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THE USE OF SMS TECHNOLOGY IN AN ODL PROGRAMME: THE JOURNEY OVER THE PAST DECADE

Dr Ruth Aluko
Unit for Distance Education
Faculty of Education
University of Pretoria
South Africa
Tel.: +27 12 420 5604
e-mail: ruth.aluko@up.ac.za

Dr Johan Hendrikz
Manager: Unit for Distance Education
Faculty of Education, University of Pretoria
South Africa
Tel.: +27 12 420 5699
e-mail: Johan.hendrikz@up.ac.za

Abstract

Distance education has come a long way since the days in which the only medium used was print. It now includes the use of radio, television, computers and mobile technology. Despite the challenges Africa faces regarding the penetration of information and communication technology (ICT), in comparison with the rest of the world, gaint strides have been made on the African continent in including technology in education.

In 2002, the Unit for Distance Education (UDE) in the Faculty of Education at the University of Pretoria introduced three open and distance learning (ODL) programmes. They are all geared toward upgrading teachers' qualifications. However it was soon found that the technology profile of distance education students differs from that of contact students. Although distance education students do not have the same internet accessibility as their contact education counterparts, their ownership of mobile phones is similar. This prompted the unit to start exploring ways of using mobile phones to support distance education students. Using the qualitative research design, the researchers focused on the technology profile of distance education students at the University, highlighting the changes that have taken place in the use of short message service (SMS) technology to support students (over the past ten years). The ensuing discussion will include the challenges the unit experienced and possible future developments. The criteria directing quality in the use of SMS messages will also be addressed. Findings from the study show that there is a blurring of boundaries between the use of SMS technology for administrative and academic purposes.

Key words: distance education, mobile phones, technology, SMS (short message service)

1. Brief review of relevant literature

Distance education is the fastest-growing mode of formal and informal teaching, training and learning (Anderson 2010). It is known for its ability to offer access to education for high numbers of students, independent of time and space, at low costs through economies of scale (mass higher education) (Zawacki-Richter, Brown & Delport 2009). One of the technologies that has helped to push the frontiers of distance education is mobile technology. In the history of technology in education, no technology has been as available to citizens as mobile telephony (Keegan 2005). Mobile learning devices are defined as hand-held devices and can take the form of personal digital assistants, mobile phones, smartphones, audio players (such as the Apple iPod), video and multimedia players, hand-held computers and even wearable devices (Zawacki-Richter, Brown & Delport 2009).

The mobile phone has evolved from being just a status symbol or a communications tool, and offers a mode of communication that is within reach of almost everyone (Johnson, Smith, Willis, Levine & Haywood 2011). It is used more widely than are computers. Although mobile penetration in Africa is the lowest in the world (41%, according to Mobithinking 2011), it is much higher when compared with internet penetration (5.6%, according to Internet World Stats 2011).

Due to the giant strides that have been made on the continent with regard to the availability of mobile phones to most students in higher education, for instance, the onus is on institutions to investigate the possible usage of mobile phones to enhance teaching and learning. This is more relevant to distance education students who often have problems in terms of a lack of personal contact with the institution, a sense of isolation, a lack of pre-course orientation and of tutor support counselling sessions (Ashby 2002; McGivney 2004). Mobility allows teaching and learning to extend beyond the traditional classroom and support learning experiences that are collaborative, accessible and integrated with the world beyond the classroom (Corbeil & Valdes-Corbeil 2007). The inability of institutions to use a form of technology to students' advantage that is available to them to enhance teaching and learning could be said to amount to an injustice (Hendrikz & Aluko 2011).

Apart from using the technology to enhance the administrative services rendered to distance education students, a route institutions could take is mobile learning (m-learning). Many definitions of mobile learning tend to revolve around the mobility of the technology or the mobility of the learner (Pachler, Cook & Bachmair 2010). M-learning has become a force to be reckoned with in view of rural distance education students' lack of access to e-learning. However, scholars have warned that the potential of mobile telephony to transform Africa will only be achieved if the development of other infrastructure keeps pace (Waruru 2010).

2. Backgroud to the study

2.1 Use of ICTs at the University of Pretoria

The University of Pretoria is one of the premier research universities in South Africa, with approximately 40 000 contact students. Due to the bandwidth available to the University (1 Gbps), it has been able to implement a comprehensive IT infrastructure. The University embarked on this e-learning strategy because the technology is available, affordable and appropriate to use. The profile of the University of Pretoria's contact students, as described above, mirrors that of any good university in a developed context. However, the profile of its distance education students differs totally.

2.2 ICTs and distance education students at the University of Pretoria

Although the University of Pretoria is primarily a contact institution, it also delivers distance education programmes to approximately 20 000 students in the Faculty of Education, via the Unit for Distance Education. The limited availability of computers and access to the internet, specifically in rural areas in South Africa, directed the University's decision to deliver distance education programmes predominantly in the form of paper-based material, supported by contact and tutorial sessions. Distance education students enrolled at the University of Pretoria are the opposite of the Millennials, Boomlets, or the Net Generation (Gawelek, Spataro & Komany 2011). Their demographics show that they are mostly above 40 years (70%) of age, and they are educators (95%) residing in the rural areas of the country with internet accessibility that has grown from 1% (2005) to 14% (2010). However, one thing the enrolled distance education students have in common with the digitally savvy generation is the cellphone (99%).

On average, about 500 000 SMSs are sent to students in a six-month cycle on matters that range from reminders of assignments, confirmations of receipt and postage of assignments, examination registrations, and complimentary greetings. The Unit for Distance Education at the University of Pretoria has continually monitored the impact of the use of SMSs on its support to students, and students have confirmed the positive impact of this form of communication.

3. Problem statement and research questions

Although South Africa is one of the few countries in Africa with better access to technology (Laaser 2006), it is still not exempt from the challenges of the digital divide. This is because many remote rural areas and communities remain out of coverage (Mandioma & Muyingi 2008). However, as in most parts of the continent, the penetration rate of mobile telephony in the country is higher than its internet penetration rate. Thus, the University of Pretoria decided to include the use of SMS technology in its student support structure, which is the focus of this study.

The pertinent research questions asked are the folowing:

1. What changes have taken place in the technology profile of distance learning students at the University of Pretoria (UP) over the past ten years, and how have these affected the support structures offered to students?

2. What are the challenges experienced by the University in supporting distance education students with SMS technology?
3. What are the possible future developments envisaged by the University with this mode of technology as a means of student support?

4. Research methods

The researchers have adopted a qualitative research design in which they use the document analysis method for the study.

5. Preliminary discussion of data

The documents emanated from the operational research conducted by the Unit on a continuous basis (2002–2011). This type of research at the University usually has a short-term focus and the results are mainly used to inform management decisions and to improve practice. The research covers all aspects of the programme and its methodology includes analyses of statistical information, on-site visits by academic and non-academic staff, analyses of evaluation forms and literature studies.

6. Brief research findings

Findings from ten-year experience show that it is possible to use SMS technology to support students academically in a limited way, bearing in mind some variables, which include the commitment of the students, family support, their attendance at contact sessions and their personal circumstances. Furthermore, experience at the University has suggested that, for instance, students who received the SMS messages (the experimental group) in the 2005 study were academically more active than those in the control group. Nevertheless, there was no statistical evidence to suggest that there is any significant difference when comparing the mean final marks of students in the experimental and control groups.

In addition, between 2010 and 2011 students were sent SMSs before each tutorial session regarding the chapters to be discussed during the session. This was done to give guidance to students on what to prepare for before the discussion. Findings from the study were also similar to the ones above, because evidence showed they were motivated to attend and contribute to the discussions during the sessions. Thus, it is possible for students to receive some form of academic support through the use of mobile technology.

Although the use of the technology has had a positive impact on students, there were some challenges. One of these was the projects' lack of sustainability, highlighted by SAIDE (2008) as a problem often experienced by distance education institutions. For instance, there was a gap between 2005 and 2009 due to the prior researchers leaving the University. The researchers who had to identify staff members interested in an ongoing project were sometimes faced with a lack of interest by faculty members. Support from the faculty, teachers and trainers is critical to the success of education innovation (Zawacki-Richter 2005).

Experience has shown researchers that there is a blurring of boundaries between the use of SMSs for administrative and for academic purposes. This is because

students' receipt of SMSs from the unit could be linked to their better understanding of the modules and their ability to meet deadlines.

7. The way forward

The Unit for Distance Education has recently (2012) embarked on a research project to further explore the use of SMS technology mainly for academic purposes in one of the modules included in its newly revised BEd (Hons) programme. In view of the recent developments of the inclusion of Twitter and Facebook on the latest models of mobile phones, the researchers are also looking with new eyes at the possibilities of social media, mobile phones and the teaching and learning environment. It is our hope that the exploration of the opportunities that would open up through this academic intervention channel would arouse interest in other faculty members. It is also hoped that the findings might lead to collaborative efforts among distance education providers.

To guide the research, the researchers have developed a framework based on some of the quality criteria developed by the National Association of Distance Education and Open Learning in South Africa (NADEOSA) (Welch & Reed 2005) for distance education in South Africa, the continual monitoring of the technology profile of our students and our experience of distance education practices at the University of Pretoria.

8. Conclusion

In conclusion, one might be tempted to agree that mobile is the future for content delivery. Colleges and universities need to establish a strategy now and make the decisions necessary to take advantage of this communication opportunity with a laser-sharp focus on content (Evans 2011). Properly designed mobile learning can be spontaneous, ubiquitous and pervasive. It affords various opportunities for teaching and learning, especially interaction (two-way communication), flexibility and maximal access, even in contrast with "traditional" e-learning. It may even become the next generation in distance education technologies if it is integrated into the mainstream (Zawacki-Richter 2005).

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