ASSISTIVE TECHNOLOGY AS A FACTOR OF IMPROVING EDUCATION ACHIEVEMENT FOR STUDENTS WITH VISUAL IMPAIRMENT AT KIBOS SECONDARY SCHOOL KISUMU COUNTY, KENYA

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E55/20351/2012

A RESEARCH PROPOSAL SUBMITTED TO THE SCHOOL OF EDUCATION IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF EDUCATION (SPECIAL NEEDS EDUCATION) AT KENYATTA UNIVERSITY

JULY 2014
DECLARATION

This proposal is my original work and has not been presented for a degree in any other university.

Signature ___________________________ Date: 02/07/2014

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This proposal has been submitted for review with my approval as a University Supervisor.

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ABSTRACT

The purpose of the study is to encourage teachers and students to shift from over relying on old technology to new technology that is quick and efficient in acquisition of education. Also to analyze the contribution and role of assistive technology in improving education achievement for students with visual impairment at Kibos special secondary school. The objectives of the study include; to establish the access technology engaged in the teaching of students with visual impairment at secondary school level, identify the kind of technology used in Kenyan secondary schools, examine the criteria used in selecting the best media that suits the student’s individual needs, to find out the challenges faced by teachers and students using access technology, determine ways teachers and students with visual impairment cope with the various types of assistive technology and finally, the impact of assistive technology on the education achievement of students with visual impairment. Students in United States and countries like Canada and Australia work independently as they use modern technology to complement them in their academic activities in revision, socialization and sharing in many areas of education. In Kenya, the curriculum and policies guiding technology utilization among students and teachers are lacking. It is even worse among students with visual impairment whose education has been emancipated by technology. Technology used by these students is manual braille through use of bailers, slate and stylus which require to be replaced with efficient technological innovations such as Smart Bailers; computers fitted with assistive technology such as large print access, speech access, Braille access, and scanned material access. Modern technology has a high ability to unlock learning and expand possibilities of students. Assistive technology can be a great equalizer in the sense that for the Braille user, it allows students to provide feedback by producing materials in Braille for personal use and then in print for the teacher, classmates, parents and others who may not be conversant with Braille. The technology gives students with visual impairment the power of storing, retrieving and disseminating information. The study methodology employed is case study and the design is descriptive. The sample size is 40 respondents, comprising 30 form two and three students, eight teachers, a transcriber and a librarian. Methods of data analysis will be Statistical Packages for Social Sciences (SPSS) and will be presented in percentages, graphs, charts, and tables to reflect the findings of the study.
<table>
<thead>
<tr>
<th>Abbreviation</th>
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<tr>
<td>MoEST</td>
<td>Ministry of Education, Science and Technology</td>
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<td>ICT</td>
<td>Information Communication Technology</td>
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<tr>
<td>JAWS</td>
<td>Job Access with Speech</td>
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<tr>
<td>UN</td>
<td>United Nations</td>
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<tr>
<td>UNCRPD</td>
<td>United Nations Convention on the Rights of Persons with Disabilities</td>
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<tr>
<td>NVDA</td>
<td>Non-Visual Desktop Access</td>
</tr>
<tr>
<td>HTML</td>
<td>Hypertext Markup Language</td>
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<tr>
<td>DAISY</td>
<td>Digital Accessible Information System</td>
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<td>AT</td>
<td>Access Technology</td>
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<tr>
<td>V.I</td>
<td>Visual Impairment/ Visually Impaired</td>
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<tr>
<td>OCR</td>
<td>Optical Character Recognition</td>
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<td>PDAS</td>
<td>Personal Digital Assistants</td>
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<tr>
<td>ITU</td>
<td>Internationals Telecommunication Union</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>NLS</td>
<td>National Library Services</td>
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<td>WSIS</td>
<td>World Summit of the Information Society</td>
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<tr>
<td>TVIs</td>
<td>Teachers of Students with Visual Impairments</td>
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<td>IDEA</td>
<td>Individuals with Disabilities Education Act</td>
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<tr>
<td>NCLB</td>
<td>No Child Left Behind</td>
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<td>ICEVI</td>
<td>International Council for the Visually Impaired children</td>
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TABLE OF CONTENTS

DECLARATION .................................................................................. ii
ABSTRACT ...................................................................................... iii
ABBREVIATIONS ........................................................................... iv
LIST OF TABLES ............................................................................. vii
LIST OF FIGURES ........................................................................... viii

CHAPTER ONE: INTRODUCTION .................................................. 1
1.0 Background to the Study ......................................................... 1
1.2 Statement of the Problem ....................................................... 6
1.3 Purpose of the Study ............................................................. 8
1.4 Objectives of the Study ......................................................... 9
1.5 Research Questions ............................................................. 9
1.6 Significance of the Study ....................................................... 10
1.7 Assumptions of the Study ..................................................... 11
1.8 Scope and Limitations of the Study ....................................... 11
1.9 Theoretical Framework ....................................................... 12
1.10 Conceptual Framework ....................................................... 13
1.11 Definition of Terms ........................................................... 15

CHAPTER TWO: LITERATURE REVIEW ...................................... 17
2.0 Introduction ............................................................................ 17
2.1 Best Technology for Learners with Visual Impairment .......... 17
2.2 Access technology used by Students with VI in Secondary Schools in Kenya... 18
2.3 Coping with Assistive Technology ....................................... 23
2.4 The Impact of Access Technology to the Academic Achievement of students with Visual Impairment ........................................ 25
2.5 Challenges Facing Teachers and Students with Visual Impairment ........ 27
Using Technology ......................................................................... 27
2.5.1 Teacher's Level of Preparedness .................................... 27
2.5.2 Location of Computers .................................................. 27
2.5.3 Goals and Objectives Addressed by Classroom Teachers ....... 28
LIST OF TABLES

Table 3.1: School Population........................................................................................................32
LIST OF FIGURES

Fig 1.1: Conceptual Framework ........................................................................13