

# SHOW-CASING INDICATORS TO A CHANGING ORGANIZATIONAL CULTURE THROUGH THE DEVELOPMENT OF AN INTEGRATED ELEARNING MODEL: INDICATIONS OF A CHANGING ORGANISATIONAL CULTURE AT THE UNIVERSITY OF THE WESTERN CAPE (UWC)

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## **Abstract**

*The adoption of technology to enhance teaching and learning in Higher Education Institutions (HEIs) has resulted in institutions having to contend with dynamic changes emanating from the increasing demands to change and improve upon the traditional modes of instruction. This has put pressure on HEIs to implement organisational cultural changes as they seek to incorporate technology in their teaching and learning discourses. The place of models within the education discourse has been more pronounced in recent years in response to the increasing call for practitioners to deliver quality education. The principal thrust of this paper therefore is to highlight the main developmental phases towards the creation of an integrated eLearning model as it seeks to influence organisational cultural change within a case-study of HEI learning environment at the University of the Western Cape for the period September 2005 – October 2011. It is a challenge to move an organisation, particularly a large organisation, and if there isn't a sense of common direction, one will find a lack of focus (Claret, 2006, p.2). Strategic plans are often associated with transitions in leadership or the attainment of certain milestones (Claret, 2006, p.3). This has been an accumulative exercise at the start of the E-learning Awareness Campaign. Accordingly the replication of such a model would also enhance exchange of ideas as HE practitioners continuously seek to improve the success rate of eLearning implementation.*

**Key words:** *eLearning, ePedagogy, indicators, integrated model, organisational culture.*

## **Introduction**

In its broadest sense, eLearning is the use of any electronic technology to facilitate student learning, such as wikis (Lamb, 2004:11), mobile technologies (Naismith, Lonsdale, Vavoula & Sharples, 2004, p.55) and gaming (Kirriemuir & McFarlane, 2004, p.41). However, when higher education institutions refer to the adoption of eLearning, they are generally referring to making existing course content available online, involving asynchronous activities – students access material in their own time and interact with teachers or other students while doing so (Bromham & Oprandi, 2006,p.21).

eLearning is a topical trend but the fundamental pedagogical principles have not been incorporated (Bixler & Spotts, 2000 in Govindasamy, 2002, p.289). There is lack of teaching and guiding principles for designing and developing pedagogical sound eLearning material (Alonso; Lopez; Manrique & Vines, 2005, p.218). The online creation model (figure 1) highlights the need for ePedagogy training and support in a growing eLearning environment, highlighting a viable instructional design process that should be followed carefully to ensure adherence to a pedagogically sound teaching-and-learning methodology. eLearning adoption is approached from the information systems acceptance point of view and this suggests that a prior condition for learning effectively using eLearning systems is that students must actually use them (Abbad; Morris, & de Nahlik, 2009, p.1). Thus, a greater knowledge of the factors that affect IT adoption and their interrelationships is a pre-cursor to a better understanding of student acceptance of eLearning systems, which in turn helps and guides those who develop, implement, and deliver eLearning systems (Carswell & Venkatesh, 2002, p.477).

eLearning should only be adopted where it will substantially add to student experience (or significantly reduce costs, in terms of staff time or other resources, without inhibiting student experience (Bromham, & Oprandi, 2006, p.23). To achieve this, eLearning should not simply replace or duplicate existing course material, but act in combination with other teaching methods through a strategy of 'blended learning' (Carswell & Venkatesh, 2002, p. 477). An examination of the benefits of different teaching delivery methods can lead to a combination of online and face-to-face teaching methods, in order to get the best of all possible worlds (Lamb, 2004, p.12). An added benefit of this approach is that it lends itself to a diversity of learning styles, and allows students to benefit from a multi-faceted education (Carman, 2002; Murphy, 2003; Young, 2002). In particular, eLearning tools have the potential to encourage student-directed learning (Abbad; Morris & de Nahlik, 2009). Unlike a large face-to-face class, online activities generally allow students to undertake tasks at their own pace; in a time and place that suits them. Moreover, interactive eLearning tools provide the means for students to "be in control of their learning experience and should have the capability to modify and abstract their personal learning" (Abbad; Morris & de Nahlik, 2009).

Higher education reform cannot take place without addressing Information Communication Technology (ICT) issues, which applies to applications in education management and administration, and those which provide access to knowledge in support of teaching, research, and lifelong learning (Nwuke, 2001). The transformation of higher education institutions (HEIs) in response to a wave of education sector reforms is integrally related to the promise of ICTs in teaching, research, and learning (Adam, 2003). This article highlights the importance of integrated curriculum design in order for eLearning to become an integral part of the teaching-and-learning curriculum across all programmes of the institution. A viable integrated eLearning model that encompasses people development processes and organisational issues is developed and presented. There is also need to establish the role of models in education.

### **The Role of Models in Education**

Models help to expose teachers and learners to the practicalities of teaching and learning. Models are important in scientific research both in formulating hypotheses to be tested and in describing scientific phenomena (Gilbert, 1995). Models also present an alternative way of looking at and undertaking learning tasks. At present, models and modelling are considered integral parts of scientific literacy (Gilbert & Boulter 1998; Gilbert, 1991; Gilbert, 1993; Linn & Muilenberg 1996; Perkins 1986). With the recognised importance of models in science education come the need for a theory of model-based learning and teaching. Consequently, the value of models and modelling to traditional scientific research has been well documented (Black, 1962). Gilbert (1993) defines a model as a simplified representation of a system, which

concentrates attention on specific aspects of the system. Moreover, models enable aspects of the system, i.e., objects, events, or ideas which are either complex, or on a different scale to that which is normally perceived, or abstract to be rendered either visible or more readily visible (Gilbert, 1995). Applied in the education sector, model-based teaching is any implementation that brings together information resources, learning activities, and instructional strategies intended to facilitate mental model-building both in individuals and among groups of learners.

### **Contextualisation (Organisational Culture)**

The objective of coming up with the E-Learning Development and Support Unit (EDSU) at the University of the Western Cape (UWC) in 2005 was to drive the ‘eLearning awareness campaign’ recognising the importance of UWC staff perceptions of the Open Source eLearning system, which was seen as an ‘experimental, second-grade system’ that had not been quality assured. The institutional reality facing EDSU at that time was marketing and driving eLearning within a resistant environment where there was a strong sponsorship for Free and Open Source Software (FOSS). Lecturer resistance to the adoption of eLearning partly arose from their association of eLearning with the Marks Administration System (MAS) which had been built into the eLearning system; and from their perspective the platform had not delivered in the past. This home-grown, integrated eLearning and MAS platform was referred to as the ‘old KEWL’ (Knowledge Environment for Web-based Learning) system. Interestingly, this is supported by the Organisation of Economic Co-operation and Development (OECD)’s report (2005) on ICT in tertiary education which found out that “ICT has penetrated tertiary education, but has had more impact on administrative services (e.g. admissions, registration, fee payment, purchasing)” than on the pedagogic fundamentals of the classroom” (OECD, 2005).

Resistance probably had deeper roots, however. White (2007) suggests that because higher education institutions (HEIs) are resistant to change, educational technology in universities has not managed to match the ubiquity of technology in everyday life. Moreover, eLearning brings about considerable change and reorganisation in the institution, a “disturbance of the status quo, a threat to people’s vested interests in their jobs, and an upset to the established way of doing things” (Kotter & Schelesinger, 2008, p.130).

### **Methodology of Research**

The methodology for this paper involving data collection instruments, processes and participants is provided in the Appendix section at the end of this paper. The data collection process was undertaken in 3 phases (see Appendix below). Primarily interviews and questionnaires were used in the data collection process for the subsequent development of an *Integrated eLearning model* which was undertaken in three phases as indicated in each phase below. A cumulative total of 971 participants were purposively targeted for all the phases, of which 563 responded. The participants were drawn from various stakeholder groups from all sections of the university population in order to attend some level of validity. Hence the target groups included academics; eLearning and IT support staff, institutional leaders and students within the University of the Western Cape (UWC). Additionally, eLearning experts and consultants in other HEIs in South Africa were also incorporated into the research. All these cited participants were either interviewed or presented with questionnaires to ascertain their level of understanding and preparedness of eLearning implementation; as well as the role of eLearning in enhancing teaching and learning in Higher Education. Below is a synopsis of the instruments, procedures and processes involved in the data collection process is given as follows:

### *Questionnaires*

**Phase 1** involved an exploration of relevant literature on factors affecting the adoption of technology in teaching and learning. In **phase 2** an email questionnaire survey was administered and was targeted at a total sample of 144 lecturers of which 31 responded. In addition, stakeholder interviews (see stakeholder group below) were conducted and these were targeted at 51 participants of which 39 responded.

### *Interviews*

In **phase 3** a cumulative total of 560 academics and students were interviewed. Of these, 42 academics and 429 students responded, giving a total of 471 cumulative responses. Academics are in a position to ‘make or break’ any eLearning initiatives, which inevitably impact on the successful implementation of eLearning, hence their incorporation into the research. The researcher sought to determine the attitudes and mindsets of the academics regarding eLearning implementation to supplement their teaching methods.

### *Sample and Sampling Procedures*

An inclusive sample across the campus community was purposively adopted and involved various players (herein referred to as stakeholders) mandated with the implementation of eLearning in teaching and learning at institutional level. The participants were purposively selected to provide an insight into factors that influence the adoption of eLearning. Various stakeholders that were targeted included *institutional leaders* as institutional policy formulators on the most appropriate mode of instruction within the institution; *IT back-end support staff and eLearning system developers* as drivers of sustainable infrastructural development and back-up support. The developers had been credited for the development of the institution’s home-grown eLearning system under the auspices of the Free Software Innovation Unit (FSIU) of the institution. Additionally *eLearning support staff (front-end)* were also included among the sample of participants in the study as the key-drivers of eLearning in the institution, especially given their hands-on experience in the engagement and communication with institutional academics.

*The academics* were incorporated as participants to the study, taking cognisance of the fact that they have access to the students who are at the core of teaching and learning in the institution. In sampling from this group the researcher sought to determine the attitudes and mindsets of the academics regarding eLearning implementation to supplement their teaching methods. At the time of the deployment of this study, eLearning has not been a mandatory means of teaching in the institution, thus the academics would still be in a position of ‘power’, especially in terms of students only having access to the Learning Management System (LMS) and its eTools when the lecturer/academic decides to engage in any eLearning initiatives. To complement the sample drawn from the institution, the researcher sought a diversified opinion by incorporating participants from other HEIs in South Africa, notably *eLearning experts and consultants in other HEIs* in South Africa who are at the forefront of eLearning initiatives at their specific institutions, especially in terms of driving eLearning initiatives for the past ten years; and the use and application of eTools within LMSs, both Open Source and Proprietary systems. Lastly, *students* within the institution across all Faculties were also roped into the study, taking cognisance of the fact that they only have access to online environments if their lecturers have created an online class for a specific discipline and module.

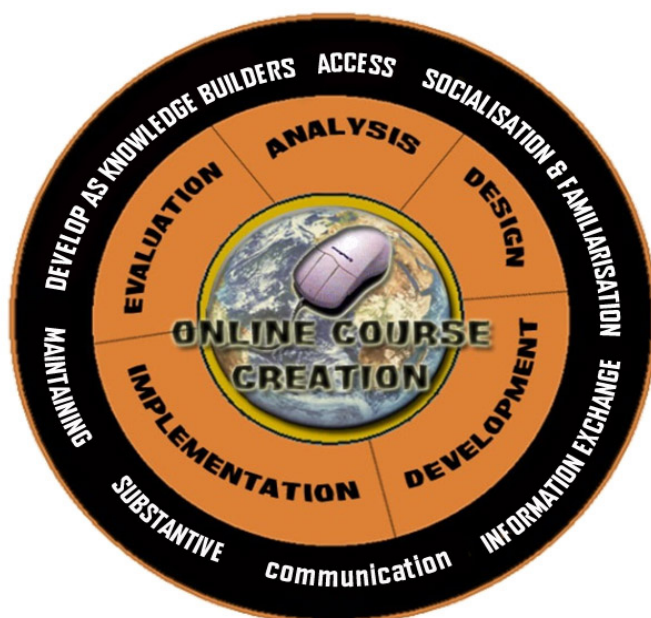
## Discussion and development of the creation of an *Integrated eLearning Model*

The creation of an *Integrated eLearning Model* was conducted in three developmental phases, each of which was a progression of and a build-up from the previous one. As a result, below are the three phases which culminated in the creation of the *Integrated eLearning Model* (Figure 3).

### Phase 1: Development of the Online Course Creation Model

This developmental phase was initiated in September 2005 and was a highlight of the establishment of the E-Learning Development and Support Unit (EDSU) as an illustration of organisational change to support eLearning across the whole university characterised by limited resources and insufficient human capacity. The establishment of an integrated eLearning support unit is indicative of the provision of a “blue print for designing organisations, fitting the pieces of the organisation together to guide the behaviour of the people - often large numbers of people - toward the accomplishment of the organisation’s objectives” (Bradach, 1996, p.1).

This phase was mostly theory grounded drawing from relevant literature and the institutional eLearning strategy document. A **strategic plan identifies the strengths and weaknesses**, while providing a road map as to where an organisation is going (Moody, 2009). This phase led to the development of an initial eLearning model; namely an *Online Course Creation* (see figure 1) model which entailed a blended ePedagogy training approach for lecturers (and tutors) to empower them to take control and ownership of their eLearning experiences, as well as enhance their computer literacy skills. This is in line with White’s (2007, p. 844) argument that public awareness is vital to fostering community ownership.



**Figure 1: Online Course creation (Stoltenkamp, 2007).**

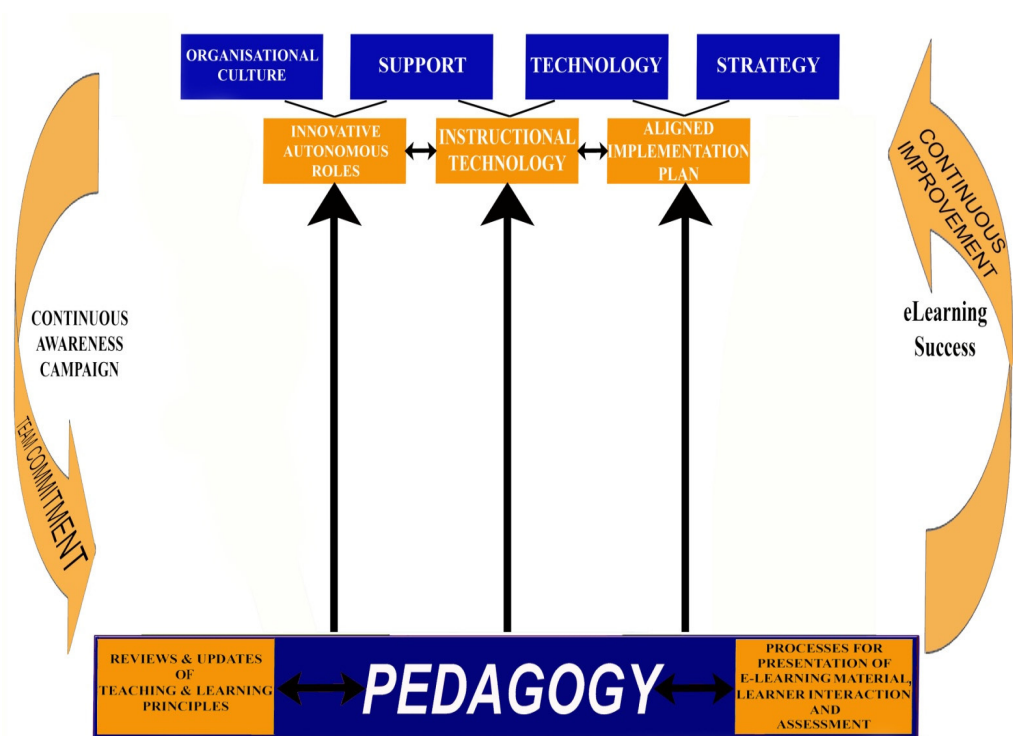
The model, Figure 1 above, presents the five stages of the generic Instructional Design (ADDIE) model, coinciding and linking with the stages deliberated by the work of Salmon (2004) regarding online teaching-and-learning (e-moderation). Moreover, the model highlights the vital commitment of an integrated support structure, whereby the lecturer/facilitator/e-

moderator/tutor and eLearning support team jointly take ownership of the implementation of interactive online course creation.

### Phase 2: Development of the Online Course Creation Model

Phase 2 was a build-up of the previous phase and highlighted an e-learning implementation beyond the focus of the delivery of training programmes; with emphasis on an awareness campaign that would familiarise educators with the eLearning support team; the various communication, content creation and assessment eTools; and their pedagogical value.

Questionnaires were sent out to and interviews conducted with stakeholder groups (refer to Appendix). Responses from these groups were identified which showed that eLearning implementation in a complex higher education domain, in goes beyond just focusing on ePedagogy applied to effective online course creation. This led to the development of a revised eLearning Model, which is an improvement and inclusion of the initial eLearning model. Hence a revised *Infused ePedagogy model* (see figure 2 below) was developed based on findings from phase 1 and responses from phase 2.



**Figure 2: An Infused ePedagogy model.**

‘Good teaching-and-learning’ principles are fundamental for successful eLearning adoption and implementation. Most pedagogical principles of the traditional classroom pertain to eLearning, but these however have to be comprehensive to adapt and advise for the quick technological changes (Govindasamy, 2002, p.288). There is a need for all-inclusive, infused approaches which include valuable learning principles based on empirical research and mostly autonomous of the eLearning programme (Bixler & Spotts, 2000).

### Phase 3: Development of the *Integrated eLearning Model*

Phase 2 opened up further gaps as expressed by lecturers and students in their responses to questionnaires and interviews, as discussed in the derived themes below:

- Lecturer's involvement; need for enhanced ePedagogy skills and incentives;
- Increasing blended eLearning practices; and attainment of skills/eSkills in other areas related to their expertise;
- Change in eLearning discourse by academics during colloquiums
- Innovative marketing eLearning practices to enhance buy-in;
- Online communities of practices in an ever-changing 'borderless world';
- Accessibility and information skills;
- Sustainability approaches of eLearning support unit/s;
- Responsibility to evolving organic processes; eLearning team, lecturer and tutors engage in joint action research;
- Quality assurance: eLearning alignment to QA systems for the development of best practices.

Lecturers have engaged in more pro-active innovative roles within the institution thereby providing evidence of increased interaction with innovative eTools such as podcasts. There is an increased positive attitude to the adoption of eLearning by academics most of whom who have expressed the need for more ePedagogy as part of staff development self-enrichment. Some academics have supported the idea of rewarding online practices; with others having expressed the notion that what is important is not personal reward, rather for the betterment of both the lecturer and the students. Despite the unstable institutional eLearning platform, increasing numbers of lecturers have voluntarily contacted the eLearning support to assist them with the adoption of eLearning practices to enhance their face-to-face instruction, due to the effective change management strategies; especially regarding a support structure for two versions of the home-grown open source eLearning system. This enabled users to seamlessly migrate from one version to another, with the older version serving as a back-up system when crashes occurred in the newer version of the eLearning platform.

Public platform such as an annual eLearning colloquium has provided an opportunity for lecturers to share challenges and experiences related to the adoption of eLearning. This has resulted in change of discourse whereby lecturers focus more on discussions related to the ownership of online environment; and online teaching and learning practices rather than the actual open source system. Making use of the blog tool for an internal communication and marketing strategy also exposes the institution's practices to the global village- as the blog tool is an internet based communication tool where visitors are encouraged to share their best practices; respond and comment on the blogs, an example of which is cited below.



**Figure 3: Example of a marketing blog sent out to campus and global communities.**

The blog has been presented herein as an example of an eTool that enabled users to cross communication boundaries through online collaborative projects which enables them to reach out to communities in other countries by engaging in discussion forums; and other online communication and assessment tools meant to strengthen intellectual life of students and staff and to contribute to the integration into global community of practice. In addition to the big appeal for computers and computer-labs, accessibility goes beyond these to include necessary logistical support; as well as appropriate training for new technological innovations, that seemingly would make their work a lot easier; and supplement their existing teaching-and-learning practices. In response to changing needs the team has transformed to include other responsibilities, such as engaging in research in niche and innovative areas. This has changed the public perception of the unit which initially was regarded as only limited to providing training, but has shown that it holds capacity to engage in research (single or joint) projects in areas such as: implementation; eTools; ePedagogy; support and training; as well as publication through-put.

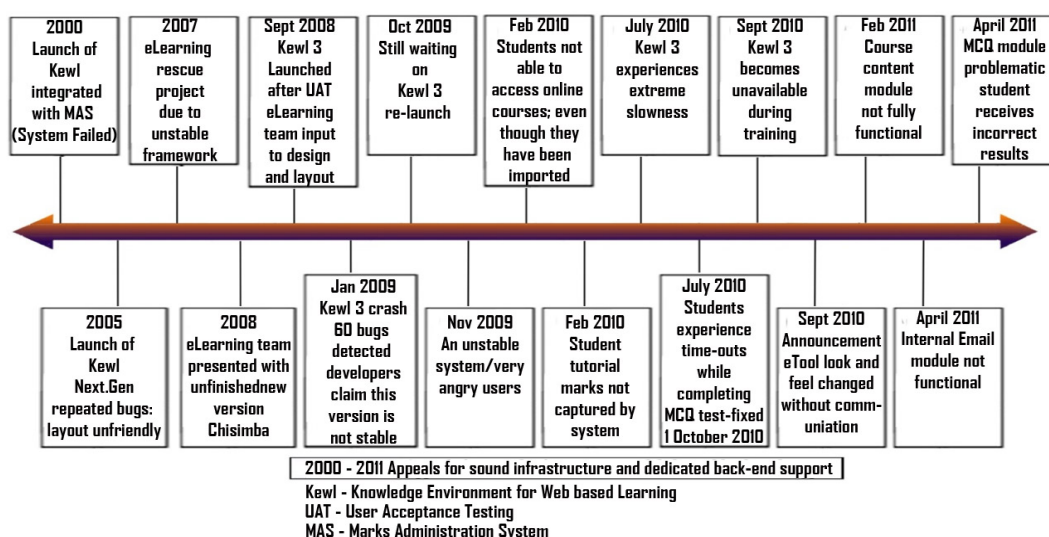
UWC has made collaborative efforts with other institutions with the African Virtual Open Initiative and Resources (AVOIR) Network, involving several higher education institutions—whereby developers across sixteen (16) institutions in Africa; North America, Europe and Kabul, Afghanistan contribute to the development of the software. Despite this network the UWC community did not perceive the home-grown Open Source Learning Management System (LMS) as part of a community of practice; hence they only alluded to the need of a stable system.

The issue of quality assurance has not been addressed adequately as participants did not view their eLearning efforts and practices as making a positive contribution to the broader HE education system which will enable the institution to apply methodologies and guidelines for the development of eLearning best practices in the institution.

Evidence of serious bugs in an unstable home-grown open source platform has presented



challenges towards the institution's efforts to market the eLearning system confidently to the users; especially the frustrated users within the institution. Reports on unstable home-grown eLearning system between (2000- 2011) and other infrastructural network and load issues add to the challenges faced hence the repeated appeals to the developers by the eLearning team, for a stable eLearning system.



**Figure 4: Appeals for sound infrastructure and dedicated back-end support.**

This continuum (time-line) does not present a critique of the open source platform, KEWL - but rather aims to outline amongst other things the significance of enabling mechanisms for sound ICT infrastructure and back-end support processes which a front-end support unit extensively depends on.

It was found that the themes address important factors which contribute to the successful implementation of eLearning. The main developmental stages towards the creation of a revised *integrated eLearning model* and how this had influenced organisational cultural change within a HE learning environment have been highlighted. A final *integrated eLearning model* was developed based on the processes deliberated in the previous phases involving; literature review; qualitative data retrieved from interviews and questionnaires; and supporting quantitative data retrieved from the actual case-study, eLearning adoption at the University of the Western Cape.

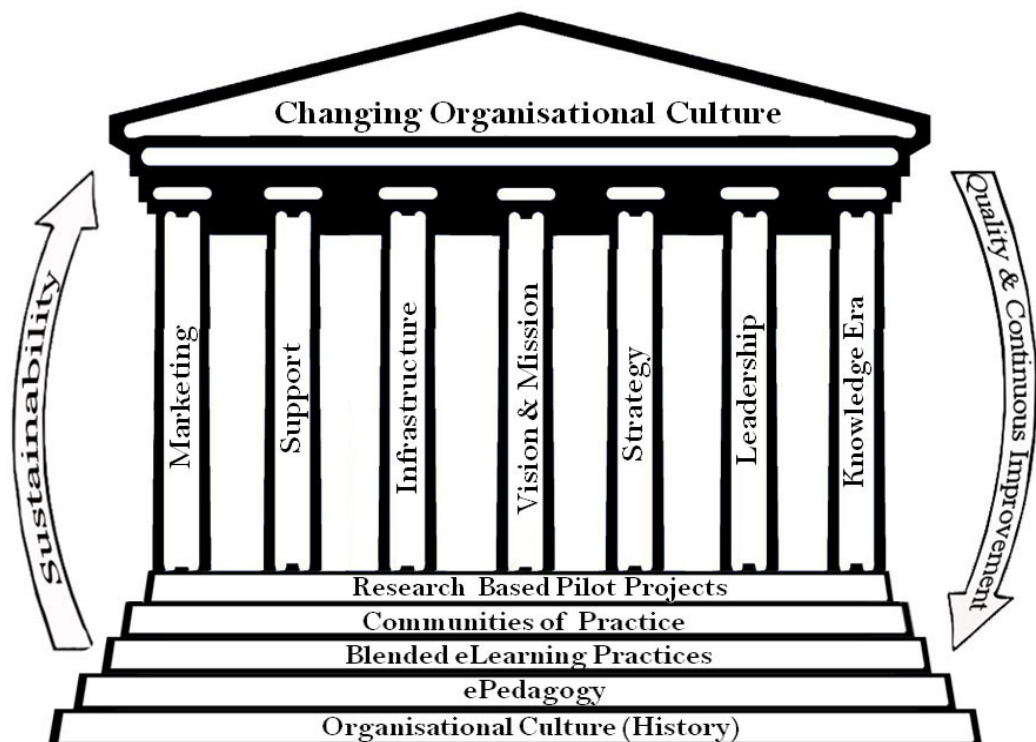
Statistical strides that show increased buy-in in the adoption of eLearning within the campus community. A cumulative total of 831 face-to-face interactions with lecturers seeking advice on the usage of eTools to supplement their teaching and learning practices (from 2005 to 2011); as well as a staggering 18517 student consultations during the same period were administered, with an average of 1544 per annum. This is a significant increase in the number of students seeking support from the eLearning Support team.

The usage of specific eTools by lecturers for teaching-and-learning practices reflects an increased preference for the content development tools. However, despite the eLearning team's continuous awareness of the discussion forum as a sound communication and assessment tool, a decrease in usage is reflected. Lecturers are engaged in the teaching of large classes and feel daunted by the administration and monitoring of the discussion topics. Hence they express the need for online tutor assistance.

There is evidence of an increased appreciation of the need to apply ePedagogy and increased adoption. As academics become more familiar and comfortable with the eTools they are able to focus more on ePedagogy. Observations are indicative of the need to have access to training in order for them to become familiar with eTools and apply it effectively and at UWC they are closely supported by the Instructional Design team. This is further related to observations of increasing student support in terms of computer literacy and eTools aligned to the institutional eLearning strategy document – which highlights the need for the students to have the necessary *skills, attitudes and resources* in order for them to become self-directed learners.

### Research Outcomes

The process of developing the model has been informed by observing and reflection on the factors which contribute to eLearning adoption and organisational change, having been in the implementation environment and having driven the eLearning awareness campaign at UWC since 2005. The *integrated eLearning model* (see figure 5 below) is a fusion of literature review, qualitative data from interviews and questionnaires and supporting quantitative data from the actual case-study (eLearning adoption at UWC). This model seeks to depict the important factors which contribute to eLearning implementation in a complex higher education setting.



**Figure 5: An integrated eLearning model: Indications of a changing organisational culture.**

The core business alone is not enough and envisions of this integrated eLearning model suggests, that a robust, useful and creative planning contributes to the system on a national and international level (Badat, 2004, p.41).

Some of the key factors that impact and contribute to effective eLearning implementation and have been experienced in UWC include:

- provision of access to holistic online activities- successful online application, successful registration, and successful access (log-in) to the eLearning system (*support, infrastructure, sustainability*);
- integrated institutional ICT infrastructure and systems with dedicated front-end and back-end support capacity and processes; enabling the development of pedagogically sound, interactive online courses which can be accessed at any time and from any geographical space (*ePedagogy, support, infrastructure*);
- communities of practice (COPs) which are replicated in the institution and between collaborative partners outside the institution (*COPs, research based pilot projects*);
- attempts by the institution to contribute and position itself favourably in the global and knowledge society (*knowledge era, vision and mission, COPs*);
- quality assured, reviewed and up-to-date improved change management strategies and pedagogical approaches to the way in which eLearning practices are presented to user-groups (institutional leaders; eLearning decision-makers; lecturers; students; tutors; eLearning support staff); and learners are assessed and interact (*quality assurance and continuous improvement; strategy, ePedagogy, leadership*);
- effective change management and marketing strategies and approaches which further enable effective communities of practices (*marketing, COPs*); and moreover the
- integrated professional leadership, management and support of the components of the eLearning model which will ensure that the institution has a shared vision and a structured implementation approach to eLearning policy design and development; and implementation (*leadership, vision and mission, strategy*).

These characteristics enable the institution to engage and market itself with confidence, in terms of its Mission, as a national university, alert to its African and international context as it *strives to meet its vision*. The integrated eLearning model intends to build on accomplished initiatives for mission achievement by *nurturing well-educated and dynamic citizens who are able to cope in an ever-changing global society*.

Additionally, the author reiterates the cyclic presentation of the model (as in phase 2) and indicates the importance of the realisation that ‘eLearning success’ can never be claimed, but must rather be perceived in terms of a team commitment to continuous support, process and awareness to learners. In this case, the learners are the lecturers, student and support functions as ‘learners on a life-long learning journey’, and in particular an eLearning journey.

In particular, this integrated eLearning model intends to guide HEIs that seek to embark on implementing eLearning; specifically those who endeavour to make use of open source eLearning systems; and for those who have already implemented, to possibly assess their progress and the quality of their eLearning initiatives; as well as challenges that may have been encountered or are being encountered. Hence, the discussions also reflect on lecturer, student support issues and the barriers that an eLearning support unit must grapple with when implementing eLearning.

Furthermore, the model also touches on change management and marketing strategies for the successful implementation of eLearning in a HE context. It is also intended that this *integrated eLearning model* may perform an educational role in future eLearning implementation planning in HE contexts; as well as contribute to the emerging body of knowledge, in terms of eLearning implementation in a developing country. Moreover, it highlights the indications of life-long organisational cultural changes due to an ever-growing eLearning community.

The development of an *integrated eLearning Model* has been a difficult task and Badat (2004,p.47) concurs “*that policy development, planning and implementation is a complex task*

which is linked to the wider social objectives, apprehensions and struggles". The situation today remains as "the national system comes under pressure for more and better higher education, a differentiation is highly probable in which there will be a residual market for private sectors... and when the public sector is not providing either the more or the better, government officials as well as multitudes of consumers are likely to support those institutions, new and old, that compete in the residual market" (Clarke, 1983, p.167).

## Conclusion

Educational technology has positively impacted on prevailing communities of practice and has even led to sound practices such as sharing online courses/modules with the global community. The escalating numbers of students seeking higher education facilities has been supported by a multi-modal delivery approach. The integrated eLearning model presented as a measuring tool has aligned itself to current quality assurance systems of the government which enables academics to apply methodologies and guidelines for the development of best practices in HEIs. The cyclic presentation of the eLearning model highlights that eLearning success' can never be claimed but rather can be perceived as team work committed to continuous process and awareness. This has inherently impacted on the organisational cultural changes which have shown that in HEIs, organisational cultural change is a process and not a one-off event as it entails the difficult task of changing mindsets toward the use of new pedagogies to supplement traditional instruction. The report highlighted various factors which contribute to the successful implementation of eLearning, including peoples' perceptions at different times of the eLearning continuum.

This paper has reflected on the exponential growth of eLearning; improved attitudes and mindsets; strategic commitment for the infusion of technology and ePedagogy; and the institutional teaching and learning strategy. On the other hand, these results are in great contrast to the repeated launches and crashes of a home-grown eLearning system, linked to the lack of management of the development of the home-grown Open Source platform, often hindering online teaching and learning initiatives and support processes. Additionally the research has reflected on repeated unstable launches and crashes of various versions of the institutional learning management platform, indicative of a lack of version control management by the developers of the system; and moreover as highlighted previously, the call on the ground for the abandonment of this system. Hence, in 2012 the leaders of the institution will have to make some serious decisions due to the looming paradox which cannot be ignored in order for eLearning to grow to the next level at the University of the Western Cape.

## Acknowledgements

The author acknowledges the work done by Jephias Mapuva in making the subsequent publication of this paper through sharing ideas with the author and helping in editing the final version.

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**Appendix: Data Collection Instruments, Procedures and Participants used in the research.**

**Table. Overall design of the longitudinal study, September 2005 – October 2011.**

OVERALL DESIGN				
Level	Qualitative Methods	Sample Target and no. of responses	Supporting Quantitative Measures	Development of an eLearning model
PHASE 1: An eLearning awareness campaign Sept 2005-Dec 2006	<ul style="list-style-type: none"> <li>▪ Literature review</li> <li>▪ eLearning strategy document</li> </ul>	<ul style="list-style-type: none"> <li>▪ Document analysis: eLearning Institutional Strategy</li> </ul>	<ul style="list-style-type: none"> <li>▪ Number of lecturers and students who received eLearning training</li> <li>▪ Number of courses online</li> </ul>	The development of an <i>Online Course Creation Model</i> focusing on pedagogy and instructional design
PHASE 2: Implementation beyond the focus on ePedagogy Jan 2007-August 2008	<ul style="list-style-type: none"> <li>▪ Literature review</li> <li>▪ Email questionnaire</li> <li>▪ Interviews Stakeholder groups:                             <ul style="list-style-type: none"> <li>-Semi-structured individual interviews</li> <li>-Focus group interview</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Email Questionnaire:                             <ul style="list-style-type: none"> <li>-Sample target=144</li> <li>-Responses=31</li> </ul> </li> <li>▪ Stakeholder Interviews:                             <ul style="list-style-type: none"> <li>-Sample target=51</li> <li>-Responses=39</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Number of lecturers and students who received eLearning training</li> <li>▪ Number of courses online</li> </ul>	The development of a revised <i>Infused ePedagogy Model</i> reflecting implementation beyond ePedagogy
PHASE 3: Indications of a changing organisational culture September 2008- October 2011	<ul style="list-style-type: none"> <li>▪ Literature Review</li> <li>▪ Semi-structured questionnaire:                             <ul style="list-style-type: none"> <li>- Delivered through face-to-face individual interviews;</li> <li>- and electronically</li> </ul> </li> <li>▪ eLearning blog</li> </ul>	<ul style="list-style-type: none"> <li>▪ Sample target: Academic Interviews, September 2008 = 110</li> <li>▪ Responses= 22</li> <li>▪ Sample target: 106 Academics and 560 students: Interviews, September 2011</li> <li>▪ Responses=42 Academics;</li> <li>▪ Responses= 429 students</li> <li>▪ eLearning blogs analysed = number = 75</li> </ul>	<ul style="list-style-type: none"> <li>▪ Voluntary number of eLearning users (academics);</li> <li>▪ Number of courses online</li> </ul>	The development of an <i>Integrated eLearning Model</i> focusing on the integrated factors which impact successful eLearning implementation

*Advised Vincentas Lamanauskas, University of Siauliai, Lithuania*

Received: *January 16, 2012*

Accepted: *January 30, 2012*

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