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ENHANCING HEALTH SCIENCES PROGRAMMES THROUGH TECHNOLOGY UTILIZATION

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ABSTRACT

In recent years, more and more educational institutions are moving into the realm of online education. The move has enabled previously disadvantaged groups to attain higher levels of education. While e-learning and distance education appeared to be the confines of the general educational program, professions such as medicine, nursing, physiotherapy, dentistry and more, seem to have realized the differences technology can bring about to the field of Health Sciences. Review of literature as well as observation and experience obtained by the researcher, were the methodologies used to compile this paper. Patient management, research and advanced training are some of the areas that have benefited tremendously from the use of technology. The shortage of health care workers has become a world-wide problem. The situation in Southern African countries such as Zimbabwe has been worsened by the migration of nurses to other countries in search for better remuneration packages. Failure to accommodate nurses for tertiary education by conventional institutions of higher learning necessitated the introduction of a Bachelor of Science Degree in Nursing Sciences at the Zimbabwe Open University (ZOU). The high maternal mortality rate, which now exceeds 850 per 100 000 live births, also demands for specialist training. The purpose of this paper is to highlight the usefulness of technology utilization in the face of limited resources. Technology has been found to support both Classroom and Clinical Nurse Education to a greater extent.

Key Words: On-line education, Conventional institutions, Migration of nurses, Technology utilization.

INTRODUCTION

While great strides have been achieved in the educational system in Zimbabwe, the existing tertiary institutions have not been able to keep pace with the increasing demand for tertiary education.

The need to expand enrolment in Nurse Training Programs at both basic and tertiary levels is of great necessity in Zimbabwe. The migration of Nurses to other countries created a critical shortage to the Zimbabwean health care sector. The Development of the Bachelor of Science in Nursing Science Degree program by Distance Education (DE) through the Zimbabwe Open University (ZOU) is viewed as a major milestone in the history of Nursing in Zimbabwe. The Distance Education program first came into existence in September, 2000.

By Definition, distance education is a set of teaching and learning strategies for connecting people who have learning needs, with the resources required to meet those needs [1]. The use of technology in Distance Education program is one way institutions can improve on program delivery and increase accessibility to students.

In its early stages of development, the ZOU degree in Nursing Science was conducted using the basic traditional methods whereby the students benefited from the use of the print module and face to face tutorials. Specific hours were allocated per course. The program was conducted in the ten regions of the country and in each region, there was a Regional Program Coordinator (RPC) who organized and conducted tutorials on scheduled dates. Shortage of expertise, and the need to accommodate the distance learner who might want to learn in the comfort of their home, at their own pace, whilst attending to other household or family demands, necessitated the use of such facilities as the cell-phone, telephone, fax as well as the

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internet, to communicate with students or students communicating with one another or with the tutor.

ZOU continued to reach out to students in a variety of ways. The delivery of program such as nursing in developed countries, can be done by distance through the use of advanced technologies. Technology utilization removes the geographical barriers that limit access to Higher Education. The use of technology enables Nursing Students to continue with their work whilst carrying out family responsibilities without undue interruptions. However, the nature of the nursing profession requires that practitioners undergo a period of hands on during the period of internship as technology cannot totally replace the face to face tutorial and the hands on experience.

Distance Education is an educational approach where the teacher is separated from students with the institutional gap being closed by technology [2]. ZOU trains only those nurses who have Diplomas in Nursing and have a current practicing certificate with the Zimbabwe Nurses Council. The assumption is that the Diploma holders would have acquired most of the basic practical competencies required of nurses.

For ZOU, the drive to increase and reach out to a larger group of students intensified. The use of video cassettes developed for Human Anatomy was introduced. Other video cassettes developed were on Biophysics as well as Microbiology and Parasitology. Each Regional Centre received a set of video cassettes and had their cassette player and monitor. Students would gather together at scheduled times where they would watch the various cassettes. The Regional Program Coordinator conducted the sessions at scheduled times. A system was developed whereby students, who had facilities at home, would borrow cassettes for a stipulated period. The cassettes would be rotated to students in the region. The system, although not entirely inclusive in its approach, managed to enhance accessibility of learning materials to students as well as ease off the critical shortage of nurse experts.

ZOU, in an effort to keep up with world class standards, and enhance student support, introduced the ZOU on-line facility and later, My Vista Platform. Students are now able to apply and register on-line. The use of technology has effectively reduced the geographical distance between the tutor and the learner. Students are now able to submit assignments on-line. E-tutors mark the assignments and timeously give feedback to students on-line.

However, for the ZOU on-line facility to be effective and successful, several issues needed to be considered. The University took into cognizance the issues of pedagogy, technology and instruction systems and designs used to deliver educational packages. Again quality issues need not be compromised by the use of technology when delivering a DE program for nurses. Management planned for the infrastructure. Computer

Laboratories were placed in each of the ten regions of the country as well as at the National Centre. To enhance accessibility the University extended invitations to students and lecturers to undertake computer courses in order for them to have better understanding of technology. Tutors were trained on e-tutoring as well as marking of assignments on-line.

Learning materials for various courses were packaged into CD's. This was done through the materials development unit (MDU), in conjunction with ICT department and ZOU on-line. This meant that students would acquire the learning materials at a cheaper rate than the print module. Technology also made it possible to package tutorial letters, assignments as well as other instructional material on CD's. Online educators want to say exactly what is new about higher learning online today, yet a proliferation of terms complicate issues [3]. The author went further to point out whether distance education should be termed 'distributed education', and the distribution has become possible through the use of technology.

Another author defined Distance education as, planned learning that normally occurs in a different place from the classroom, and as a result, requires special techniques of course design. ZOU introduced the course-team approach in the development of course materials that fitted well into the current approaches [4].

He went on to define distance education that, there is need for special instructional techniques, special methods of communication by electronic and other technology. He also emphasized on the need for special organizational and administrative arrangements [4].

In order to strengthen the use of technology in the delivery of the ZOU BSc Nursing Science program, the university has send Faculty members for staff development courses on DE. It is hoped that further advancement in the use of technology will enable the ZOU Nursing Science students to have an opportunity to interact with video, voice and data, in real time, with their tutors. Technology will make the demonstration of some procedures on video conferencing possible. However, technology cannot substitute the hands on experience, as nursing is a humanistic, practice oriented discipline whose conduct is based on the social and behavioral skills acquired through a well-structured Nurse Education Program. The need for internship for nurses needs to be re-examined as nurses are clients' advocates and they need to uphold the ethics of the profession. However, it is critical that a positive learner attitude towards online educational methodologies, is reinforced in students if the use of technology is to be successful [5]

CONCLUSION

With the ODL mode of delivery by ZOU, students have graduated from as far afield as New Zealand, Australia, the United Kingdom, Botswana, South Africa

and Zambia. The use of technology enabled ZOU to reach out to students who had migrated to other countries. Initially, the program was conducted through the use of the print module and face to face tutorials for the local students. Later on, the use of cell phones, the fax, telephone and internet became popular means of communication, between the tutor and student as well as student to student. Video Cassettes were introduced in the area of Microbiology and Parasitology, Human Anatomy and Biophysics. Migration to e-learning is rapidly gaining pace. Online facility assists students to apply, register for program as well as submit assignments and have them marked online by e-tutors. Modules are written, reviewed and edited on-line The University continues to strive for excellence and the thrust is now towards the development

of video conferencing facilities as well as high-tech clinical simulations for the distance learner. However, it should always be borne in mind that the use of technology alone in nursing, cannot wholly replace the hands-on experience. Students need to undergo a period of internship where they gain valuable contact with the client. Technological development in Zimbabwe still has its teething problems and it is hoped that one day, technology utilization will play a major role in support of classroom and clinical nurse education for distance learners.

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CONFLICT OF INTEREST:

The authors declare that they have no conflict of interest.

REFERENCES

1. Reinert B, Fryback, P. Distance learning and Nursing Education. *Journal of Nursing Education*, 36(9), 1997, 421.
2. Willis B. Distance Education at a Glance: Guide No 9. 2002, Retrieved September 29, 2004 from <http://www.uidaho.edu/evo/dist9.html>.
4. Moore M, Kearsly G. Distance Education: A Systems View. Wadsworth Publishing Company, 1996.
5. Novotny JM, Davis RH. Springer publishing Company, Inc. New York NY 10036.