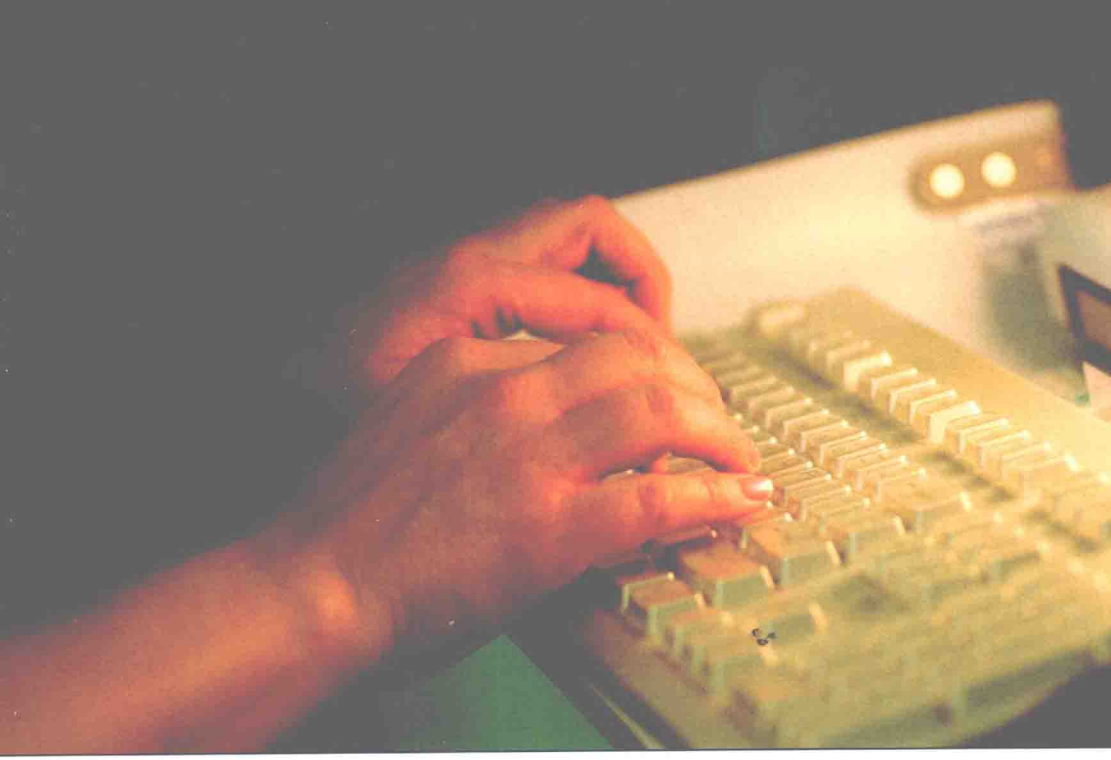

Patricia Muhuro

Use of ICT in teaching and learning in an African University

A Case study

LAP LAMBERT Academic Publishing

Patricia Muhuro

Use of ICT in teaching and learning in an African University

A Case study

LAP LAMBERT Academic Publishing

Impressum/Imprint (nur für Deutschland/only for Germany)
Bibliografische Information der Deutschen Nationalbibliothek: Die Deutsche Nationalbibliothek verzeichnet diese Publikation in der Deutschen Nationalbibliografie; detaillierte bibliografische Daten sind im Internet über http://dnb.d-nb.de abrufbar.

Coverbild: www.ingimage.com

Verlag: LAP LAMBERT Academic Publishing GmbH & Co. KG
Dudweiler Landstr. 99, 66123 Saarbrücken, Deutschland
Telefon +49 681 3720-310, Telefax +49 681 3720-3109
Email: info@lap-publishing.com

Approved by: Alice, University of Fort Hare, Diss, 2008

Herstellung in Deutschland:
Schaltungsdienst Lange o.H.G., Berlin
Books on Demand GmbH, Norderstedt
Reha GmbH, Saarbrücken
Amazon Distribution GmbH, Leipzig
ISBN: 978-3-8454-1738-7

Imprint (only for USA, GB)
Bibliographic information published by the Deutsche Nationalbibliothek: The Deutsche Nationalbibliothek lists this publication in the Deutsche Nationalbibliografie; detailed bibliographic data are available in the Internet at http://dnb.d-nb.de.

Cover image: www.ingimage.com

Publisher: LAP LAMBERT Academic Publishing GmbH & Co. KG
Dudweiler Landstr. 99, 66123 Saarbrücken, Germany
Phone +49 681 3720-310, Fax +49 681 3720-3109
Email: info@lap-publishing.com

Printed in the U.S.A.
Printed in the U.K. by (see last page)
ISBN: 978-3-8454-1738-7

Patricia Muhuro

Use of ICT in teaching and learning in an African University

Foreword

The use of technology in teaching and learning is one way in which educational institutions try to keep pace with the demands of the information age. However many factors impact on the ability of institutions to tap into the full potential of technology for teaching and learning. This study therefore investigated the availability of Information and Communication Technology (ICT) resources and their use in teaching and learning. at one South African university.

A descriptive survey was adopted to gather data using semi-structured questionnaires, interviews and document analysis. The sample of the study consisted of 125 academic staff and 344 students and 10 administrators randomly sampled from the three campuses and the five faculties of this South African University.

The results of the study showed that financial constraints have impacted on the provision of adequate ICT facilities and human resources. The insufficient ICT resources constrained equitable distribution, access and use by students and staff in teaching and learning. Despite the inadequacy, the incorporation of ICT in the administrative functions of the university increased performance of many tedious processes such as student registration, fees accounting and library booking. Participants appreciated the benefit provided by ICT such as the ability to communicate, exposure to the new technologies and improved research.

It is suggested that in addition to providing more resources, maintenance must be improved to enhance use of ICT in teaching and learning. Training the academic staff as well as encouraging collaboration with other professionals who are successful in using ICT could greatly assist in use of ICT in teaching and learning.

ACKNOWLEDGEMENTS

I would like to acknowledge the permission I was granted by the University of Fort Hare administration, the staff and the students in carrying out this research. Mostly I am grateful to my supervisor, Dr S Rembe for her unfailing support , guidance and encouragement provided during the whole process of carrying out this research. I also thank members of the Faculty of Education, members of the E-learning Unit of the Teaching and Learning Centre for the theoretical teaching on how to carry out research. I am grateful to Ms J. Thakrar, Dr L. Brown and Professor R. Bally for their assistance in data collection. This course would not have been a success without the moral and intellectual support from my colleagues Dr E. Gwaradzimba, Dr O. Chabaya, Dr C. Ndebele, Mr N. Wadesango, Mr A. Makura, Ms M. Mabika and Mr D. Garwe.

DEDICATION

This study is dedicated to my family specially my beloved daughters: Marceline, Maryline and Miriam. Thank you for enduring the absence of a studying mother.

LIST OF ACRONYMS

AAU : Association of African Universities

BECTA : British Educational Communications and Technology Agency

E-mail :Electronic mail. A facility for corresponding over the internet.

DoE : Department of Education

ECHEA : Eastern Cape Higher Education Association

HRD Review : Human Resources and Development Review

ICT : Information and Communication Technology

ISTE : International Society of Technology in Education

NEPAD : New Partnership for Africa's Development

NCRL : North Central Regional Laboratory

TLC : Teaching and Learning Centre

TSC : Technology /support Centre

USP : University Strategic Plan

UNESCO : United Nations Educational, Scientific and Cultural Organization

LIST OF TABLES

TABLE OF CONTENTS

CHAPTER 1:INTRODUCTION AND BACKGROUND TO THE STUDY

CHAPTER 4: Data Presentation

CHAPTER 5:Discussion of Findings

CHAPTER 6:Conclusions and Recommendations

LIST OF FIGURES

CHAPTER 1

Introduction and Background to the Study

1.0 Introduction

The study investigates how one South African higher education institution availed the necessary ICT resources to students and staff to enable them to use in teaching and learning. This study is premised on the discourse that when used appropriately, Information and Communication Technologies (ICT) facilitate the acquisition of higher order thinking skills and creativity (Eselaar, 2004). There is general notion that effective learning occurs when the learner actively participates in activities which offer real life situations. ICT has intrinsic features which enable collaboration, active participation in problem solving situations related to real life (Bates, 2000). The use of ICT in teaching and learning is therefore crucial, as it enhances the necessary skills required in the technology infused society.

The first chapter of this study gives a brief background to the study, the objectives of the study, the assumptions, justification, delimitation and limitations of the study.

1.1 Background of the Study

The evolution of the global economy and the rapid developments in Information and Communication Technologies (ICT) in the last two decades have presented new challenges as well as opportunities for the education

sector. Among the challenges is the digital divide that has created a wide gap in the access to information between the rich and the poor. The digital divide is characterized by lack of access, limited affordability, illiteracy, high levels of poverty as well as social divisions and discrepancies (Dewan and Riggins, 2004; Jones, 2005). Those who do not have access to the ICT are excluded from participating meaningfully in today's information society. Herselman (2003) notes that, it is difficult for someone who is not computer literate to successfully complete tertiary studies and find a gainful employment. This is because most jobs in the government, business and social sectors require some knowledge of the use of computers and the internet. Ololube (2006) asserts that the quality of education in any country determines the ability of its citizens to meet social and economic needs.

In trying to respond to the technological wave, many ICT policies have been developed with the aim of ensuring that people are given the necessary capabilities to use ICT. The policy developed by the United Nations Educational, Scientific and Cultural Organization (UNESCO) highlights the role of ICT in developing the most vulnerable people and transforming their lives (UNESCO, 2003). In Africa, the New Partnership for Africa's Development (NEPAD, 2003) also developed policies whose objectives included achieving readiness to use ICT in all African countries. The objectives are: (1) developing a pool of ICT-proficient students and youths from which Africa can draw future ICT professionals; (2) developing local content software based on Africa's legacy; doubling density to two

lines per 100 people by 2005 and (3) providing adequate level of access for households and lowering the cost of ICT as well as improve reliability of service.

Despite the existence of ICT policies worldwide, there have been challenges in implementing the ICT policies in educational settings. Previous studies have cited reasons such as inadequate or poor resource availability, limited access to ICT resources, lack of support and limited professional expertise to enhance integration of ICT in teaching and learning (UNESCO, 2003; NEPAD, 2003).

In South Africa, ICTs are considered a basic requirement for the knowledge society for which universities prepare their students (Burbles and Callister, 2000). The roles of ICT in improving teaching and learning are reflected in the National Plan for Higher Education (Department of Education (DoE), 2001). The Department of Communication through the Telecommunications Act (No.103 of 1996 as amended 2001) addressed connectivity by implementing a reduced rate for all educational institutions. The e-rate allow educational institutions to have a discount on calls and for Internet access charges (DoE, 2003). Other services covered by the e-rate include electricity, videoconferencing services, high-speed data connections, phone service and some types of internal wiring and network equipment in educational settings.