (including lecturers, students and other role players)

- Lens 6: The role and contributions of leadership and change management at different levels of your institution

- Lens 7: The availability of resources, resource sharing and repurposing: Where, when and how?

- Lens 8: Information on students' and lecturers' experiences and levels of satisfaction over the past two years

- Lens 9: Relevant and recent information on existing collaborations, partnerships and success stories at and between different HE institutions

- Lens 10: Funding

- Lens 11: HR issues
- Lens 12: Describe the steps of your process from formulating TAL related policies to implementation

This includes no policy that refers to or promotes e-learning within the teaching and learning domains of the University of Zululand. No specific Quality Management processes in place to enhance e-learning. Limited initiatives for the professional development of staff to integrated e-learning within existing curricula. No structures in place for technical and system support and working with pre-determined standards and few contributions from leadership and change management, hence requiring a bottom up approach.

Increased exposure to instructional technologies in the classroom can partially be attributed to the use of proprietary LMSs like Blackboard (previously WebCT) or open source systems like Moodle. Moodle is Unizulu's university-supported LMS that provides a suite of tools for lecturing staff to easily build and manage online learning experiences. Moodle allows students to personalize their learning experience, conveniently and dynamically access course materials and communicate and collaborate with each other and the instructor. Unizulu hosts four installations of Moodle (One for each Faculty) which can be accessed through our e-learning portal. The majority of Moodle use takes place in supplemental and blended learning environments.

3. E-learning Implementation Strategy and Plan

The University of Zululand strategic plan (2008) does not clearly delineate the role of technology. This is, in the view of the e-learning Task Team an under sight that needs attention.

> "The number one benefit of information technology is that it empowers people to do what they want to do. It lets people be creative. It lets people be productive. It lets people learn things they didn't think they could learn before, and so in a sense it is all about potential."
>
> Steve Ballmer
> Chief executive officer of Microsoft Corporation

Technology is changing faster than any other factor affecting us, our environment and our institution, which affects not only what is taught but how. Technology is also ever shaping the workplace in which our students will find themselves. It's our responsibility to help our students, whatever their field of study, to become fully conversant with the latest available technology.

Analysis of other similar institutions show that top priorities serving their e-learning needs include:

- Developing and updating teaching and learning policies.
- Promoting and rewarding faculty and staff for appropriately using and demonstrating e-learning.

- Expanding the number of courses and degrees offered for life-long learning in distance mode.
- Helping faculty deploy ICT in support of their teaching, research and outreach.
- Providing increased technical and instructional design support to assist in the design and development of e-learning and research materials.

Encouraging the use of new technologies for instruction relies on the existence of an "enabling environment" for faculty developing instructional technology skills and competencies and for students accessing course content online. For its part, Unizulu must develop policies that tear down barriers through the provision of adequate and appropriate resources, develop a "culture of innovation" among the entire university community, and create a dynamic and responsive infrastructure that anticipates, rather than reacts, to change. This will be accomplished through the creative partnership between the new e-learning organization and the faculties to reallocate current, and locate new resources to implement a more flexible and equitable service delivery and support system.

The Plan's Goals, Outcomes, Objectives, Tasks and Metrics

The plan represents a two-year implementation strategy. It is organized into five sections, each a response to a critical success factor describing what is needed for Unizulu to meet the e-learning Plan's future state vision. Each of the sections is organized by goal, desired outcome, objectives and the series of tasks required to meet each objective. Each task is associated with a set of metrics. The tasks and detailed timeline are delineated in Appendix I.

3.1. CRITICAL SUCCESS FACTOR 1: A cohesive vision and services across faculties and service departments to support e-learning.

E-learning is not integrated or coordinated at Unizulu. While there are numerous pockets of successful e-learning activities in certain departments, most lecturing members do not have the level of support centrally or within their faculties to assist them in building technology-enhanced courses and programmes. With a few exceptions, the departments and faculties have not funded educational technology to appropriately scale to the development and delivery needs of their students, staff and faculty. There are very few processes in place to periodically evaluate and review new and existing programmes.

CRITICAL SUCCESS FACTOR 1: A cohesive vision and services across faculties and service departments to support e-learning.

Goal	Desired Outcome	Objectives	Tasks	Metrics
Realign internal	Unizulu will	Effectively	Year One	Survey users to

resources to build an organization to provide and coordinate centralized support for e-learning at Unizulu.	successfully meet the e-learning needs of its staff, students and the citizens of surrounding rural areas by providing targeted support and resources to its academic community.	utilize university assets by building a programme and staff to support the overarching, centralized, e-learning needs of the academic community and to interface closely with academics and admin staff in supporting their constituents	Establish e-learning Unit Possibly move Academic Support, e-learning unit, Quality assurance and ICT services physically closer into same building.	determine satisfaction and to identify needs Survey staff to determine if they are meeting their potential and to identify skill gaps Increased use of services and resources
			Year One Canvass deans and IT professionals to determine which centralized services best meet their needs	Number of new services to meet needs and projects designed to advance collaboration Survey to determine user satisfaction
			Year one Establish and advisory committee to provide direction and refine procedures, policies, mission, goals and objectives.	Survey to determine user satisfaction Track and report on the committee's progress

3.2. CRITICAL SUCCESS FACTOR 2: Funding for and investments to support the

implementation of e-learning.

Funding is a challenge for e-learning because there is an expectation that it is a revenue builder when, in fact, the majority of e-learning programmes either lose money or just break even. More often, these e-learning programmes are being implemented to provide a university a competitive edge by meeting the diverse needs of its student body. A significant investment is required for Unizulu to implement a successful e-learning programme.

Opportunities for external funding exist but many require multidisciplinary and donor collaborations. The major funding weaknesses at Unizulu are:
- Lack of investment monies available to fund costly upfront course and programme development costs and faculty compensation and release time.
- Lack of set procedures to recapture monies from fees and subsidy to use for the development and delivery costs of e-learning projects.
- Unizulu does not have the mandate to tap into the distance education market.

In addition to fiscal shortfalls, there are human resource problems in building and keeping a skilled IT workTeam. As technology swiftly changes, staff must be retrained, recruited and retained in order to provide uninterrupted, quality support. Lacking a career ladder and a reward system, the recruitment and retention of a quality IT work Team throughout the university will remain an ongoing problem.

Lastly, if Unizulu is to catch up to its benchmark institutions, and even take a lead in select areas, it will have to invest in a modest but innovative research and development programme. The University should partner with other universities, vendors, and professional organizations to pilot new ideas and to assist faculty in leveraging their own research into online e-learning environments.

CRITICAL SUCCESS FACTOR 2: Funding for and investments to support the implementation of e-learning.

Goal	Desired Outcome	Objectives	Tasks	Metrics
Encourage and support the development and delivery of top quality e-learning for Unizulu students and the local community.	Academics will have the requisite training and resources to integrate technology into teaching and learning and students will enjoy the convenience and quality of	Invest by identifying collaborative and interdisciplinary and multidisciplinary grants, projects and revenue generating partnering	Year one Obtain approval from Rector for implementation plan and budget that adds human and financial resources to advance strategic e-learning initiatives	Amount of funding and reallocated staff and budgets directed towards supporting this operation Number of task completed Number of clients attracted to suite

technology supported learning opportunities Staff will have the requisite training and resources to support their clients' needs effectively	opportunities			of services
			Year one and ongoing Formalize a "brokering" programme with academic units for the purpose of soliciting and attracting multidisciplinary and collaborative external funding and support	Amount of grants identified and successfully won Quality of proposal outcomes Number of strategic internal and external partnerships
			Year One Establish an incentive programme to provide instructors and instructional developers with the knowledge and support to advance instructional technology strategies	Survey users to determine satisfaction, access results, and new identify needs Number of instructors and developers applying for funding Qualitative and quantitative impact of incentives
			Year two Replicate Unizulu's Teaching Excellence Awards for Course Design or Redesign	Number of programmes successfully adopting plan Student assessment of improved learning Reduction in number of students closed

				out of courses and number of course completions
		Build research and develop partnerships with peers, vendors and professional organizations to further the advancement of e-learning on our campus, within the workTeam and outside the Province's boundaries	Year one and ongoing Support and pilot new and emerging educational methodologies and technologies under the UJ initiative	Number of methodologies and technologies successfully adopted and mainstreamed Number of partnerships built and funds collected to support research
		Invest in IT staff by supporting professional development and career advancement	Year one and ongoing Work with HR to provide career advancement opportunities Coordinate professional development and training opportunities	Customer satisfaction surveys Number of staff retained Staff satisfaction surveys

3.3. CRITICAL SUCCESS FACTOR 3: Policies and procedures conducive to offering e-learning

Unizulu's policies and procedures are not conducive to offering e-learning opportunities to students on campus. This is one of the primary reasons that Unizulu lags behind its benchmark institutions and other universities. There is a lack of clear and consistent policies related to e-learning including intellectual property ownership, faculty workload, class size, tuition and fees, funding distribution, creation and delivery of non-credit and certificate programmes, graduate admission requirements, course approval processes and policies for admissions, registration, financial aid, etc. A major e-learning initiative will affect everything from faculty workload to tuition and state subsidy funding. On the quality front, learners,

faculty, administrators, employers, funding agencies, and policymakers are demanding proof of effectiveness in e-learning offerings. Unizulu has yet to adopt and approve criteria for assuring quality in the delivery of online course components and courses. Often, course content is transferred directly to digital formats without taking into consideration the inherent capabilities of technology to transform and transcend traditional learning into engaging and interactive formats through the use of rich multimedia, a variety of synchronous and asynchronous communication tools, interactive exercises, simulations and problem-based scenarios, 24/7access, and the broad reach of the Internet. Lastly, it takes time and effort to develop high quality, interactive e-learning experiences, yet there are very few intrinsic and extrinsic incentives and rewards for faculty even to improve their basic information technology literacy and skills, let alone sign on to build fully-fledged e-learning courses.

CRITICAL SUCCESS FACTOR 3: Policies and procedures conducive to offering e-learning

Goal	Desired Outcome	Objectives	Tasks	Metrics
Advocate for and develop policies and procedures conducive to supporting and delivering e-learning	Supportive and clearly delineated policies and procedures will allow Unizulu to offer quality e-learning, that is competitive with its peer institutions and responsive to the needs of its users.	Gain a better understanding of the competitive and collaborative e-learning environments of our peer institutions	Year one and ongoing

Inventory and monitor e-Learning procedures and policies | Evaluate findings to determine whether Unizulu's e-learning offerings are on par with that of peer institutions. |
| | | Develop and support policies and procedures that are conducive to offering quality, credit- based e-learning offerings | Year one Resolve e-learning issues through policy and procedural solutions using collaborative processes involving many factions of the academic community | Number of issues resolved

Survey of user perception on improvements to the system |
| | | | Year one

Ensure quality in new modes of delivery through QA curricular oversight of | Student satisfaction

Growth in enrollment |

				credit-based, e-learning offerings	
				Year one Recommendation to Library and Vice Rector to clarify and revise intellectual property (IP) policy issues on ownership of online content and courses	Revised IP policy in place by predetermined date
				Year two Implement and widely disseminate IP policy	Number of instructors aware of and satisfied with new policy Increased number of instructors submitting content to online environments Number of successful revenue sharing partnerships
				Year two Advocate for a faculty academic reward system that encourages integrating educational technology into teaching, research and outreach	Number of faculty e-learning users who are tenured and promoted Student evaluations

3.4. CRITICAL SUCCESS FACTOR 4: Student access to e-learning resources and support

Research indicates that easily accessible student services are one of the most important components of a successful learning programme. Unizulu student support services are ad hoc and sometimes unreachable, especially for part time students and students studying at other campuses. The support services are difficult to locate, not available beyond standard work hours and may not be Web-enabled. Unizulu lacks:

- A single point of presence to funnel all e-learning requests and services comprising a call center and a customizable portal or gateway to virtually link the university's resources in one place that is accessible anywhere and anytime.
- Social services for students who do not physically come to campus, but still require health care information, career and academic advising, access to a virtual bookstore and library materials and social interaction with other online peers.

While the academic community has excellent access to published materials through the Eastern Seaboard Association of Libraries, Unizulu's online library system, it lacks coordinated access to unpublished institutional data, information, and knowledge. An innovative Knowledge Bank Network project, designed to embrace the University's vast amount of published and unpublished data, information and knowledge into a usable and accessible enterprise-wide system has great promise, and should be further investigated.

CRITICAL SUCCESS FACTOR 4: Student access to e-learning resources and support

Goal	Desired Outcome	Objectives	Tasks	Metrics
Provide and coordinate student access to e-learning and other institutional knowledge resources	Students taking courses at Unizulu will have one- stop access to services and resources regardless of whether they come to campus or access the university at a distance	Initiate an end-to-end solution for developing and delivering e-learning courses, programmes and/or degrees	Year one Inventory campus e-Learning services and resources provided.	Survey to evaluate student and faculty satisfaction
			Year two Realign campus e- Learning services and resources when and where appropriate to support seamless access to courses	Better use of resources dedicated to e-learning across the system

			Year two Collaborate with Top Management to streamline administrative and student support procedures	User satisfaction surveys Number of users
			Year two Develop and implement online orientation programme for distance learners Investigate and implement best practices for assessment	User satisfaction surveys Feedback from assessments
		Create a point of presence online portal for Unizulu's e-learning offerings	Year one Redesign the e-learning Website to work towards a single, web-based, point of presence for online course listings and student, faculty and staff support	Survey of users perception of ease of use and ability to locate resources Number of hits
			Year two Expand the e-learning Website into a robust and customizable portal linking e-learning services across campus and the regional campuses	Survey of users perception of ease of use and ability to locate resources Number of hits Demonstrated excellent service levels and

			increased user satisfaction
		Coordinate with existing student services to build a user-friendly, student service web presence to meet the needs of remote learners	
	Provide remote students with support structure similar to their resident counterparts	Year one Pilot the expansion of the ICT Help Desk to add a E-learning Call Centre with an online student services component	Review of pilot evaluation with decision to build or outsource
		Year two Establish a e-learning Call Center (in-house or outsourced) to address general information requests and technological, academic, and student service issues	Demonstrated excellent service levels and increased user satisfaction Increased student use and enrollments with less attrition Lower user service costs Increased visibility in market
	Increase the number of Unizulu courses listed in Unizulu's LMS and the number of students enrolled	Year one In collaboration with ICT and ELU, devise a method to track, update and report e-learning statistics and activity to HEQC	HEQC requirements satisfactorily met Improved accounting of e-Learning activity Number of courses listed in LMS

				Number of new students enrolled in Unizulu's listed e-learning courses/programmes
		Partner with the University Libraries and others to create and manage a nationally recognized institutional knowledge repository	Year two Provide academic community with training and support to build and access learning object collections Expand breadth and usage of the repository	Number of community members trained and perceived quality of training and support Number of objects submitted and number of hits Survey of user satisfaction National visibility

3.5. CRITICAL SUCCESS FACTOR 5: A technology infrastructure to support an e-learning enterprise

The functional requirements of an e-learning operation necessitate the investment in multiple technology solutions and skilled support personnel to run them. Examples include a course management system, a streaming video infrastructure and a content- management repository. These solutions must be periodically upgraded and staff must be trained so that they can keep current with the constantly changing technology. Unizulu has already made investments in technology solutions which could potentially address some functional requirements. However, formal evaluation and additional investments need to be made in coordination with the faculties. This is especially true as faculty, staff and students request more technology support for delivering non credit courses, conducting research, using rich media, and facilitating student interaction.

CRITICAL SUCCESS FACTOR 5: A technology infrastructure to support an e-learning enterprise

| Goal	Desired	Objectives	Tasks	Metrics

	Outcome			
Provide Unizulu's academic and research community with the technology infrastructure to support access to easy to use, Web-enabled e-learning productivity tools and services	Unizulu's academic community will have the computing power and infrastructure required to support a broad spectrum of educational technology methodologies and practices	Provide faculty and students with technologies that support and extend teaching and learning	Year one Establish a multimedia lab for use in training and supplying services to staff Provide scalable, robust and reliable academic systems infrastructure to train staff	Poll users to define needs Evaluate user feedback Number of trained staff
		Provide seamless and quality course management support for Unizulu's credit and non-credit courses and programmes	Year one Lead a formal, system wide evaluation of enterprise-level learning management systems (in progress) Select best solution and implement installation Provide migration paths and training	Evaluate responses gathered from formal evaluation and weigh against available human and fiscal resources Number of new system users (instructors and students) Survey users to determine quality of service
			Year one Pilot process to extend use of the learning management system (Moodle) to noncredit offerings Develop cost recovery model	Number of requests for service Survey instructor and student satisfaction with process
			Year two If feasible,	Number of units using service

			support noncredit courses within LMS structure	Model covers costs of supplying service

4. Governance Plan

4.1. Organization

The central e-learning organization described in this document is composed of three functional clusters: Business Services, Design and Delivery and Support. The organization mirrors the major activities that make up the e-learning "supply chain" and comprises programme planning, product design, development and assessment and user support. The staff report to the Director: E-learning. An advisory committee reports to the Rector with a dotted reporting line to the director ICT. The organization is built on the premise that it will be able to closely interface with existing units within the Office of the CFO and the university.
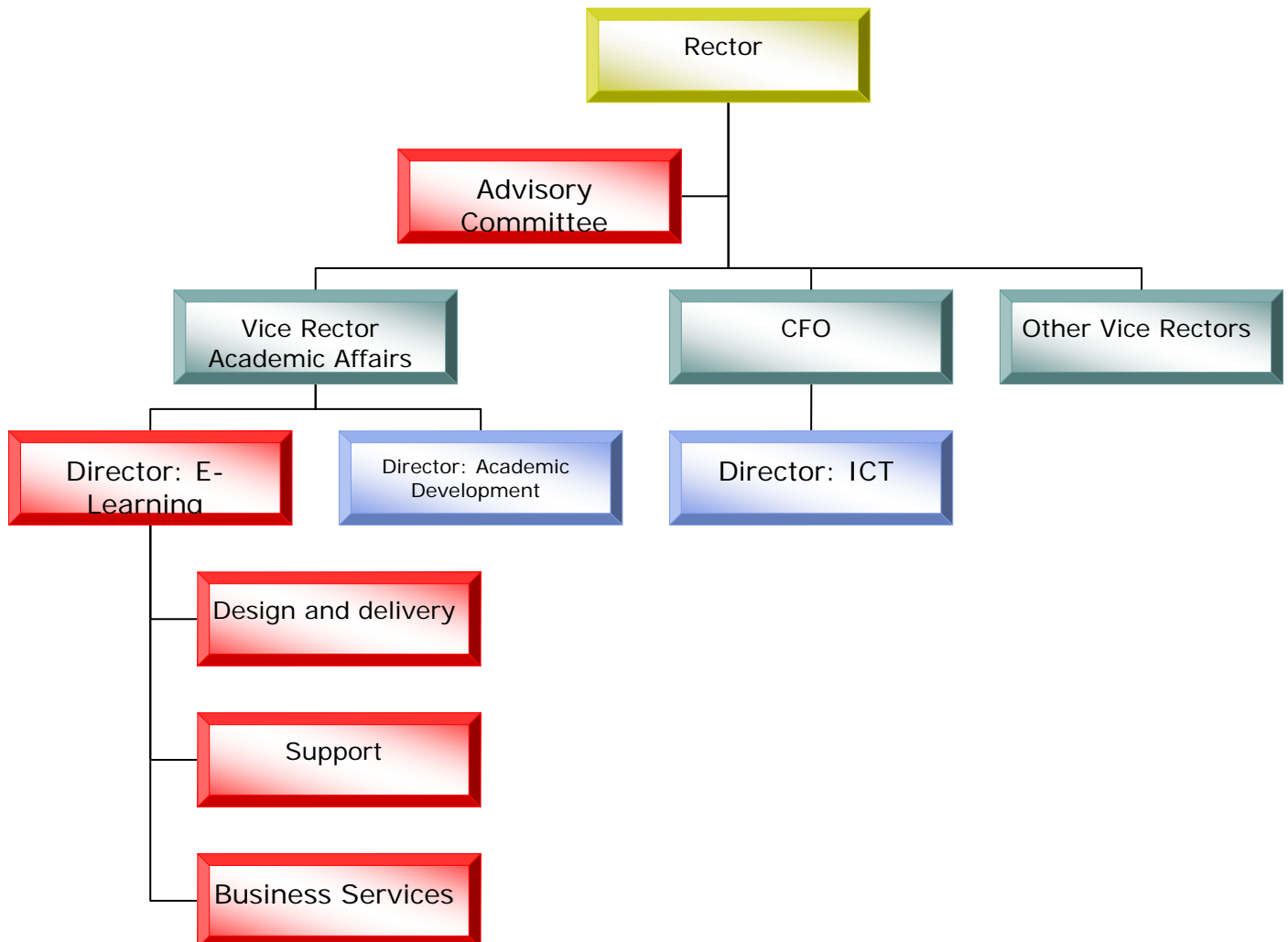
Threats, Risks and Mitigating Actions

Implementing a centralized e-learning support service does not come without associated threats and risks. These generally fall into three categories: Financial, Pragmatic and Infrastructure. What follows is a table delineating the threats and risks paired with solutions for addressing them.

	Threats and Risks	Mitigating Actions
Financial	Loss of revenue due to misjudged market and programme expenses	Provide market analysis, business planning, and financial forecasting in order to better understand the cost of entering the market
	Escalating programme development and technology costs	Phase in the implementation strategy based on financial forecasting Build or join consortia to create economies of scale when negotiating with vendors
	Unplanned costs of maintaining equipment	Devise a mechanism to ensure cyclic, rate-funded renewal and replacement of technology assets
	Lack of funding for new, critical, student-oriented support functions	Place and finance student-oriented support functions apart from instruction and content delivery
Pragmatic	Student dissatisfaction and withdrawal from courses/programme	Provide technology literacy options for resident students and suite of student support and social services for remote students Constantly survey stakeholders to collect feedback on existing services to better understand needs Conduct exit interviews with students who withdraw from programmes

	Plan not supported by deans	Canvass deans regularly for input. Design programmes to meet their needs Work closely with university's IT staff to complement their efforts Provide clearly defined ROI	
	Lack of faculty interest in using e-learning	Provide better conduits for communication Provide faculty incentives with clearly defined ROI	
	Faculty resistance to change in academic culture and mission. E- Learning is perceived as threatening or as an add-on to existing structures and not as a new way of teaching and learning	Educate faculty and administrators by working one-on-one and customizing training and support to meet their discipline-specific needs Work with cohort groups of faculty Collect and share best practices Provide meaningful faculty incentives	
	Lack of student interest in using e-learning	Invest in communication, public relations, and marketing services to promote Unizulu's educational brand	
Infrastructure	Insufficient technical infrastructure	Value e-learning as a mission critical-operation and support accordingly.	
	Equipment failures	Run redundant operations Hire or realign talented staff Manage expectations Infrastructure	

	Inability of technology to scale to Unizulu's needs	Carefully evaluate technical specifications prior to purchase
		Communicate with user groups and peer institutions

4.2. Rewards

The rewards for implementing this e-learning implementation strategy plan are numerous and directly affect the entire university community and learners within KZN and beyond. The first and foremost reward is that this plan supports and advances many of the statements proposed by Unizulu's Vision and Mission. The Mission state's that:

The University of Zululand is a comprehensive institution which is set:

a. To provide access to students from diverse backgrounds to an enabling and caring teaching and learning environment.

b. To provide relevant quality education which integrates career preparatory, and general academic programme offerings and research, which are responsive to the development needs of society.

c. To generate knowledge through appropriate research and disseminate it through publications, teaching and development, in partnership with the local and international communities.

d. To produce knowledgeable undergraduate and postgraduate students characterized by an impeccable character and displaying good citizenship.

The rewards associated align directly with the Mission in three distinct ways: 1) improving learning and the reach of education; 2) improving access to knowledge; and 3) increasing Unizulu's prestige and visibility in the research community

Improving Learning and the Reach of Education

Implementing this e-learning strategy will increase Unizulu's ability to deliver technology-enriched education programmes in classrooms and online. This unit is tasked with meeting the needs of its student clientele by working towards enabling technology to improve learning, and ultimately, the quality of a Unizulu student's education. Technology used for its inherent capabilities of increasing interaction, providing anytime access to credible data, information and knowledge, and delivering educational content using multimedia modalities, has the

potential to inspire students to become curious, disciplined, and passionate about learning. When attention is paid to matching instructional strategies with meaningful technology delivery solutions, students benefit from engaging learning environments customized to meet their particular learning styles. Programmes can be custom-designed around the needs and interests of the recipient instead of around the scheduling and resource needs of the provider.

Online technology pushes pedagogy to the forefront. Faculty, students, instructional designers, and other practitioners are using a number of new information technologies to improve learning outcomes, create new models, and place more responsibility for learning on the learners themselves. Furthermore, students who use educational technology are more apt to be information literate and thus are better prepared for meeting competitive career and/or advanced degree requirements. Technology can also leverage research into the learning environment and introduce students to higher order thinking earlier in their academic careers. In addition, students with special needs are better served if they have access to adaptive technologies and alternative course offerings.

Lastly, offering online sections of select over-enrolled introductory courses can alleviate the perpetual problem resident students have with closed sections or over-full venues. This can improve graduation rates and reduce attrition, along with expanding capacity to meet expected growth in enrolments.

Improving Access to Knowledge

It is no longer necessary for educational programmes to be built around the assumption that students and teachers must meet face-to-face as a group for learning to take place – broadband telecommunications allows learners successfully to share virtual space as well as physical space. E-learning opens up new markets for students who want to access Unizulu's offerings from a distance at times convenient to their varied lifestyles and busy schedules. This is a relatively untapped market for Unizulu and it spans a broad and diverse audience. High school students could prepare for successful transitions into Unizulu by taking online versions of university-level or advance placement courses that would aid in first year retention rates and attract top students from across the country. Adult learners could overcome geographical barriers to higher education by enrolling in flexible graduate and professional degree programmes that do not dislocate them from work and home. Employers already make use of Unizulu's Institute for Local Government services by contracting with the University to deliver corporate training and workTeam development. As more and more jobs demand higher levels of education, this need will grow. In addition, the University can reach out to its alumni and offer programmes that meet professional and personal growth goals, ultimately fostering better relationships and loyalties with the university.

Both resident and remote students will be rewarded with better access to the University's e-Learning offerings and support services through a single point-of- presence portal. This virtual consolidation of online e-learning services will alleviate confusion about where faculty, staff and students and external users go for information and support.

The campus community also will benefit from a realigned centralized e-learning unit that can offer a better coordinated and a higher quality level of service and support. The University benefits from using its resources more effectively and taking advantage of economies of scale.

Lastly, as the initiative to maximize the intellectual capital of Unizulu's academic community

moves forward, access to quality course content will grow. Unizulu's constituents will not only have access to http://elearn.uzulu.ac.za vast collection of published materials, but to the Unizulu Knowledge Bank's collections of text and rich media, course materials and learning objects. Faculty who submit, access, preserve, and share educational content are better prepared to integrate technology into teaching and learning. They can build engaging and interactive learning experiences using multimedia and streaming video to complement text-based content and learning objects. They also are better positioned to use the inherent capabilities of technology to leverage their research into the learning environment, which translates into higher order learning experiences for Unizulu students.

Increasing Unizulu's Prestige and Visibility

The Mission stresses the need to be a leader in all areas of teaching, research, and outreach and community engagement. Although this e-learning strategy does not make recommendations for a spin-off, degree-granting online entity, it does recommend a coordinated e-learning strategy that will improve the competence, confidence, and effectiveness of its faculty. By focusing e-learning offerings, support and services in a single point of presence, Unizulu will build a brand identity that will increase its prestige and visibility amongst its benchmark peers. Unizulu will be known for high-quality online education directed towards niche markets of proven need. Unizulu also benefits by serving as good stewards of the outreach and engagement mission because it has wisely invested in using technology to extend programmes to reach a broader Umhlathuze citizens.

5. Financial Implications

5.1. Revenue

As previously discussed, e-learning is a growing market; however, it has proven not to be the revenue enhancement that some academic administrators imagined. It is very expensive and time consuming to develop high-quality, media-rich, interactive learning experiences that must be competitively priced in order to attract savvy education shoppers. As a result, few virtual universities have turned a profit and many have closed down or have been merged back into the academic fray. Since the courses are online, competition is no longer the institution 20 kilometres away, but the world. In today's environment, the universities that are most successful in offering full spectrum e-learning solutions choose to expand access to quality education for both its resident and remote audiences, not solely to make money. However, successful implementation of technology-enhanced knowledge dissemination relies on the university's ability to explore and implement new and innovative funding and revenue models. Although resources are becoming scarce, this is a time when higher education needs to invest more not less in technology to provide quality education to students, to pursue national and local priorities, and to achieve desires efficiencies.

The budget requested for this implementation strategy is for a transitional investment to build and staff the central e-learning Unit, which, in turn, will work with its advisory committee to identify and solicit additional funds to roll out a complete solution.

5.2. Projected Costs

Many of the tasks listed in the "Implementation Plan" section of this report do not require new money, but the commitment of knowledge, time and energy of dedicated educational and information technology staff. Others do have funding obligations requiring both rate and cash allocations. The budget items directly align with the tasks required to meet the previously stated goals, outcomes and objectives. A budget would reflect what it would take to launch a centralized unit to support the full spectrum of e-learning activities. However, the use of educational technology is heavily weighted towards supporting supplemental and blended environments used by the approximately 13,000 students on campus, not the limited number of students accessing Unizulu's resources at a distance.

Funding sources might include additional reallocations within ICT, human and financial resources from realignment of units within the University (as recommended by the E-learning Task Team), the Office of Academic Affairs, and the University and Richards Bay campus. External funds to support equipment, research and development and faculty and staff support could be solicited from the Department of Education, allocations, grants, vendor partnerships, and possibly capital requests and debt financing.

Appendix 1

Tasks and Time lines (Still to be filled in when approved by senate)

Tasks	2010 T1	2010 T2	2010 T3	2010 T4	2011 T1	2011 T2	2011 T3	2011 T4
CSF 1								
Establish e-Learn Unit								
Canvass deans and IT professionals to determine which centralized services best meet their needs								
Move Academic Support, e-learning unit, Quality assurance and ICT services physically closer under same roof.								
Establish an advisory committee and to provide direction and refine procedures, policies, mission, goals and objectives								
CSF 2								
Obtain approval from Rector for implementation plan and budget that adds human and financial resources to advance strategic e-learning initiatives								
Formalize a "brokering" programme with academic units for the purpose of soliciting and attracting multidisciplinary and collaborative external funding and support (NUFFIC and others) (in progress and on going)								
Establish an incentive programme to provide instructors and instructional developers with the knowledge and support to advance instructional technology strategies								
Replicate Unizulu's Teaching Excellence Lecturer Awards for Course Design or Redesign								
Support and pilot new and emerging educational methodologies and technologies under the UJ initiative								
Work with HR to provide career								

advancement opportunities								
Coordinate professional development and training opportunities								
CSF 3								
Inventory and monitor e- Learning procedures and policies								
Resolve e-learning issues through policy and procedural solutions using collaborative processes involving many factions of the academic community								
Ensure quality in new modes of delivery through QA curricular oversight of credit-based, e-learning offerings								
Recommendation to Library and Vice Rector (Academic) to clarify and revise intellectual property (IP) policy issues on ownership of online content and courses								
Implement and widely disseminate IP policy								
Advocate for a faculty academic reward system that encourages integrating educational technology into teaching, research and outreach								
CSF 4								
Inventory campus e- Learning services and resources provided								
Realign campus e- Learning services and resources when and where appropriate to support seamless access to courses								
Collaborate with Rectorate to streamline administrative and student support procedures								
Develop and implement online orientation programme for e-learners								
Investigate and implement best practices for assessment								
Redesign the e-learning Website to work towards a single, web-based, point of presence for online course listings and student, faculty and staff support								

Expand the elearn Website into a robust and customizable portal linking e-learning services across campus and the regional campuses									
Coordinate with existing student services to build a user-friendly, student service web presence to meet the needs of remote learners									
Pilot the expansion of the ICT Help Desk to add a E-learning Call Centre with an online student services component									
Establish a E-learning Call Centre (in- house or outsourced) to address general information requests and technological, academic, and student service issues									
In collaboration with ICT and ELU, devise a method to track, update and report e-learning statistics and activity to HEQC									
Provide academic community with training and support to build and access learning object collections									
Expand breadth and usage of the repository									
CSF 5									
Establish a multimedia lab for use in training and supplying services to staff									
Provide scalable, robust and reliable academic systems infrastructure to train staff in using LMS, pedagogy and best practice models									
Lead a formal, system wide evaluation of enterprise-level LMS									
Select best solution and implement installation (Done)									
Provide migration paths and training (In Progress)									
Pilot process to extend use of the LMS to noncredit offerings									
Develop cost recovery model									
If feasible, support noncredit courses within LMS structure									