# The role of e-tutors in promoting e-learning using Web 2.0 technologies

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## Abstract

The University of South Africa (UNISA) is South Africa's largest Open Distance Learning (ODL) institution and the leading provider of higher education opportunities within the ODL sphere. UNISA's high student enrolment figures and its strict adherence to its ODL policy requires heightened efforts in student support. One mode of providing student support and increasing the throughput rate, is through the new e-tutoring model that was implemented in 2013. This e-tutoring model is provided via the Learner Management System (LMS), *my*UNISA.

UNISA currently has the capability to provide fully online programmes through its LMS, *my*Unisa. The role of Web 2.0 technologies in particular fosters a new construct to enhance the learning experience of students. This paper explores the concept of interactive learning by focussing on the use of Web 2.0 technologies by e-tutors in undergraduate modules to enhance the teaching and learning process.

## Keywords

E-tutoring, Distance education, e-learning, Web 2.0 technologies, Learning Management System (LMS), Open Distance Learning (ODL)

## 1   Introduction

The development of new technologies in higher education has changed drastically in recent years. The past years have seen a revolution in the manner whereby education is delivered with today's student being "more informed and technology savvy" than in the past (Wiid et al., 2013).

Due to the increased reliance of technology both as a teaching and learning delivery mechanism in distance education, it is imperative that distance education institutions make use of technology-enhanced learning and innovative assessment for academic student support. Amongst these technological developments, many higher education institutions (and educators) are now expected to familiarize themselves with the world of social media applications and social media users (Selwyn, 2012).

The University of South Africa (UNISA) is the largest Open Distance Learning (ODL) organisation in South Africa dedicated to providing quality education with the prospect of connecting the student and the lecturer (Wessels, 2012).

UNISA's definition of ODL is "a multi-dimensional concept aimed at bridging the time, geographical, economic, social, educational and communication distance between student and institution, student and academics, student and courseware and student and peers" (UNISA, 2008). The definition implies that, in the context of a formal learning system, ODL is focused on removing barriers to access learning, a flexible means of providing learning, student-centricity, student support, and constructing learning programs with the prospect of helping students.

One challenge UNISA is currently facing is the growing use of information technology in the modern world. Information and Communication Technology (ICT) is vital within the ODL environment to ensure that the "distance gap" is bridged between lecturers, students and the institution. Distance education is extending to all areas of education and the proliferation of worldwide communications networks has redefined the concept of distance learning and the delivery thereof. The traditional mode of delivery by means of printed materials and face-to-face discussion classes has been replaced by the concept of electronic learning (e-learning). E-learning is a mode of learning in which the educational process is supported by ICT (Sulčič and Sulčič, 2007).

At UNISA, e-learning takes place via the Learning Management System (LMS), *my*UNISA. As of 2013, e-tutors were appointed to drive the e-learning process. As an ODL institution, UNISA emphasises the important role of the tutor in the teaching and learning environment in order to support students to achieve greater access, and improve their pass and throughput rates (Ngengebule et al., 2007).

In any attempt to improve teaching and support practices (and learning outcomes), engaging tutors, who have direct contact with learners is most productive (Calvert, 2006). Calvert (2006), further adds that direct student tutors play a pivotal role in guiding both the social and intellectual or academic aspects of education and training and therefore provide valuable insight in refining and improving instructional design and delivery approaches in ODL.

The tutor is central to both student support and assessment and role of the tutor at undergraduate level is twofold (UNISA, 2008). The first role is to facilitate and guide the learning of students to obtain the necessary skills and competencies to cope with their studies. The second role is to prepare students to become self-directed learners, attending to any difficulties they might encounter, conducting tutorials and, marking and providing feedback on assignments. Both these roles can be done via face-to-face, telephone and online tutoring. The focus of this research is on online tutoring, also known as e-tutoring.

The objective of this paper is to engage with research in teaching computing subjects in an ODL environment. More specifically, it relates to exploring academics' use of technology-enhanced learning by e-tutors towards academic student support in the School of Computing (SoC) at UNISA.
This paper includes a discussion on how e-tutors envisage technology enhanced learning towards academic student support in an ODL computing environment. This entails obtaining feedback from e-tutors regarding their active involvement with technology-enhanced learning and in particular Web 2.0 technologies and the impact of this on academic student support.

This paper commences with an overview of e-tutoring followed by a discussion on the *my*UNISA LMS. Thereafter e-tutoring via the *my*UNISA platform is explored followed by an overview of the reflections of e-tutors. The paper concludes with a synopsis of the research.

## 2   E-Tutoring

Berge (1995) outlined four main e-tutor roles, namely pedagogical roles, social roles, managerial roles and technical roles. Pedagogical roles encompass tasks such as: guiding and maintaining students' involvement in discussions. Social roles involve the creation of friendly and contented social environments for students.

Managerial involve arranging learning activities and tasks, clarifying procedural rules and decision-making norms. Technical roles entail becoming conversant with the ICT systems and software that compose the e-learning environment. The technical role is the most important role because online technologies are used as the platform for teaching, support, management and assessment of students. Therefore all the other roles of an e-tutor are contingent on the technical role.

Technology plays a vital role in every aspect of higher education and especially in an ODL institution, namely for teaching and learning, research and community engagement (Prinsloo et al., 2011). Technology entirely replaces paper-based and face-to-face education manifesting in e-learning. At UNISA, the technical environment is *my*UNISA, a LMS that provides open distance learning (ODL) to about 300 000 students worldwide.

The following section provides an overview of the LMS environment, *my*UNISA and the prospects it has for e-tutoring and Web 2.0 technologies for teaching and learning.

## 3   The *my*UNISA platform

Most universities that offer ODL courses have their own education portals for learning and administrative support. These portals, commonly referred to as a LMS, have interactive communication capabilities which can be used to engage learners, lecturers and administrative staff (Ng, 2011). Most universities have adopted technology enhanced learning environments to facilitate academic student support. While other institutions across the country implement systems such as ClickUP (University of Pretoria) and eFundi (North-West University), the LMS used at UNISA is known as *my*UNISA.

UNISA uses *my*UNISA, as its LMS. This web space of academic and administrative information may be accessed by lecturers and students from any location, at any time and as long as is required. LMS's contain support features to assist learners' access to course material, submission of assignments and quizzes and discussion forums. The challenge is that the extent to which a module is presented and accessed on *my*UNISA depends on lecturer involvement and student participation.

Du et al (2013) identified three challenges of teaching in an ODL environment. The first challenge is the differences of education level, education system and knowledge structure among nations that lead to students differing in aspects of knowledge. The second challenge is the interaction between lecturers and students in ODL teaching/learning activities. Most methods used in ODL teaching/learning, such as e-mail, online materials and discussion forums (like *my*Unisa), DVD, satellite broadcast, and printed materials are half-duplex communication, i.e. up and down communicating channels (teaching). The third challenge is that ODL education is contingent on the student's individual study motivation, self-study activities and abilities. Every student has one's own frame of thinking, and mode for learning and understanding.

Du et al (2013) further espouse that ODL puts more prominence on "integration than individuation", because all students receive the same knowledge media (printed, visual, or auditory materials) regardless of their individual thinking preferences.

To overcome the above challenges and eradicate the feelings of alienation and isolation in distance education, students should be encouraged to collaborate with one another. Kamel Boulos and Wheeler (2007), argue that the benefits of making connections, even though they may be virtual encourage and motivate students to persevere in their studies.

Online environments offer lecturers in higher education new opportunities for extending their teaching into collaborative modes (Matheson et al., 2012). Furthermore, the social software of Web 2.0 allows students to be connected in ways that allow them to produce content collaboratively online (Parker and Chao, 2007). Web 2.0 technologies, may lead to a metamorphosis from the traditional educator-centred approach to a dynamic learner-centred approach presenting a profound change in the higher education sector (Grippa et al., 2009). Web 2.0, applications take full advantage of the "network nature of the Web: they encourage participation, are inherently social and open" (Ullrich et al., 2008).

There are a plethora of Web 2.0 technologies that can be used to enhance the learning experience. Grosseck (2009), identified blogs, microblogs, wikis, syndication of content through RSS, tag-based folksonomies, social bookmarking, media-sharing, social networking sites and other social software artefacts as specific technologies that can contribute in higher education. The next section provides an overview of the Web 2.0 technologies that can be used on the *my*UNISA platform.

### 3.1 E-Tutoring using *my*UNISA

Many Internet-based tools are available to the ODL instructor who wants to enrich online teaching and learning strategies. Of these, the Web-log (or blog) is increasingly being employed as a tool in pursuit of collaborative approaches on the *my*UNISA platform.

A blog it is a Website with dated entries presented in reverse chronological order and published on the Internet (Duffy and Bruns, 2006). According to Abdullah (2012), blogs can be used in education in several ways. Some of these ways include an alternative to digital portfolios or as a learning log, to support collaborative work, to reflect on teaching experiences, to categorise descriptions of resources and methodologies for teaching, to communicate teaching tips for other academics, to illustrate specific technology-related tips for other colleagues, to create a common online presence for unit-related information such as calendars, events, assignments and resources and to create an online area for students to post contact details and queries relating to assessment.

Abdullah (2012), further adds that blogs can be used to post comments based on literature readings and student responses and as a collaborative space for students to act as reviewers for course-related materials. A group of bloggers using their individual blogs can build up a body of interrelated knowledge via posts and comments. This might be a group of learners in a class, encouraged and facilitated by an educator, or a group of relatively dedicated life-long learners. Educators can use a blog for course announcements, news and feedback to students. Educators can also use blogs to encourage reactions, reflections and ideas by commenting on their students' blogs.

At present, the blog and podcasts are the predominant is Web 2.0 technologies integrated within the *my*UNISA webspace. The ensuing section provides an overview of the reflections of e-tutors regarding the *my*UNISA platform and the use of integrated Web 2.0 technologies.

## 4  E-tutors reflections on *my*UNISA to promote e-learning using Web 2.0 technologies

At the end of 2010, Senate approved the piloting of e-tutoring at UNISA, to foster tutorial support to students who are unable to attend face-to-face tutorial sessions. As from 2013, all NQF level 5 students (i.e. first year level students) have been provided with an e-tutor to encourage student success interaction. As from 2014, NQF level 6 students (i.e. second year level students) have been assigned e-tutors.

Each module has an online space on the *my*UNISA LMS with a main site for the lecturer to engage with the students and a tutor site for the e-tutors to interact with the students. E-tutors are given complete authority to work on their respective sites.

Students were assigned e-tutors on the first level from 2013 and on the second level from 2014. E-tutors received basic training on the LMS system and the individual lecturers have to monitor their performance and communicate their expectations of the module to their respective e-tutors.

Since this was the first year that e-tutors were appointed with 2013 being a pilot year, e-tutors were asked to relay their experiences particularly with regards to the *my*UNISA LMS system and the use of related Web 2.0 technologies.

Most of the e-tutors stated that they observed a great deal of student participation because students were not receiving hard copies of the study material. The Group site afforded e-tutors the opportunity to interact in their own area without unnecessarily being distracted by "onlookers".

The self-assessment tool and discussion forums contributed to the experience of online teaching. The use of the discussion forums and the announcements options allowed e-tutors to have their hands on the pulse of the students because students can receive notifications whenever e-tutors send out or upload additional material.

Some of the e-tutors stated that most of their communication takes place via e-mails but this can be a lonely and isolated means of communication.

The only social media tool that e-tutors used is the blog tool. Students were given an activity where they had to reflect on their learning experience. E-tutors found this activity particularly useful as it afforded students the opportunity to engage with one another eliminating the barriers of isolation that has been synonymous with distance education. The e-tutors expressed their concern that they could not freely use social networks outside of the *my*UNISA platform since students are in fact using these platforms on a daily basis. This is however a misconception from there side as e-tutors can use Web 2.0 technologies outside of the *my*UNISA platform provided they are used correctly. An example of this can be to use collaborative editing tools and Social Bookmarking tools for collaborative research or using Second Life (SL) for discussion classes.

One of the e-tutors who is also a lecturer at another institution provided an extensive overview of his concept of e-learning that could negatively impact e-tutoring. He espoused that e-learning is the protagonist for innovative change in the educational system by providing the impetus to solve many of the authentic learning and performance bottlenecks facing many educational institutions. For instance, e-learning can be used by lecturers to improve the efficacy of educational interventions in the face of the diverse social, scientific and pedagogical quandaries.

The implementation of e-learning has been generally characterized by massive failure for a variety of reasons, among which are poor student and lecturer educational awareness, low motivation for lecturers to integrate the technology into curricula and poor training arrangement for students and staff. These issues must be adequately dealt with to fully benefit from several opportunities of e-learning.

The e-tutor further added, that the challenges that lecturers are facing in the academic world of today, clearly surpass what their predecessor had faced yesterday. The ever increasing number of students intake and the advances in educational system have considerably increased demands on academic faculty. Lecturers now engage in intensive administrative functionalities than ever before, resulting in less time for teaching, research, innovation and community engagement.

However, despite the enormous benefits often associated with e-learning, there are implementation challenges. Among these are inadequate contributions by faculty members for the adoption of a particular e-learning system, lack of direct involvement of faculty members at the early stage of the system implementation and lack of support for training materials. The primary reason that business information system adoption has failed in many organizations is lack of user inputs, in terms of the fit between the system functionalities and organizational business logics, which eventually has to come from end users and not system developers. In a nutshell, an effective e-learning system should adapt to the user needs and not users trying to adapt to the rigid functionalities that are provided by the system. This is where user inputs at the earlier stage of system implementation become essential.

It can be inferred from the above that a great deal of work has to be done if the e-tutoring project is to be a resounding success. At this stage, e-tutors, have very little knowledge regarding the *my*UNISA LMS system and how to use Web 2.0 technologies to enhance the learning process. Although the blog tool, is the only tool integrated in the LMS, there are a number of other tools such as micro-blogs, wikis, social networking sites, notification and syndicating (publishing) technologies, media-sharing services, social bookmarking 2.0, collaborative editing tools and group work spaces that can be used to promote learning in higher education. Abdullah (2012), provides a comprehensive overview on how these technolgies can be deployed as well as the advantages and disadvantages thereof.

## 5   Conclusion

While technology has an overwhelming impact on higher education, there is still much to be learned about its effective educational contribution. Academics should ensure that they do not focus solely on how a particular technology works but should in essence develop a scholarly approach to using the technology concerned. Therefore it is more important to understand how a particular technology can promote teaching and learning rather than focusing on the technical competencies thereof.

Using e-tutors to promote e-learning requires a sophisticated thinking about the objectives and outcomes of how an educational programme may be designed. Technology can foster new modes of teaching and learning but it cannot in itself ensure that effective and appropriate learning outcomes are achieved. Technology does make a valuable contribution to support student learning, but it is not the technology itself that is the agent of change: it is the educator.

Learning in an ODL context is a daunting phenomenon. Academics should perceptively explore the content of learning material when aiming to promote engagement, motivation and collaboration in an ODL context.

Academics should understand that the students they teach are isolated learners who are impacted by factors such as employment and other responsibilities. They should therefore train e-tutors to make proper use of the *my*UNISA LMS and Web 2.0 technologies to make the learning experience a rich, rewarding, stimulating and participatory experience.

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