**THE CATHOLIC UNIVERSITY OF EASTERN AFRICA**

**FACULTY OF ARTS AND SOCIAL SCIENCES**

**DEPARTMENT OF SOCIAL SCIENCES AND DEVELOPMENT STUDIES**

# EDUCATION MANAGEMENT IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS NAIROBI

**BY**

**LILLIAN WAMUYU MWANGI NG'AYO**

**REG. NO: 1025660**

**A Thesis Submitted to the Faculty of Arts and Social Sciences, Department of Social Sciences and Development Studies in Partial Fulfillment of the Requirements for the Award of the Master Degree in Development Studies**

**NAIROBI –KENYA**

**SEPTEMBER, 2023**

## DECLARATION

This research proposal is my original work and has not been presented to any other examination body.

**Student Name: Lillian W. Mwangi** **Reg. No. CITY/MDS/1025660**

Signed Date: 7th June 2023

**DECLARATION BY THE SUPERVISORS**

This thesis was prepared under our joint supervision and guidance and has been approved for examination by us having been duly appointed by the department.

**Dr.** **1st Supervisor**

Signature: ..... Date: .....

**Dr. Michael Sitawa** **2nd Supervisor**

Signature:  Date: .....

**THE HEAD, DEPARTMENT OF SOCIAL SCIENCES & DEVELOPMENT STUDIES**

This work was undertaken under the auspices of the department and underwent all the required stages with the approval of the Directorate of Research, Innovation and Graduate Training.

**Signed ……** **Office stamp/Date …….……**

## DEDICATION

I dedicate this research to the late Charles Mwangi and Bill Kring.

## ACKNOWLEDGEMENTS

I thank the almighty God for his guidance throughout the writing process. I feel greatly indebted to my Supervisors for their tireless academic and professional contributions and advices during my study times. I wish to acknowledge Bill Kring who contributed financially, advice wise and for his patience towards the completion of the research proposal. I acknowledge the contribution of all the respondents for having willingly and happily participated in the research work.

# TABLE OF CONTENTS

DECLARATION ..... ii

DEDICATION ..... iii

ACKNOWLEDGEMENTS ..... iv

TABLE OF CONTENTS ..... v

LIST OF TABLES ..... ix

LIST OF FIGURES ..... x

ACRONYM/ABBREVIATIONS ..... xi

ABSTRACT ..... xii

CHAPTER ONE ..... 1

INTRODUCTION ..... 1

1.1 Background of the Study ..... 1

1.2 Statement of the Problem ..... 6

1.3 General Objective ..... 8

1.3.1 Specific Objectives ..... 8

1.4 Research Questions ..... 8

1.5 Research Assumptions ..... 8

1.6 Justification of the Study ..... 9

1.7 Significance of the Study ..... 10

1.8 Scope of the study ..... 10

1.8.1 Limitation of the study ..... 11

1.9 Conceptual Framework ..... 11

1.10 Operation Definition of Terms ..... 13

CHAPTER TWO ..... 15

LITERATURE REVIEW ..... 15

2.1 Critical Review of Theories ..... 15

2.1.1. Constructivism Theory ..... 16

2.1.2. Strengths of the theory ..... 18

2.1.3. Unified Theory of Acceptance and Use of Technology ..... 18

2.2 Empirical Review ..... 19

2.2.1 Effect of EMIS on Efficient Student Management in Informal Schools ..... 19

2.2.3 Effect of EMIS on Efficient Teacher Management in Informal Schools ..... 24

2.3 The extent to which EMIS eliminates learning challenges in Non-Formal Schools ..... 26

2.4 Chapter Summary ..... 27

2.5 Knowledge Gap ..... 28

CHAPTER THREE ..... 29

RESEARCH DESIGN AND METHODOLOGY ..... 29

3.1 Research Design ..... 29

3.2 Site description ..... 29

3.3 Sample and Sampling Techniques ..... 30

3.3.1 Target Population ..... 30

3.3.2 Target Population ..... 31

3.3.5 Sampling Techniques ..... 32
3.4 Instruments and Methods of Data Collection ..... 33
3.4.1 Validity of the Research Instruments ..... 34
3.4.2 Reliability of the Research Instruments ..... 34
3.4.3 Pilot testing of the research instruments ..... 35
3.5 Data Analysis Procedure ..... 35
3.6 Ethical Considerations of the Study ..... 36
CHAPTER FOUR ..... 37
DATA PRESENTATION AND INTERPRETATION OF FINDINGS ..... 37
4.1. The Respondents Return Rate ..... 37
4.2 Demographic Information of the students ..... 38
4.2.1 Education Level of the Respondents ..... 39
4.3: Using Education Management Information System (EMIS) to enhance formation of learners in Informal Schools. ..... 40
4.4 EMIS enhances class management efficiency in non-formal schools. ..... 41
4.5 How EMIS enhances individual student management efficiency in non-formal schools in Kenya. 42
4.6 How EMIS enhances teacher management efficiency in non-formal Schools ..... 44
4.6.1 Statements on how EMIS eliminates learning challenges in non-formal schools ..... 47
4.7 Chapter summary ..... 49
CHAPTER FIVE ..... 50
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ..... 50
5.1 Summary of the Findings ..... 51

5.1.1 Attitude ..... 52

5.1.2 Age ..... 52

5.2 Conclusions ..... 53

5.3 Recommendations ..... 53

5.4 Suggestions for further research ..... 54

REFERENCES ..... 56

APPENDICES ..... 60

APPENDIX I: LETTER OF INTRODUCTION ..... 60

APPENDIX II: INTERVIEW GUIDE FOR HEAD TEACHERS ..... 61

APPENDIX III: QUESTIONAIRES FOR THE TEACHERS. ..... 62

Appendix IV: NACOSTI RESEARCH AUTHORISATION LETTER ..... 67

Appendix V: Research Clearance Permit ..... 69

Appendix vi: Plagiarism Report ..... 70

## LIST OF TABLES

Table 3.1: Target population ..... 31
Table 3.2: Sampling Frame ..... 32
Table 3.3: Sampled Size of Respondents ..... 33
Table 4.1: Participant's Return Rate ..... 38
Table 4.2: Education Level of the Students ..... **Error! Bookmark not defined.**
Table 4.3: Education Level of the respondents ..... 39
Table 4.4: Opinions on the implementation of EMIS and Learning in Informal Schools: ..... 39
Table 4.5: How would you describe your relationship with other colleagues using the Program ..... 40
Table 4.6: Teachers Responses on EMIS Definition. ..... 41
Table 4.7: How EMIS enhances class 'management in non-formal schools. ..... 42
Table 4.8: How EMIS enhances student management efficiency in non-formal schools in Kenya. ..... 43
Table 4.9: How EMIS enhances teacher management efficiency in non-formal schools ..... 45
Table 4.10: How EMIS eliminates learning challenges in non-formal schools ..... 48

## LIST OF FIGURES

Figure 1.1: Conceptual Framework showing variables of the study ..... 12
Figure 4. 1: Pic chart: whether the implementation of EMIS in informal schools is important to the lives of the individual learner ..... 44

## ACRONYM/ABBREVIATIONS

**APBET** Alternative Provision of Basic Education and Training

**BIA** Bridge International Academies

**CEO** Chief Executive Officer

**EMIS** Education Management Information System

**FPE** Free Primary Education

**FGD** Focused Group Discussion

**FSE** Free Secondary Education

**GoK** Government of Kenya

**ICT** Information Communication Technology

**MoEST** Ministry of Education Science and Technology

**SPSS** Statistical Package for Social Sciences

**UNESCO** United Nations Educational Scientific and Cultural Organization

**UTAUT** Unified Theory of Acceptance and Use of Technology

**MoEYs** Ministry of Education Youths and Sports

## ABSTRACT

Learning management and education management information systems (EMIS) in informal schools: a case study of bridge international schools in Nairobi is the focus of this study. This research set out to answer three main questions: (1) how effective is EMIS at boosting teacher management efficiency in NFS; (2) what role does EMIS play in reducing or eliminating NFS learning challenges; and (3) where exactly in Nairobi County's Kibera slums do NFS exist? The study was broken down into sections, the first of which introduced the problem, stated the research's aims, emphasized the study's significance, outlined its boundaries, outlined its underlying assumptions, and defined its essential words. The literature review was discussed in Chapter 2. Research and methodology were covered in Chapter 3, along with sample and sampling procedures, instruments, data collection, and analysis in Chapter 4, along with a discussion of the play and novel, a thematic perspective, and character styles and traits. In the final chapter, we reviewed our findings and made some suggestions before listing our sources. The continuous use of dynamic and disruptive ICT as energizing elements of the educational process is a reality of current days, where millennials are the center of an education paradigm in which students are much more inclined to use technologies than enrolling in a traditional non-digital course. Considering education management information systems (EMIS) capacities to collect, analyse, process and publish information and data, it is easy to perceive their relevance to both education organizations and students. Nevertheless, and despite EMIS complexity and inherent possibilities, the existing literature does not provide for a detailed characterization on the impact these systems might have on students' success. Thus, this research focuses on understanding the use of EMIS by students and the arising of net benefits; it introduces an EMIS success model which posits that to ensure net benefits for students, education institutions must safeguard that their education management information systems are of high quality, while at the same time students are maintained satisfied with the system and engage in continuous use. The study's theoretical framework was constructivism. The researcher employed a Convergent parallel design mixed-methods strategy and zeroed in on a select group of respondents. 15 principals, 45 instructors, and 240 students (one focus group discussion with eight students per grade level) were randomly selected. Questionnaires and in-person interviews were used to compile the data. Descriptive statistics and SPSS for Windows version 21 were used to handle and analyze the collected data. Tables, frequencies, and percentages were used to display quantitative data, while questionnaires and interviews were used to display and analyze qualitative data. Schools should embrace the incorporation of education management information system (EMIS) and learning in informal settings, according to the study's findings, because school leadership and management play a crucial role in mitigating the negative impact EMIS has on Bridge International Academies' pedagogical approach. Kenya's Ministry of Education, Science, and Technology (MoEST) benefited greatly from the study's findings on the impact of EMIS on student learning and its suggestions for the ministry's future policymaking and ICT implementation. Researchers are encouraged to use the study's findings to further their own knowledge of EMIS in non-formal education systems, to test hypotheses, or as background reading for future investigations.

# CHAPTER ONE

# INTRODUCTION

This chapter details the study's rationale, scope, limitations, and overall importance, as well as its background, issue statement, research aims, and research questions. In a similar vein, this chapter lays forth the theoretical foundations that will serve as the study's map.

## 1.1 Background of the Study

The Education Management Information System (EMIS) is a crucial tool in the management and planning of educational systems Villanueva, C. C. (2014). It collects, processes, and analyzes data related to all aspects of education, including student enrollment, teacher qualifications, infrastructure, and financial resources. EMIS provides policymakers, educators, and researchers with up-to-date and accurate information to inform decision-making and policy formulation. In informal schools, which cater to marginalized and disadvantaged communities, implementing an effective EMIS can be challenging due to various factors such as limited resources, lack of infrastructure, and high student dropout rates. However, the importance of an EMIS in these schools cannot be underestimated, as it can help track and monitor student progress, identify areas for improvement, and facilitate targeted interventions to ensure quality education for all.

From a global perspective, the variables relevant to EMIS in informal schools include access to education, enrollment rates, completion rates, teacher-student ratios, infrastructure availability, and the overall quality of education. These variables highlight the need to ensure equitable access to education, reduce dropout rates, improve the quality of teaching, and enhance the learning environment in informal schools worldwide.

At the continental level, variables to consider in relation to EMIS in informal schools include geographical disparities in educational opportunities, regional education policies and frameworks, funding discrepancies, and cultural and linguistic diversity Tikly, L. (2011). These variables emphasize the importance of addressing regional disparities and promoting inclusive education that respects and values the unique needs and backgrounds of students in informal schools across continents. Looking at the regional perspective, variables can include the availability of educational resources, teacher training and qualifications, curriculum relevance, and collaboration between different education stakeholders. These variables highlight the importance of regional cooperation and coordination to ensure that EMIS in informal schools is effective and responsive to the specific challenges and needs of a particular region.

In an African context, variables such as access to education, gender disparities, socioeconomic factors, and the impact of conflicts and emergencies on education are crucial when examining EMIS in informal schools. These variables shed light on the specific challenges faced by African nations in providing quality education in informal settings and emphasize the need for targeted interventions to address these issues. EMIS (Education Management Information System) is defined by De Silva and Valsangkar (2015) as "the system for collecting, storing, analyzing, disseminating, and using data within the educational system." Strategic planning in education can be facilitated through the use of EMIS, which governments should use. Depending on the complexity and design of the educational system, EMIS can enable additional functionalities, such as issuing licenses for educational program and institutions, allowing parents to see their children's grades, providing insight into the needs for professional development of teachers, or identifying the needs for infrastructural investments.

Different countries have different EMIS systems, and sometimes there are even regional variations within the same country. The governmental system of a country, the availability of technology infrastructure, and social attitudes towards data and its usage are the most significant elements determining the disparities between EMIS systems. The EMIS system has a wide range of potential integration points. De Silva and Valsangkar (2015) use the EMIS system in Afghanistan as an example of the successful implementation of IT in education. This system is made up of several interconnected subsystems that store a wealth of information about individual students (identification and demographic data, grades, GPA, conduct), individual teachers (education, professional training), individual classrooms (number of students, class size, educational profiles, additional features), individual schools (location, number of students, classes, educational profiles, additional features), school infrastructure and property, and the

In developing countries, investment in formal education has resulted in high costs of education, high student-to-teacher ratios, inadequate teaching materials, and poor quality education, among other things (Song, 2010) despite the fact that this is where the majority of countries and donor agencies have focused their bilateral or multilateral assistance programs (Manzoor, Wang, Qutub, & Hongwei, 2016). This has resulted in the need for, and the proliferation of, non-formal schools Grajcevci, A., & Shala, A. (2016). because formal education has not always achieved the development promise and has, in some instances, worsened education exclusion, especially to poverty-stricken informal settlements.

Due to poverty and the high cost of education in Sub-Saharan Africa (SSA), nonformal schooling has emerged to provide a route and opportunity for children and students living in informal settlements to gain access to education.

Several countries in Sub-Saharan Africa rely on informal settlements as a source of non-formal education.

In this category you'll find countries like Angola, Benin, Chad, Ethiopia, Guinea Bissau, Madagascar, Mauritania, Niger, Rwanda, Sierra Leone, Somalia, Sudan, and Tanzania.

In these countries, non-formal education makes up 41% of the total.

Botswana, Burundi, Cameroon, Cote d'Ivoire, Eritrea, Gabon, Ghana, Kenya, Nigeria, and Zambia all have nonformal school rates between 25% and 30% (UNESCO, 2005; UNICEF, 2000).

Education has been a top priority in Kenyan policy documents ever since the country gained independence.

Vision 2030 is a plan to transform not only the economy but also the country's educational system (Oketch & Sommerset, 2010; Oketch & Rolleston, 2007) and is included here together with Sessional Paper No. 10 from 1960.

Despite the fact that universal Free Primary Education (FPE) was supposed to increase enrolment and access to education, recent studies have found that most households in informal settlements are unable to send their children to public school, so non-formal schools have continued to proliferate in these areas (Oketch, Mutisya, Ngware, & Ezeh, 2010).

Similarly, Song (2010) argues that nonformal education often draws inexperienced and low-paid instructors who aren't fully invested in their students' success.

There has been a worldwide shift in the educational system as a result of the incorporation of ICT (Song, 2010). With the help of information and communication technologies (ICT), schools have been able to make the switch from manual, paper-based processes to automated, instantaneous access to educational content, which has improved not only the quality of

classroom instruction but also students' ability to retain new information and perform better on standardized tests.

The introduction of the modern library and the pencil around the middle of the 1600s marked the first widespread use of technology in educational settings.

The first computer was reportedly introduced to American classrooms in the 1970s, as stated by Franke (1987). Nearly twenty percent of schools in the United States and the United Kingdom had computers by the early 1980s, when IBM built the first PC.

Education Management Information System (EMIS) is a new kind of software made possible by the widespread adoption of computers in schools. EMIS, as defined by Verspoor (2002), is the synchronization of educational materials across digital platforms with the goal of improving educational productivity, quality, and effectiveness. Therefore, EMIS provides schools and the education sector with a method for collecting and processing high-quality data to inform education planning and decision making at both the school and system levels (Chunwijitra, 2013; Song, 2010; Ojwang, 2010). EMIS's primary objective is to aid schools in enhancing education quality by connecting students' academic accomplishments to their active participation in society Taniguchi, K., & Hirakawa, Y. (2016).

while compared to private and government schools in Kenya, non-formal institutions face numerous barriers while attempting to implement EMIS (Ojwang, 2010). This is because most non-formal schools are situated in urban slums, which are characterized by an un-conducive educational environment, as well as poverty and other socio-economic issues. Brembeck defines non-formal schools as entities that dispense lessons outside the formal education system to educate the marginalized, vulnerable, or disenfranchised communities under the sponsorship of a

person, group, or organization, while Phillip Coombs establishes non-formal schools as systematic educational activity outside the established formal system.

According to research published in 1995 by the Kenya Institute of Education (KIE), informal education in Kenya employs a wide variety of methods outside from those often used in conventional institutions. Many informal schools are crucial in the informal settlements, especially for the disadvantaged children who live there, as stated by the commission of Inquiry into the Education System in Kenya (1995). However, the committee also found that most of these schools deliver inferior education to formal institutions due to a lack of infrastructure, qualified teachers, and instructional equipment. Kenya, like many other African countries, has struggled to ensure that all of its citizens have access to quality education. For instance, once Free Primary Education (FPE) was implemented in 2003, 1.5 million additional children started attending primary school (Kaugi, Bunyi, & Waweru, 2012).

**1.2 Statement of the Problem**

The research problem is to investigate the implementation and effectiveness of Education Management Information System (EMIS) and Learning Management in informal schools.

Existing knowledge suggests that EMIS and Learning Management Systems have been widely adopted in formal educational settings to enhance administrative processes and improve the quality of teaching and learning. However, there is limited research on the implementation of these systems in informal schools, which cater to marginalized and underserved communities.

By linking with previous studies, this research aims to contribute to the ongoing conversation in the field by exploring the challenges and opportunities associated with implementing EMIS and Learning Management Systems in informal schools. This study will shed light on how these systems can be adapted and optimized to meet the unique needs and constraints of informal

school settings, thereby enhancing access to quality education for marginalized populations. The findings will also inform policy and practice in education management and contribute to the larger discourse on inclusive and equitable education.

An estimated 1.9 million children aged 6-13 in primary school and 2.7 million adolescents aged 14-17 in secondary school are not actively engaged in continuous school learning despite the introduction of Free Primary Education (FPE) in 2003 and Free Secondary Education (FSE) in 2008. Furthermore, 7.8 million Kenyans are illiterate, according to the Kenya National Audit Literacy Survey 2008. This represents around a third of all people in the 15-to-30 age bracket. The areas of the country that are the most prone to poverty are also the ones where illiteracy is the more of a problem: informal urban settlements, desert and semi-arid territories. To meet the educational needs of children, teenagers, and adults who are not able to attend traditional schools, the Alternative Provision of Basic Education and Training (APBET) has developed in such contexts.

One of the APBET school models that evolved in informal settlements with the aim of providing high-quality, scalable, and inexpensive education to underprivileged adolescents in slum communities is Bridge International Academies. Since its beginning in 2009, Nairobi's Bridge International Academies have used extensive EMIS technology to educate students in 15 alternative schools. According to the study's author, not enough of this technology is being used to boost Kenya's educational system as a whole.

Therefore, the purpose of this research was to highlight the potential and actual effectiveness of EMIS technology in enhancing education generally and learning specifically in the case of Bridge International Academies in Nairobi.

### 1.3 General Objective

The study aims to evaluate the effectiveness of Education Management Information Systems (EMIS) in supporting and enhancing informal education initiatives.

#### 1.3.1 Specific Objectives

The following aims were used to direct this investigation:

i. To determine how much EMIS improves the effectiveness of student management in Nairobi County, Kenya's Bridge schools.

ii. To assess how much EMIS contributes to improving teacher management effectiveness in Bridge schools in Nairobi County, Kenya.

iii. To determine how much EMIS helps Bridge schools in Nairobi County, Kenya with their learning issues.

iv. To analyze the role of EMIS in enhancing transparency and accountability.

### 1.4 Research Questions

1. How does EMIS improve the effectiveness of student management in Nairobi County Bridge schools in Kenya?
2. How does EMIS improve the effectiveness of teacher management in Kenya's non-formal schools in Nairobi County?
3. How much does EMIS help non-formal schools in Nairobi County, Kenya that have learning challenges?

### 1.5 Research Assumptions

The foundation of this study will be the belief that informal education improves learning outcomes and lowers the rate of school dropouts in informal communities. As a result, the majority of Kenya's informal settlement Bridge International Academies have embraced EMIS.

The second assumption is that the Bridge International Academies will agree to participate in the study after being contacted for it. Last but not least, this study will be predicated on the premise that non-formal schools continue to play a substantial role in providing education and learning for those populations who lack access to regular schools.

**1.6 Justification of the Study**

EMIS is a critical tool that helps education administrators in capturing, managing, and analyzing data related to various aspects of education, such as enrollment, attendance, and academic performance. However, most of the existing literature and research on EMIS primarily focuses on formal schools, leaving a gap in understanding how EMIS can be effectively utilized in informal school settings. Informal schools, which encompass a wide range of non-traditional educational settings like alternative schools, homeschooling, or community-based learning programs, play a crucial role in providing education to marginalized and underserved populat ions. Therefore, it is important to explore how EMIS can be adapted to suit the unique needs and challenges of informal schools in order to enhance their learning management processes and improve educational outcomes. By studying this topic, researchers and policymakers can gain insights into designing and implementing effective EMIS in informal school settings, thereby ultimately helping to bridge the education gap for marginalized groups. EMIS has been implemented in Kenya's non-formal education sector by Bridge International. Bridge International Academies has been using extensive EMIS technology to educate students in non-traditional settings since its start in 2009. However, the degree to which this has enhanced education as a whole remains unclear.

That is to say, these metrics must show the quality and relevance of a program or cycle of education in addition to measuring enrollment, attendance, and graduation rates. As a result, it is

no longer sufficient to rely solely on data from formal education institutions; instead, data must be collected in other ways and from other sectors in order for EMIS to be able to assess the impact of education on poverty reduction, health, and economic development. As things stand, the educational sector is the only one in which most countries gather statistics.

Some of the indicators, however, cannot be gathered in this way, such as information on the health and psycho-social well-being of children under the age of 5, information on the number of children not enrolled in school, information on the number of children who participate in informal education, etc. This study is warranted since collecting this information is difficult, and demographic information from household surveys may be the best option.

### 1.7 Significance of the Study

Through the lens of Bridge International Academies, this research will establish crucial conclusions on the impact of EMIS on their education model, which will help school leadership and learning management. Second, the findings of this research may be useful to the Kenyan Ministry of Education Science and Technology (MoEST) in formulating policies and implementing ICT in the country's educational institutions. Third, researchers and academics interested in EMIS in non-formal school systems, who wish to test hypotheses or make use of the study's research literature, will find this study to be of great use.

### 1.8 Scope of the study

Bridge International Academies in the Kibera and Mathare slums were the focus of this research. Bridge International runs non-formal schools in these areas of Nairobi, Kenya's informal settlements. Second, the scope of this research will be restricted to the impact of EMIS in informal learning settings, rather than the complete ICT infrastructure.

The focus was narrowed to how using EMIS could improve scholastic data storage in comparison to more conventional approaches. This will allow the researcher to zero in on the specific impacts or consequences of EMIS. The time frame for this analysis is March 2020 to December 2020.

### 1.8.1 Limitation of the study

The study was constrained by the unwillingness of non-formal education institutions to give data necessary to address the research questions. To overcome this shortcoming, permission from the school administration was requested in advance, and any questions about how to apply the study's findings were answered. Database security was another barrier to the research. Since each computer in an EMIS cell kept its own database, the potential for data leakage was quite significant. In half of the district's EMIS Cells PCs, an analysis revealed, there was no safe password, leaving the data vulnerable to virus attack and allowing unauthorized users easy access and the ability to make changes or modifications. In addition, it was reported by all EMIS Cells throughout districts that unlicensed virus prevention software is readily available.

Another issue was that information and data were not being shared uniformly throughout all the districts. Annual data reports are distributed by the provincial EMIS cell to all districts. The lack of direct connections between districts prevents them from sharing information effectively. When one district makes a request for data about another, it is sent to the Provincial EMIS office, which either satisfies the request if the data is already stored there or rejects the request.

## 1.9 Conceptual Framework

A conceptual framework is a graphical representation of the connections between concepts (Mugenda & Mugenda, 2003). The conceptual framework is presented below, and it emphasizes the connection and interplay between the independent, dependent, and intervening factors. difficulties of student learning in non-formal schools (environmental challenges, school

obstacles, household challenges) affect the dependent variables (student participation, higher achievement, improved attendance, and reduced drop-out) through the intervening variables (effectiveness of student management; learning; participation; school attendance); and effectiveness of teacher management; teaching; lesson plan and content; attendance; and performance).

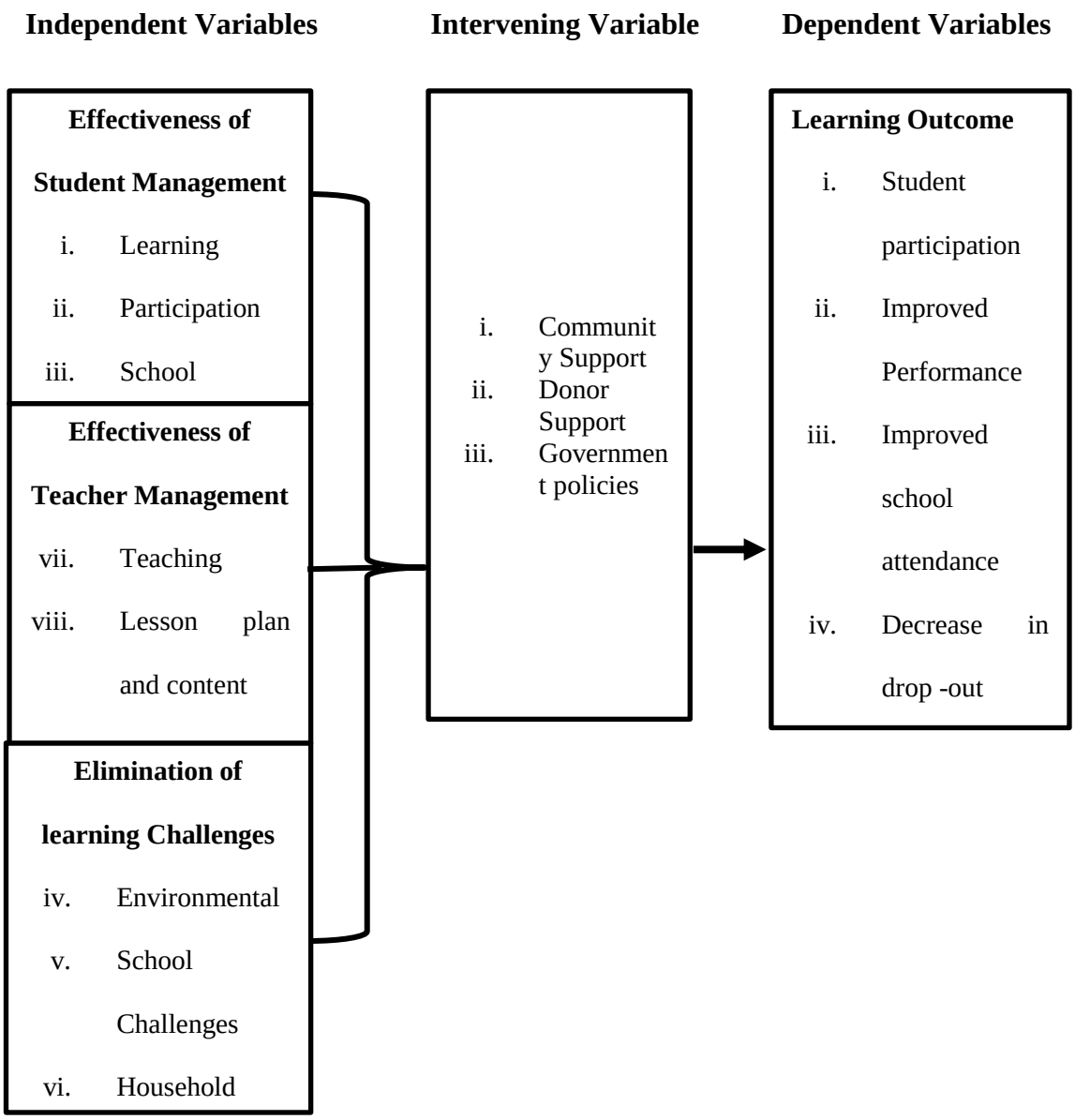



**Figure 1.1: Conceptual Framework showing variables of the study**

*Source: Researcher.*

## 1.10 Operation Definition of Terms

**Education Management System (EMIS)**

In this context, refers to the incorporation of digital tools into the classroom to improve efficiency and engagement.

**Formal Schools**

Formal education refers to the structured education system that runs from primary (and in some countries from nursery) school to university, and includes specialized programmes for vocational, technical and professional training.

**Non-Formal Schools**

Non-formal education refers to education that occurs outside the formal school system. Non-formal education is often used interchangeably with terms such as community education, adult education, lifelong education and second-chance education.

**Student Management**

Means that the school can organize the student's information, correspondence, and timetable in accordance with his or her progress.

**Teacher Management**

Means keeping tabs on how well teachers are doing in order to improve instruction and, ultimately, student achievement.

**Learning Outcomes**

Purposeful statements that help students understand what they will learn and why it is important to learn it by the end of a given assignment, class, course, or course.

**Learning**

Learners should reflect on the value of the information and abilities they've gained at the conclusion of a unit, semester, or year of study.

# CHAPTER TWO

# LITERATURE REVIEW

In this section, we describe the findings of various researchers who have studied the effect of EMIS on improving educational outcomes in non-traditional settings. It investigated the efficacy of EMIS in removing obstacles to learning in NFS and its implementation in NFS, focusing on the positive effects of EMIS on student and teacher management. Both constructivism and the Unified Theory of Acceptance and Use of Technology (UTAUT) were used as theoretical frameworks in the research.

This allowed the researcher to determine if learning in informal settings was socially constructed or if EMIS may genuinely impact student performance. UTAUT theory, on the other hand, was applicable to this study because it helped the researcher determine how the introduction of EMIS technology in informal settlements has affected performance expectations, teacher and student expectations of effort, and the social influence and facilitation conditions of the technology. Finally, the difficulties of using EMIS in non-traditional educational settings were discussed.

## 2.1 Critical Review of Theories

The research used constructivism and the UTAUT (Unified Theory of Acceptance and Use of Technology) frameworks. This study's applicability to constructivism theory stems from the researcher's ability to examine whether or not EMIS can truly affect learning outcomes and whether or not knowledge is socially produced in non-formal settings. UTAUT theory, on the other hand, was applicable to this study because it allowed the researcher to determine the extent to which EMIS technology influences performance expectations, effort expectations on students

and teachers, social influence, and facilitation conditions in informal settlements, all of which have an impact on learning outcomes.

### 2.1.1. Constructivism Theory

Constructivism is an educational theory that emphasizes active learning, the creation of knowledge, and the importance of learners' prior knowledge and experiences. It suggests that individuals construct their understanding of the world based on their own experiences, interactions, and reflection. This theory is particularly relevant in the field of education as it encourages educators to create a learner-centered environment where students can engage and construct their knowledge.

One of the main benefits of the constructivist approach is that it promotes deeper learning. By encouraging students to actively construct their knowledge, through discussion, problem-solving, and collaboration, they are more likely to develop a rich understanding of the subject matter. Constructivism also emphasizes the importance of personal meaning, allowing students to connect new knowledge to their existing framework of understanding. This can lead to more meaningful and authentic learning experiences, making education more relevant and applicable to students' lives.

Critics of constructivism argue that it might be challenging to implement in certain educational contexts. Constructivist learning can be time-consuming and requires a high level of engagement from both students and teachers. Critics suggest that a more traditional, teacher-centered approach may be more efficient for delivering specific content knowledge within limited time frames. Additionally, the constructivist approach may not suit all learners or subject areas. Some students may struggle with the open-ended

Jean Piaget (1980) laid the groundwork for constructivism when he argued that knowledge was not meant to represent an objective reality but rather was a product of social interaction. (From von Glasersfeld, 1996) It serves an adaptive purpose. And as Shunk (1996)

pointed out, the psychological perspective of constructivism in learning is that people create much of what they learn and understand. According to Elliott et al. (2000), constructivism is "an approach to learning that argues that people actively build or create their own understanding and that truth is established by the prior knowledge of the learner."

Singh, S., & Yaduvanshi, S. (2015). elaborates on the concepts of constructivists, explaining that they hold that the learner constructs meaning through experience, and that meaning is shaped by the interplay of existing knowledge and new occurrences. The core tenet of constructivism is that knowledge is produced by learners, that new information is added to existing knowledge.

What a person learns from new experiences, and how that information is built upon or altered by existing knowledge, is discussed in Ferguson, R., (2016). The second idea is that education is a process that requires participation rather than observation. In contrast to the passive approach to education, which sees the student as "an empty vessel" to be filled with information, the constructivist approach holds that students can only make sense of the world by actively interacting with it (via, for example, experiments or real-world problem solving).

The difference between receiving information and understanding it lies in the ability to draw connections between what one already knows, what one is learning, and how one is learning it. Every student comes to the learning process with their own unique set of experiences, beliefs, and perspectives. Each student's subjective interpretations will be distinct, even if they all participate in the same lesson, teaching, or activity.

It would seem that this notion runs counter to the idea that knowledge is a social construction.

Fox (2001, p. 30) argues (a) that while everyone has their own unique educational background, there are many areas of knowledge that people can and do share, and (b) that while

education is a social process heavily influenced by culture, cultures themselves are composed of sub-cultures, sometimes even of a single sub-culture. The knowledge held among people is not a carbon copy of any socially formed template, and neither is the knowledge held by cultures. Each new student of a culture alters that culture forever.

### 2.1.2. Strengths of the theory

According to Kaufman, D. M. (2018), the incorporation of cognitive thinking into the educational planning process is made possible by constructivism. As a result, conceptions of knowledge and education are the products of a social construction of reason between students and instructors. Windschitl (1999, 2002) echoes this sentiment, noting the rising popularity of constructivist pedagogies and, in particular, the use of technology to place lessons in their proper context.

### 2.1.3. Unified Theory of Acceptance and Use of Technology

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a widely recognized and influential theory in the field of technology acceptance and adoption. It was developed by Venkatesh et al. in 2003 and has been widely used to understand and explain individuals' acceptance and use of technology in various contexts. The relevance of the UTAUT lies in its ability to provide a comprehensive framework for understanding the factors that influence technology acceptance. It integrates and extends several existing theories, such as the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Social Cognitive Theory (SCT), to offer a more comprehensive understanding of user behavior.

In addition, the UTAUT (Venkatesh et al., 2003) paradigm was employed to understand how people accept and utilize technology.

Highly recommended models (SCT) included the Theory of Planned Behavior (TPB), the Theory of Reasoned Action (TRA), the Innovation Diffusion Theory (IDT), the Technology Acceptance

Model (TAM), the Motivational Model (MM), the Model of PC Utilization (MPCU), and the Social Cognitive Theory.

To evaluate the efficacy of several IT models, Venkatesh et al. (2003) created the Unified Theory of Acceptance and Use of Technology (UTAUT) by combining key aspects of eight different models.

Therefore, the UTAUT model incorporates four factors—performance expectations being just one of them—that determine whether or not schools use technology.

## 2.2 Empirical Review

### 2.2.1 Effect of EMIS on Efficient Student Management in Informal Schools

The EMIS informs those invested in education outside of traditional institutions about the state of the education system and students' progress in school (Mourshed, Chijioke, & Barber, 2010). Therefore, the EMIS allows non-formal institutions to collect and evaluate data on student performance and involvement, allowing them to pinpoint problem areas. For instance, EMIS is used by Bridge International Academies to monitor students' engagement in class based on where they are seated. The teacher can keep track of how often each student took part in the activity, and then give extra attention to the children who typically do not (Bridge International, 2017).

Data on student attendance and performance in the classroom is crucial to improving the quality of instruction, and EMIS plays a key role in this process (Makwati, Audinos, & Lairez, 2003). Keeping tabs on student attendance and performance at non-formal schools, which is often difficult to do in informal settlements where these schools are commonly located, is made much easier with EMIS. It's important to recognize that several factors prevent students who aren't enrolled in formal education from consistently attending class. It was previously difficult

to map out student-specific obstacles to school attendance and learning; now, with the advent of EMIS, this is now achievable (UNESCO, 2014).

Permanently absent students in non-formal settings can be monitored in relation to their academic performance, and tailored interventions can be created as needed. Zaidi (2014) agrees, arguing that the EMIS is especially important for non-formal schools because of its capacity to divide data for each student, which is then utilized to create individualized treatments. To rephrase, EMIS may be even more important in non-formal schools with significant absenteeism than in traditional schools (Ng'ang'a, 2010).

The UNESCO (2014) report states that without the EMIS data collecting and processing capabilities, it will be difficult to determine how many pupils are not enrolled in school in the informal settlements. In most cases, government agencies rely on inefficient school records, as public schools rarely collect data on student-specific characteristics other than absenteeism. The situation is much more dire in non-formal education institutions, since they often do not keep even the most elementary of class attendance records (Verspoor, 2000; Ojwang, 2010; Chunwijitra, 2013).

The interactive learning of students is particularly difficult in non-formal settings compared to those of students in formal settings (Kaugi, Bunyi, Waweru, 2012). This is often brought on by ineffective teaching strategies, substandard classroom facilities, unsanitary conditions, and students' financial hardships. Because of this, Ng'ang'a (2010) contends that non-formal education is less effective than conventional school institutions. Despite this, the quality of education provided to kids fails to meet even the barest minimum. One of the most important things that can be done to ensure that all students in the system who attend non-formal schools are getting a good education is to implement EMIS into the system.

Allavida (2008) found that EMIS had a significant impact on student achievement in Kibera's informal schools, and one could make the case that this is because the system allows teachers to tailor lessons to each individual's needs. Students' motivation and engagement in class both improve when they are given opportunities to learn at their own pace. The ability to collect student-specific data using EMIS also makes it simpler to involve parents and other stakeholders in designing and implementing targeted learning interventions in non-formal settings (Makwati, Audinos, & Lairez, 2003). Students from informal settlements, who would otherwise receive a subpar education or none at all, can benefit from the use of EMIS in non-formal schools, as was found in a research by Romulo and Akhtar (2003).

EMIS in informal settings not only encourages independent study, but also facilitates and mediates constructionist approaches to education (Selwynn, 2003). What this means is that students' knowledge is formed in a social context that includes the resources available to them. Students' interest in learning is piqued when EMIS is implemented in non-formal settings because their exposure to interactive information technology begins to alter their worldview (Dighe, Hakeem, & Shaeffer, 2009). In addition, the instructivists' perspective considers EMIS implementation as a means of guaranteeing that students in alternative educational settings use technology only for the purpose of learning. However, evidence from places like Malaysia shows that EMIS offers more than just an interactive learning environment that fosters the creation of novel ideas, meanings, and concepts among students (and, by extension, a foundation upon which to build transformative expertise; Selwynn, 2003).

EMIS not only increases enrollment in non-traditional educational settings, but also improves students' numeracy and reading skills (UNESCO, 2008). Though there isn't a lot of data to back this up, Bridge International Academies (2016) found that their kids in non-formal

settings outscored their public school peers in arithmetic by 35% and in reading by 19%. Therefore, we can infer the degree to which students' improved performance resulted from their use of EMIS technology. Growing research shows that EMID technology use improves the quality of education and provides an additional value to students in non-traditional settings (Romulo & Akhtar, 2003; Allavida, 2008; Mourshed, Chijioke, & Barber, 2010; Zaidi, 2014).

Allavida (2012) found that the majority of non-formal schools are owned by community groups, religious groups, private people, and philanthropists. Through a non-traditional school model based on urban slums, The Bridge International collaborates with local governments, parents, and educators to provide better educational opportunities for disadvantaged children.

Several scholars who have studied the use of ICT in schools have concluded that EMIS by itself is not sufficient to improve students' academic performance. For instance, Olaleye's (2011) research found that educators' upbeat dispositions significantly aided their students' academic development. On the other hand, research by Song (2010) found that implementing EMIS in the classroom could assist modernize the archaic educational system while simultaneously enhancing the quality of the classroom's instructional materials and the effectiveness of its technological features. In their 2012 article, "Information and Communication Technology for Education Management Information Systems," Kiilu and Muema focused on how ICT may be utilized as an administrative tool by government and schools, but they did not go into detail on the effects or influence of the same.

Research by Chunwijitra (2013) suggests that providing students with access to the latest and greatest in information and communication technology (ICT) could help them develop the knowledge and abilities necessary to succeed in the developing competitive and global "knowledge" economy. Nonetheless, none of these reports (Olaleye, 2011; Song, 2010; Kiilu &

Muema, 2012; Chunwijitra, 2013) looked into the Bridge education model, or the impact of EMIS on education in Kenya's informal settings. The use of technology has grown ubiquitous. In today's globalized society, technological progress is crucial for many daily activities, including commerce, education, and travel (Vandenbroucke, 2009).

Education Management Information Systems (EMIS) were developed as a result of the widespread adoption of ICT in schools; these systems have had a profound impact on the field of education around the world. The purpose of educational management information systems (EMIS) is to "improve the quality of education, enhance efficiency and effectiveness, and increase access to education and educational materials through technological platforms" (Chunwijitra, 2013). In addition, schools have access to a standardized mechanism for collecting high-quality data through EMIS platforms, which aids in educational planning and decision-making at both the institutional and governmental levels (Song, 2010; Ojwang, 2010).

EMIS is utilized in non-formal schools in the same ways it is used in public and commercial institutions (UNESCO, 2008): to better manage content, train teachers, and facilitate more effective student-teacher interactions. Therefore, it might be argued that EMIS is concerned not only with the quality of education and inputs like student attendance and involvement, but also with the educational processes such teaching strategies, student literacy and numeracy, and curriculum development (Verspoor, 2002). The World Education Conference for All (WECA) held in Jomtien, Thailand in 1990 confirmed this by recognizing the importance of EMIS in boosting educational quality and equity (UNESCO, 2008). The Dakar Framework for Action on Education (DFAE) from 2000 echoes this sentiment, noting that EMIS improves educational and instructional practices that are crucial to attaining economic and social development, especially in Sub-Saharan Africa (Verspoor, 2000).

### 2.2.3 Effect of EMIS on Efficient Teacher Management in Informal Schools

Teachers' capacity, abilities, and ability to present excellent learning content to students have all been improved as a result of the EMIS (Carlson & Gadio, 2002), which has a multiplicative effect on students' non-formal learning, involvement, and performance. Ojwang (2010) argues that with the use of EMIS, educators can collaborate with their superiors to design lessons and frameworks that promote student engagement and retention. Standardized content, such as when and how to ask questions, how to engage inactive students, and how to provide feedback to students, is delivered to teachers' digital platforms via EMIS, which is especially beneficial for non-formal schools (Binginlas, 2009).

Adopting EMIS platforms is a step in the right direction for non-formal schools looking to improve their pedagogical use of IT (Ng'ang'a, 2010; Chunwijitra, 2013). This is crucial because it allows classroom instructors to raise the bar for student learning. Dighe, Hakeem, and Shaeffer (2009) conducted research in Malaysia and found that using EMIS allowed teachers to better convey complex concepts to pupils using scripted content. Therefore, it may be argued that EMIS makes it simpler for teachers to personalize and exchange learning materials, lesson plans, diversifying teaching, making students the center of the classroom, and bringing the real world into the classroom.

It's important to remember that EMIS isn't a replacement for the hands-on, experiential learning that comes before or after reading or watching a video. Therefore, giving students access to authentic, hands-on learning opportunities is crucial. Binginlas (2009) argues that teaching students how to function in the digital age requires a focus on incorporating EMIS into the classroom.

One of the goals of EMIS integration in the education system, according to Carlson and Gadio (2002), is to track and analyze data on factors crucial to improving the quality of teaching

and learning. Thus, educators play a crucial part, as their everyday interactions with the system shape its features and the information that must be gathered and processed. However, other researchers, such as Guha (2000) and Carnavale (1990), have suggested that teachers' workloads rise because of EMIS because it is platformed on information technology and requires them to read, interpret, and implement computer-based classroom instructions. Operating EMIS classroom gadgets can be difficult, especially for non-formal schools where teachers are often untrained or have low ICT abilities, yet doing so is essential for the success of EMIS.

According to a study by Price Waterhouse Coopers (PWC) published in 2003 and titled employing EMIS in schools; resolving teacher workload issues, some educators believe that implementing EMIS into the classroom adds more work to their plates. This is due to the fact that EMIS relies on information and communication technology (ICT) platforms that necessitate the completion of certain steps before students' learning processes can begin. The study was conducted in conventional educational settings, which may not be indicative of non-traditional educational settings.

Teachers in non-formal settings can better meet the technological and instructional demands of today's rapidly developing knowledge-based economies by adopting and utilizing EMIS (Binginlas, 2009). Also, employing EMIS allows non-formal educators to keep up with their counterparts in more sophisticated formal education systems, ensuring that their knowledge and methods of instruction are not become obsolete (UNESCO, 2008). It may be argued that the EMIS learning curve in traditional schools is steeper than in non-traditional institutions, but this doesn't change the fact that they're both necessary.

### 2.3 The extent to which EMIS eliminates learning challenges in Non-Formal Schools

Non-formal educational institutions have significant difficulties in the implementation of EMIS. This is because of a wide variety of internal and external school influences (Yusuf, 2011). Non-formal schools are often located in dangerous slum areas that are not ideal for teaching and learning. As a result, the adoption and implementation of EMIS in non-formal schools are hindered (Allavida, 2012) since the learning environment does not appeal to highly qualified and EMIS instructors or ICT professionals.

In a similar vein, Ojwang, C. (2012) writes that the non-formal education system poses both physical and emotional risks to its students. Teachers and students often share a lack of access to sanitary facilities and potable water. As a result, most kids have to go to the restroom in unsanitary locations such as open fields or river streams. Disease and illness spread easily in an unproductive classroom setting (Kaugi, Bunyi, & Waweru, 2012), leading to student absences. Similarly, Mutisya et al. (2010) note that a lack of a sufficient drainage system can lead to the growth of mosquitoes, which can spread Malaria, Pneumonia, and other diseases that have a negative effect on students' ability to learn.

Poor school infrastructure is another barrier to EMIS acceptance and implementation. There is a paucity of classrooms, student desks, and electricity at non-formal schools, as reported by UNESCO (2014). It would be challenging, for instance, to use computers for EMIS at a school where there is no electricity. Due to the fact that computers require electricity to run, these schools are just as functional as conventional schools that do have access to electricity (Manzoor, 2016).

According to Ojwang, C. (2012), the EMIS investment is often wasted if the non-formal schools do not have the potential for ICT sustainability to continue employing the EMIS devices.

The UNESCO (2014) report states that without the EMIS data collecting and processing capabilities, it will be difficult to determine how many pupils are not enrolled in school in the informal settlements. In most cases, government agencies rely on inefficient school records, as public schools rarely collect data on student-specific characteristics other than absenteeism. The dilemma is exacerbated in non-formal educational settings that lack even the most fundamental class attendance registers, underscoring the importance of using ICT.

**2.4 Chapter Summary**

In this section, we review the research and writings of different academics who have studied how EMIS has changed formal and informal educational settings. A survey of the relevant literature reveals that researchers have largely ignored the implications of technology adoption and use in non-formal institutions, particularly in Kenya. The second Sustainable Development Goal (SDG) focused only on ensuring that all children, regardless of their location or gender, have access to and complete primary school by the year 2015.

Goal 4 of the UN's Sustainable Development Agenda examines education in a broader context, as a process that spans a person's entire life. This includes the child's formative years, formal schooling through high school, college, and beyond, and continuing education in the workplace. EMIS systems now have to measure more broader and more sophisticated indicators of goal fulfillment, which presents new issues as attention shifts from basic education to learning as a lifetime process.

That is to say, these metrics shouldn't just assess how many people enroll in, show up to, and graduate from a given educational cycle or program; they should also reveal information about the educational program's quality and its applicability to the informal economy.

This chapter also discussed the significance of the selected theories, which allowed the researcher to determine whether or not EMIS could genuinely affect learning outcomes, and whether or not learning in non-formal institutions was socially constructed. UTAUT theory was useful because it allowed the researcher to determine the extent to which EMIS technology in informal settlements influenced performance expectations, effort expectations for students and teachers, social influence, and facilitation conditions.

This research aimed to close that knowledge gap by investigating how using EMIS has changed education in Kenya's informal communities.

## 2.5 Knowledge Gap

The literature review on the topic of Education Management Information System (EMIS) and Learning Management in Informal Schools reveals a significant knowledge gap in understanding the use and effectiveness of these systems in informal educational settings. While numerous studies have focused on the implementation and impact of EMIS and learning management systems in formal schools, there is a dearth of research exploring their applicability and potential in informal educational settings. Informal schools, which cater to marginalized and vulnerable populations, often lack the necessary infrastructure and resources to effectively manage and monitor educational processes. The integration of EMIS and learning management systems in these schools has the potential to enhance data collection, organization, and analysis, as well as improve teaching and learning activities. However, the existing literature fails to investigate the specific challenges, benefits, and outcomes of implementing such systems in informal educational settings. Consequently, there is a need for further research that explores the use and effectiveness of EMIS and learning management systems in informal schools, illuminating the unique context and considerations of these settings.

# CHAPTER THREE

# RESEARCH DESIGN AND METHODOLOGY

In this section, we detail the methodology used to conduct the study. This section also detailed the research facility, the participants, the sampling procedures, the data collection strategies, the Validity of the Research Instruments, and the analytic procedures. The final section discusses the ethical measures taken before, during, and after the study.

## 3.1 Research Design

According to Munyoki and Mulwa (2012), "research design" refers to the "plan and structure of investigation" developed with the specific goal of answering the research question. A descriptive methodology was used by the researcher. What, where, when, and how much are the focus of descriptive design (Kothari, 2004). The researcher was preoccupied with the phenomena itself and paid little attention to its particulars. Teachers, students, and heads of department at Bridge International Schools in Kenya provided the researcher with data for a descriptive study of EMIS's impact on improving educational outcomes in non-formal settings.

Descriptive research, as outlined by Borg and Gall (1989), is meant to generate numerical data regarding educational topics of relevance to policymakers and practitioners. According to Gay (1992), researchers can utilize questionnaires and interviews to collect data that describes the current state of affairs by inquiring into respondents' perceptions, attitudes, behaviors, and values.

## 3.2 Site description

In 2009, Bridge International Academies was founded as an APBET-compliant alternative to the traditional model of providing primary and secondary schooling. Over 520 alternative schools are managed by Bridge International Academies in countries like Kenya, Uganda,

Nigeria, India, and Liberia. More than 100,000 students from informal communities are enrolled in Bridge's programs right now. The Bridge concept of non-formal education has benefited approximately 40 villages and 15 elementary schools in Kenya. The Bridge learning system incorporates cutting-edge software with original textbooks and instructions for educators. Bridge also uses an Education Management Information System (EMIS) to collect data that is analyzed and used to modify lesson plans to maximize the learning outcomes of every topic and pedagogy employed.

In order to ensure consistency in teaching methods across grade levels, Bridge Academies collect and analyze student data. Data collected through the EMIs is also utilized to enhance and improve teacher professional development initiatives. In Kenya, Bridge academies partner with the country's Ministry of Education to train educators to impart knowledge to students while also preparing them to become contributing members of society. The majority of Bridge Academies in Kenya may be found in slum areas such Kibera, Mathare, Korogocho, Mukuru, and Sinai (NPR, 2014). As a result of the high quality education, scalability, and affordability of the Bridge education model, Bridge students in non-formal schools outperformed their public school peers in arithmetic and reading in 2016 by 35% and 19%, respectively (Bridge International, 2017).

### 3.3 Sample and Sampling Techniques

#### 3.3.1 Target Population

A population is the total group of people or things from whom a representative sample is taken for statistical analysis. Staff, students, and parents from Bridge International Academies in the Kibera, Mathare, Korogocho, and Mukuru slums of Nairobi County, Kenya, made up the study population.

### 3.3.2 Target Population

The term "target population" refers to the subset of the study's population from which each study participant is drawn (Cooper, 1998). Target population, as defined by Kombo and Tromp (2006), is the sample size that allows the researcher to successfully complete the study. According to Mugenda, A. (2003), the term "target population" refers to "the entire set of individuals, cases, or objects with some common observable characteristics to which researcher generalizes results." The research employed a Convergent parallel design based mixed-methods strategy. The study included 405 participants from 15 schools.

These individuals were chosen for participation based on their openness to taking part and their accessibility during the researchers' visit. Only 300 participants were randomly selected from a pool of 405. There were 15 principals, 45 teachers, and 240 students, or 1 full-class diameter (FGD) of 8 students each classroom. (1st through 8th grade).

Below is a table with the data in question.

**Table 3.1: Target population**

| **Population** | **Target population** | **Percentage** |
|---|---|---|
| Teachers | 280 | 95% |
| Head Teachers | 14 | 5% |
| **Total** | **294** | **100%** |

We used SPSS for Windows, version 21, to process and analyze the data we gathered from surveys and interviews using descriptive statistics. Tables, frequencies, and percentages were used to illustrate the qualitative information. The research concluded that informal education

settings would benefit from adopting the use of a system for education management information (EMIS).

### 3.3.3 Sample Frame

A sampling frame is a list of criteria that can be used to pick a representative sample from a larger population. To confirm and select a sample size, researchers employ a list that contains all of the variables in a target population (Cooper & Schindler, 2014). A sampling frame was collected from the administrative offices of Bridge International Academy for this research.

**Table 3.2: Sampling Frame**

| **Strata** | **No. of respondents** |
|---|---|
| Head Teachers | 14 |
| Teachers | 280 |
| **TOTAL** | **294** |

### 3.3.5 Sampling Techniques

A population is sampled when a sufficient number of things or people are selected from that population to provide an accurate representation of the population's features, as described by Kombo and Tromp (2006).

This study used a stratified sampling method that separated respondents from the schools into three groups: students, teachers, and administration. Stratified sampling divides the population to be sampled into categories, or strata. There are consistent features throughout all levels.

The study's sample size was 240 kids, 45 educators, and 15 principals.

Those people who completed and submitted their surveys. Table 3.3 shows that 300 people were randomly selected from a total population of 405.

For the study on the impact of education management system (EMIS) on education in Kenya's informal schools, researchers used the case of Bridge International Schools and Academies to randomly select an adequate number of staff from a population of the selected sample.

Each division had an equal chance of being included in the sample, although the chance was weighted higher for divisions with bigger populations. Key informants were chosen using a purposeful sampling strategy.

**Table 3.3: Sampled Size of Respondents**

| *Target Population* | *Categories* | *Sampled Size* | *Percentages* |
|---|---|---|---|
| *294* | Teachers | 280 | 95% |
| | Head Teachers | 14 | 5% |
| ***Total*** | | **294** | **100** |

### 3.4 Instruments and Methods of Data Collection

Discussions in focus groups, as well as questionnaires and interviews, were used for this study. Students were the focus of focus groups, while administrators were interviewed and instructors and Bridge International School administrators filled out questionnaires. The researcher can more easily regulate the discussion and keep it on topic by using a focus group discussion guide that allows for follow-up questions to help members of the focus group clarify or provide more information in areas crucial to the study.

A focus group discussion guide was used in this investigation. A semi-structured questionnaire was created and used for the collection of data. A questionnaire was created and

used as a guide throughout interviews. Quantitative data was gathered through surveys, and qualitative data was gathered through focus group discussions and individual interviews.

Orodho and Kombo (2002) state that surveys are widely used to rapidly and accurately collect data about present conditions, opinions, behaviors, and attitudes. Data on demographics was gathered in the first section of the questionnaire; information on the effectiveness of EMIS in managing students and teachers in non-formal settings was gathered in the second and fourth sections; and information on the difficulties of implementing EMIS was gathered in the fourth.

### 3.4.1 Validity of the Research Instruments

In this section, we describe the results of our pilot studies and reliability analyses of the instruments we utilized to conduct the research. Both face validity and content validity analyses were performed on the questionnaire items. The study questions were incorporated into the development of the instruments to ensure face validity. Instruments were considered to have face validity if they were found to accurately reflect the nature of the concepts being measured (Singh, 2010). Together, they helped refine the study's methods and incorporate additional adjustments based on participant comments. By using content validation, the researcher could determine if the measuring technique's content was consistent with what was already known about the issue, ensuring that the researcher had accounted for all relevant concepts (Creswell, 2014; Singh, 2010). Only when there was agreement between the two sets of results was the test judged reliable.

### 3.4.2 Reliability of the Research Instruments

One definition of reliability is the extent to which multiple iterations of the same research technique yield the same results. In addition, as claimed by (Orodho 2005), it can also refer to an instrument's consistency in producing repeatable results. The test-and-retest strategy was used to confirm the study's validity.

### 3.4.3 Pilot testing of the research instruments

The researcher pretested the questionnaire and made any required adjustments to ensure the reliability of the data gathered. Ten students and ten faculty members who were not involved in the final study were used in a pilot study to test the validity of the research questionnaire in Sinai Slum Bridge schools.

## 3.5 Data Analysis Procedure

Quantitative and qualitative methods were used to examine the data. Social Package for the Social Sciences (SPSS) version 21 was used to classify and categorize the data, which was then loaded into software for analysis.

The goals guided the collection, analysis, interpretation, grouping into meaning clusters, categorization of themes, and coding of the qualitative data.

The research questions informed the interpretation of the qualitative data acquired during the interview schedule. Results from the analysis of the unstructured data were presented in the form of thematic narratives. Based on the data collected, we were able to draw inferences and formulate concrete recommendations for improving the educational management information system (EMIS) and the quality of education provided in non-formal settings.

### 3.6 Ethical Considerations of the Study

Ethical considerations, according to Orodho (2009), involve the conduct of the researcher, research assistants, and targeted respondents and may affect the reliability of study results. The researcher obtained approval from all appropriate bodies before beginning the study. Both the college administration and the Bridge school's upper echelons were involved. The researcher elaborated on the study's goals for the respondents. All participants gave their time voluntarily. Therefore, the respondents suffered no harm (whether physical, mental, or emotional). The respondent's anonymity was protected at all times by the researcher.

# CHAPTER FOUR

# DATA PRESENTATION AND INTERPRETATION OF FINDINGS

This chapter reports on research conducted at Bridge International Schools in Kenya to examine the relationship between Education Management Information Systems (EMIS) and non-formal education.

The chapter can be broken down into three distinct parts. In the first section, we will discuss how EMIS has helped improve the effectiveness of non-traditional educational institutions' student management. The second piece investigates how EMIS helps teachers become more effective managers, and the third section determines how much of a role EMIS plays in resolving learning difficulties in non-formal settings.

## 4.1. The Respondents Return Rate

Presentation of the questionnaire and responses received by the researcher were included in this part. The respondent rate, expressed as a percentage, is the proportion of eligible respondents who actually filled out the survey. There were 118 participants in the study, and 106 completed and submitted their questionnaires. As a result, we now have an 80% response rate.

The researcher deemed this response rate high enough to be representative of the sample population. According to Mugenda & Mugenda (2012), a response rate of 50% is sufficient, good if the rate is 60%, and very good if it is 80% for the analysis of the data. The 15 Bridge Schools in Nairobi County, Kenya, with their respective staffs and student bodies were the intended audience.

Field data showed that more than half of the people in the various target groups took part in the survey; specifically, 45 instructors (11%) and 15 principals (4%); the remaining 240 respondents (59%) were students. Information pertinent to the implementation of "Education

Management Information System (EMIS) and Learning in Informal Schools" was distributed across the three primary types of participants.

**Table 4.1: Participant's Return Rate**

| Responses | Frequency | Percentages |
|---|---|---|
| Teachers | 280 | 95% |
| Head Teachers | 14 | 5 % |
| Total | 294 | 100% |

However, 300 people responded, accounting for 74% of the total, whereas 105 people did not. This amounts to a response rate of 26%.

The 27 participating schools' principals have not provided an explanation for the low response rate, which may be indicative of one of the many problems with this study design.

**4.2 Demographic Information of the students**

The statistical According to the students' comments, it appears that the vast majority of them are beyond the age of 13. The responses suggested that the respondents had sufficient background knowledge to read the study and offer considered opinions on the topic. The field data also revealed the average years of schooling among respondents.

Their thoughts on how to measure how much of a role EMIS has in removing learning obstacles in non-formal settings, how EMIS affects student management efficiency, and how EMIS affects teacher management efficiency. This was crucial because the age of the respondents was known to have a major impact on the learning process.

### 4.2.1 Education Level of the Respondents

**Table 4.2: Education Level of the respondents**

| Education level of the respondents | Frequencies | Percentages % |
|---|---|---|
| Primary Education | 260 | 64 |
| College | 130 | 32 |
| University | 15 | 4 |
| If other specify | 0 | 0 |
| Total | 405 | 100 |

Responses in table 4.3 suggest that respondents meet the minimum educational threshold necessary to implement EMIS and facilitate learning in non-formal settings. Most of the teachers held advanced degrees from prestigious institutions.

### 4.2.2 Efficiency of student management in relation to (EMIS)

The purpose of this study was to determine whether or not (EMIS) is an effective tool for student management. This helped the researcher better understand how the respondents felt about the topic at hand. Table 4.3 below displays the outcomes of their responses.

**Table 4.3: Opinions on the implementation of EMIS and Learning in Informal Schools:**

| **Opinion on the implementation of EMIS** | **Frequencies** | **Percentages %** |
|---|---|---|
| Enhances time management | 11 | 24 |
| Enhances easy student monitoring | 21 | 46 |
| Good academic record keeping | 13 | 28 |
| Complex | 1 | 2 |
| Other | 0 | 0 |
| Total | 46 | 100 |

11 (24%) of respondents mentioned that it helps them better manage their time, as seen in Table 4.3. A total of 21 respondents (46%) found it to simplify student monitoring, while 13

(28%) found it to be useful for academic record keeping. As a result, it appears that the option that "alienates us from time consumption" came in second to "enhances easy student monitoring." The majority of respondents agree that the learning environment is taken into account during the EMIS implementation process. It is thought that this method aids in the candidates' ideal formation and is crucial in helping them make informed professional decisions.

**Table 4.4: Relationship of respondents with other colleagues.**

| Teachers relationship with other colleagues | Frequencies | Percentages % |
|---|---|---|
| Good | 35 | 35 |
| Moderate | 7 | 16 |
| Just fine | 4 | 9 |
| Don’t know | 0 | 0 |
| Other | 0 | 0 |
| Total | 46 | 100 |

Table 4.4 shows that out of 100 responses, 35 (35%) were rated as good, 7 (16%) as moderate, and 4 (9%) as fine.

**4.3: Using Education Management Information System (EMIS) to enhance formation of learners in Informal Schools.**

The result of this test was shared in the table.

**Table 4.5: Teachers Responses on EMIS Definition.**

| Teachers Responses on EMIS Definition | Frequencies | Percentages % |
|---|---|---|
| Teaching that involves computer | 4 | 9 |
| Use of technology in teaching and management | 7 | 15 |
| Teaching process involving general conferences and technology | 25 | 54 |
| System that enhances easy learning and understanding of a particular learner | 10 | 22 |
| **Total** | **46** | **100** |

Table shows that four-and-a-half percent (9%) of respondents consider EMIS to be computer-based education. While 25 (54%) have said that it is a teaching process incorporating general conferences and technology, just 7 (15%) consider that Use of technology in teaching and management. Ten (22% of respondents) cited a system that facilitates learning and comprehension as the reason. The study found that EMIS is a method of instruction that makes use of both technological and broad-based gatherings. Consistent with the accounts supplied by the respondents, it is evident that the implementation of EMIS in the informal educational setting will facilitate both teaching and administration. The study's author believes that using this method could help educators and students work together more effectively.

**4.4 EMIS enhances class management efficiency in non-formal schools.**

The study looked at how EMIS helps improve classroom management in non-traditional settings. This was significant because it allowed the researcher to control for factors that she knew would have some bearing on how successfully the Education Management Information System (EMIS) and Learning in Informal Schools were implemented. The tabular data below displays the responses received.

**Table 4.6: EMIS enhances class management in non-formal schools.**

| EMIS enhances class management. | Frequencies | Percentages % |
|---|---|---|
| 1. Simplifies teaching | 51 | 17% |
| 2. Guarantees general security of the student's data | 67 | 23% |
| 3. It enhances easier communication between student and teacher | 63 | 21% |
| 4. It promotes time consciousness and effectiveness | 54 | 19% |
| 5. Enhances instant feedback during learning | 59 | 20% |
| Total | 294 | 100% |

Table 4.6 shows that 51 respondents (17%) agree that EMIS makes it easier to teach. A total of 67% are confident that their pupils' information is safe, while 21% are not. Improves student-teacher dialogue by 54 percentage points (19%) Time awareness and productivity are both boosted, and rapid feedback on one's progress in learning is praised by 60% of respondents.

Results from the field support the claims of Story (2010), who argues that people's actions are drawn to the social worlds they've created for themselves. This means that for many students, learning centers are their primary source of social interaction, making them just as influential in shaping their attitudes, values, and personalities as their families and communities.

**4.5 How EMIS enhances individual student management efficiency in non-formal schools in Kenya.**

Four statements were used to gauge respondents' levels of agreement or disagreement with the claim that EMIS improves the effectiveness of individual student management in non-formal educational settings.

The scale used in this study ranged from "Strongly Disagree" (SD) to "Strongly Agree" (SA).

**Table 4.6: How EMIS enhances individual student management efficiency in non-formal schools.**

| Enhancement of individual student management Efficiency | SD | D | U | A | SA |
|---|---|---|---|---|---|
| EMIS enhances better understanding of the Learner. | 0(0%) | 63(21%) | 71(24%) | 84(29%) | 10(22%) |
| Integration of EMIS in non-formal schools enhances easy teaching | 0(0%) | 18(6%) | 64(21%) | 131(45%) | 81(28%) |
| EMIS guarantees security of student's data. | 0(0%) | 1(2%) | 14(5%) | 123(40%) | 156(53%) |
| EMIS enhances consistent daily growth for both the Teacher and the learner. | 0(0%) | 21(7%) | 16(5%) | 121(41%) | 136(47%) |

Table 4.6 displays the results from the field: 22% strongly agree EMIS improves teachers' comprehension of their students, 21% disagree, 24% are unsure, 26% are neutral, 28% agree, and 0% highly agree.

Respondents as a whole affirmed these views as being representative of their own beliefs. How Non-Formal Educational Institutions Can Benefit from EMIS Integration to Simplify Instruction There were 131 respondents (45%) who agreed with the statement, 64 (28%), who disagreed, 0 (0%), who were unsure, and 0 (0%), who strongly disagreed.

Similarly, when asked whether they thought EMIS ensured the privacy of student information, 123 (40%) of respondents said they agreed and 0 (0% said they strongly disagreed).

The results showed that 136 people (47%) highly agreed that EMIS helps both teachers and students improve every day. Of those polled, 41% strongly disagreed, 41% agreed, 41% were unsure, and 7% disagreed. According to the comments, most people think that using EMIS in non-traditional educational settings makes teaching simpler. Teachers benefit from this method

because it helps them connect with their students on a deeper level. This method enabled educators to see the uniqueness of each student and motivate them to approach the EMIS curriculum with an open mind. The study's primary goal was to ascertain whether or not students would benefit from EMIS being used in non-formal settings. Figure 4.1 displays the test findings.

| Respondent | Number | Percentage |
|---|---|---|
| Yes | 223 | 76% |
| No | 56 | 19% |
| Others | 15 | 5% |
| Total | 294 | 100% |

**Figure 4.1: Implementation of EMIS in informal schools to the lives of the individual learner.**

According to the data presented above, 73% of respondents answered "yes," 18% replied "no," and 9% wrote "others" to indicate missing or unspecified answers. According to the results, most respondents agree that introducing EMIS into non-formal educational settings will have a positive impact on students' lives.

Inadequate information or biases about EMIS values may be reflected in the responses identifying others or considered as no or absent.

### 4.6 How EMIS enhances teacher management efficiency in non-formal Schools

In order to better integrate EMIS in education, the researcher analyzed statements on how EMIS improves teacher efficiency in management in non-formal settings. This was determined using a 5-point Likert scale with five assertions concerning how EMIS improves the

effectiveness of faculty administration in alternative educational settings. The survey's respondents were asked to rate how much they agreed or disagreed with each statement.

**Table 4.7: EMIS enhances teacher management efficiency in non-formal schools**

| ***Enhancement of teacher management efficiency in non-formal schools*** | **SD** | **D** | **U** | **A** | **SA** |
|---|---|---|---|---|---|
| *EMIS simplifies teaching in non-formal schools* | 6(2%) | 1(2%) | 27(9%) | 173(59%) | 82(28%) |
| *EMIS is central part of the teaching process in non-formal schools* | 20(7%) | 64(22% | 70(24%) | 108(37%) | 32(11%) |
| *EMIS enhances teacher management efficiency in non-formal schools* | 6(2%) | 12(4%) | 0(0%) | 122(41%) | 154(53%) |
| *Teaching using this system means engagement in specific practices and disciplines* | 0(0%) | 6(2%) | 0(0%) | 215(73%) | 73(25%) |
| *Quality teaching using EMIS involves General conferences and spiritual retreats* | 0(0%) | 6(2%) | 6(2%) | 147(50%) | 135(46%) |
| *Total commitment and team work are inevitable during the teaching process* | 0(0%) | 0(0%) | 21(7%) | 132(45%) | 141(48%) |

Table 4.7 shows that out of the total number of respondents, 173 (59%) agreed, and 82 (28%) strongly agreed that EMIS makes it easier to educate students in non-traditional settings.

Learning, as shown by Shavitt (2008), thus establishes norms for shared things, time periods, and places in terms of how people perceive, believe, evaluate, communicate, and take action with one another. Respondents as a whole affirmed these views as being representative of their own beliefs.

Regarding the importance of EMIS in the non-traditional educational setting Some 6 percent of respondents severely disagreed, 22 percent disagreed, 24 percent were unsure, 37 percent were agreeing, and 11 percent were extremely agreeing.

Similar results were found when asking whether or not EMIS improved the efficiency with which teachers managed non-formal schools; 2% of respondents strongly disagreed, 4% disagreed, 0% were unsure, 41% agreed, and 53% highly agreed.

Results showed that while none of the respondents strongly disagreed, six percent disagreed, none were unsure, two hundred fifteen (73%) agreed, and seventy-three (25%) respondents strongly agreed.

In addition, 0 (0% of respondents) strongly disagreed, 6 (2% of respondents) disagreed, 6 (2% of respondents) were undecided, 147 (50%) Agreed, and the remaining 135 (46%) strongly agreed that quality teaching utilizing EMIS incorporates general conferences and spiritual retreats.

Among those surveyed, 0% strongly disagreed, 0% disagreed, 7% were unsure, 46% agreed, and the remaining 141% strongly agreed that total commitment and teamwork are essential to effective teaching.

### 4.6.1 Statements on how EMIS eliminates learning challenges in non-formal schools

The study looked at how respondents' perceptions of EMIS's ability to solve learning challenges in informal settings were tested. The instructors' responses to these demonstrated that they viewed their jobs as a means of preparing their students for adulthood, and gave insight into whether or not the teachers were familiar with certain methods of instruction. The responses to these questions were collected, organized, and displayed in a

| **EMIS Eliminates learning challenges in non-formal schools** | **SD** | **D** | **U** | **A** | **SA** |
|---|---|---|---|---|---|
| It incorporates both the theoretical and practical aspects of learning | 6(2%) | 12(4%) | 0(0%) | 126(43%) | 150(51%) |
| EMIS guarantees effective time management during the teaching process | 0(0%) | 32(11%) | 0(0%) | 218(74%) | 44(15%) |
| EMIS guarantees completion of the syllabus and good teacher student relationship within and without the learning environment | 0(0%) | 71(24%) | 0(0%) | 97(33%) | 126(43%) |
| It enhances wholistic learning and formation through expanding the learners perception of education | 6(2%) | 12(4%) | 0(0%) | 112(38%) | 164(56%) |

**Table 4.8: EMIS eliminates learning challenges in non-formal schools**

Table 4.8 shows that 6% (two percent) of respondents strongly disagree with the claim that this method integrates both academic and practical parts of education. Only 12 people (4% of the total) were against this, zero were unsure, 126 were in favor (43%), and the remaining 150 were in enthusiastic favor (50%).

Similarly, when asked if they thought EMIS would ensure efficient use of class time, 0% of respondents strongly disagreed, 11% disagreed, 0% were unsure, 74% agreed, and 15% highly agreed.

None of the respondents significantly disagreed with the statement that "EMIS guarantees completion of the syllabus and good teacher student relationship within and outside the learning environment," whereas 71% of those polled disagreed, 0% were unsure, 33% agreed, and 43% strongly agreed.

In addition, when asked whether they thought EMIS improved learning and formation by broadening students' perspectives on education, 164 (30%) said they strongly agreed while just 6 (2%), 11 (12%), and 0 (0%, respectively) disagreed.

**Table 4.9: EMIS eliminates learning challenges in non-formal schools**

| Serial Number | Levels | Number | Percentage |
|---|---|---|---|
| 1 | Low | 39 | 13 |
| 2 | Medium | 79 | 27 |
| 3 | High | 176 | 60 |

Learning Efficiency of EMIS and Age distribution

| **Serial Number** | **Age Group** | **Low** | **Medium** | **High** | **Total** |
|---|---|---|---|---|---|
| 1 | 23-28 | 10 | 19 | 47 | 76 |
| 2 | 29-35 | 20 | 39 | 117 | 176 |
| 3 | 35 and above | 2 | 10 | 30 | 42 |

### 4.7 Chapter summary

EMIS is a system that helps non-traditional educational institutions better manage their student bodies. It investigated how EMIS improved teacher management in informal settings and determined how much of an impact EMIS had on resolving educational barriers in informal settings.

Several methods for incorporating EMIS into classroom instruction were also evaluated. Tables, frequencies, and percentages were used to illustrate the quantitative data. The chapter drew to a close with a summary of the chapter's important findings, which suggested that combining EMIS with education in non-formal settings has the potential to make learning more engaging and enjoyable for students.

# CHAPTER FIVE

## SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter provided a synopsis of the research conducted on the topic of Education Management Information System (EMIS) implementation and education in non-formal settings. Focusing on Bridge International Schools in Kenya, this study aims to: determine the extent to which EMIS eliminates learning challenges in non-formal settings; explore the extent to which EMIS mitigates learning challenges in non-formal settings; determine the effects of EMIS on student management efficiency in non-formal settings; and determine the extent to which EMIS enhances teacher management efficiency in non-formal settings.

The study's research questions were informed by these aims, and it was grounded in the constructivist theory popularized by Jean Piaget. Piaget is credited with laying the groundwork for constructivism by arguing that knowledge is socially constructed and serves an adaptive rather than representational function (von Glasersfeld, 1996). The psychological perspective of constructivism in learning, as emphasized by Shunk (1996), is that most of what people learn or understand is formed or constructed by themselves.

The data collection and analysis in this study were carried out using a mixed research design paradigm. The principals, teachers, and students of the Bridge Schools were the intended audience. To ensure that all relevant subgroups were adequately represented in the study, the researcher employed purposive sampling procedures to choose respondents from each of the participating schools. Out of a total of 405 members from the selected schools, 294 participated in the survey.

To establish the dependability of the study tools, a test-and-retest procedure was used. The findings from the fieldwork were presented using descriptive methods. Tables, frequencies, and

percentages were used to summarize the quantitative data from the fieldwork. All survey responses were considered in the data analysis that was conducted using a mixed methods methodology.

Quantitative data were coded and entered into the Software package for social sciences SPSS for processing, and the data was then organized thematically according to the individuals with whom it was most closely associated.

**5.1 Summary of the Findings**

The study begins by discussing the concept of EMIS, which is a comprehensive system that allows for the collection, management, and analysis of educational data. It emphasizes the need for accurate and up-to-date information to make informed decisions regarding education policies and strategies. The study argues that implementing EMIS in informal schools can help improve the overall management and organization of these schools.

Furthermore, the study delves into the role of LMS in informal schools. LMS is a software platform that helps facilitate the delivery of online learning materials and resources to students. The study argues that incorporating LMS in informal schools can enhance the learning experience by providing access to quality educational resources, promoting interactive learning, and enabling personalized learning paths.

The study also highlights the potential challenges in implementing EMIS and LMS in informal schools. These challenges include limited resources, lack of technical infrastructure, and resistance to change. The study suggests that addressing these challenges through proper planning, training, and resource allocation can help overcome the barriers to implementing EMIS and LMS effectively.

More than eighty-five percent of invited participants showed up and completed the survey or interview, providing valuable insight into their experiences with and perspectives on the topic under research. Researchers separated participants into three groups: educators, administration, and students. The results of the study showed that EMIS adoption was affected by respondents' demographic factors.

Despite the fact that these schools were already utilizing this approach, the data suggested that the success of the policy depended on the commitment of both instructors and students to uphold it. Learners' absenteeism created a void in the policy, making it difficult to monitor their locations without deploying contact persons in the neighborhood.

### 5.1.1 Attitude

Some educators wrongly believed that introducing EMIS to their classrooms would make students' education more difficult than it already was. As a result, mindset affected Education Management Information System (EMIS) rollout and education in non-formal settings.

### 5.1.2 Age

The adoption of the Educational Management Information System (EMIS) and education in informal settings were both hampered by the fact that some pupils started school when they were too old to benefit from it. This was due to students not having a solid grounding in the four essential elements of the English language that are taught in the early grades.

The research uncovered viable options for introducing EMIS as a system. Outreach initiatives, an apologetic strategy, seminars and workshops including educators in the trial of this system, and electronic media platforms were among the methods uncovered by the study.

Several strategies for incorporating EMIS into educational programming were identified. Some of these were: being aware of and adapting to the changing needs of students, keeping

educators inspired and ready for their work, bringing in outside voices and perspectives, and including parents and other community members.

### 5.2 Conclusions

The research found that non-formal educational institutions were better able to manage their student bodies using EMIS. It investigated how EMIS may improve the effectiveness of non-formal school administration, how it can be used to get rid of obstacles to education, and how it can lessen the severity of existing obstacles to education in the Kibera slums of Nairobi County, Kenya.

Several methods of utilizing EMIS in the classroom were evaluated.

Tables, frequencies, and percentages were used to illustrate the quantitative data. Key findings were summarized, and the vast majority of respondents agreed that Education Management Information System (EMIS) and informal schooling should be combined to better engage students in their education.

### 5.3 Recommendations

- Integration of EMIS in Informal Schools: It is crucial to introduce an EMIS specifically designed to cater to the needs of informal schools. This system should incorporate features such as student enrollment, attendance tracking, and learning progress monitoring. Implementing a robust EMIS will enable the collection and analysis of valuable data, helping informal schools identify areas for improvement and make informed decisions.
- Capacity Building for Informal School Administrators: To effectively utilize EMIS tools, administrators and staff of informal schools should be provided with adequate training and capacity building programs. These programs would focus on developing their skills

in data management, information analysis, and reporting. Enhancing their understanding and proficiency in using EMIS will enable them to optimize the system's benefits.

- Resource Allocation and Monitoring: Informal schools often lack resources, both financial and material. EMIS can assist in efficient resource allocation by tracking the usage of available resources and identifying areas where additional support is required. Additionally, monitoring the utilization of resources can help ensure transparency and avoid mismanagement.
- After periodic examination and critical analysis by a team of specialists in accordance with their constitutions and rules of life, teachers and school administrators should regularly update their teaching guides.

**5.4 Suggestions for further research**

- To investigate the specific challenges and opportunities in implementing EMIS in informal schools. This study could involve conducting interviews or surveys with teachers, administrators, and students in different informal school settings to understand their perceptions and experiences with using EMIS. By exploring the unique contextual factors that influence the successful adoption of EMIS in informal schools, researchers can identify strategies or adaptations needed to ensure its effective use.
- To explore the impact of integrating Learning Management Systems (LMS) in informal schools. LMS platforms allow educators to create and manage online learning environments, including resources, assignments, and assessments. However, little research has been conducted on the potential benefits and challenges of implementing LMS in informal school settings. This study could involve exploring how LMS can complement traditional teaching practices in informal schools, support student-centered

learning, and enhance access to quality educational resources. Additionally, the research could investigate the digital literacy skills required for teachers and students to effectively use LMS in the informal school context.

- To establish the relationship between Education Management Information System (EMIS) installation and formal schooling, a comparable study should be conducted in urban schools.
- Researchers in Kenya need to find out how often and how well students in public secondary schools use EMIS.

In conclusion, there is a significant knowledge gap regarding the implementation and integration of EMIS and Learning Management in informal schools. Research on this topic can provide valuable insights into how technology-based educational tools can be effectively utilized in informal school settings to improve access to quality education, enhance learning outcomes, and promote educational equity. Various research suggestions outlined above, such as investigating implementation challenges, exploring the impact of LMS, conducting comparative studies, and analyzing the effects on learning outcomes, can contribute to filling this knowledge gap. These research efforts will provide valuable insights and recommendations for policymakers, educators, and stakeholders seeking to enhance the educational experiences and opportunities for students in informal schools.

## REFERENCES


Allavida-Kenya (2012). *Access to and quality of basic education in Kibera*, Nairobi: Study and Synthesis Report.

Brembeck, S.C (1972). (Program of Studies in Non-Formal Education [microform]: *The Strategic Uses of Formal and Non-Formal Education* / Cole S. Brembeck

Bridge International (2017). Available at: http://www.bridgeinternationalacademies.com/about/what-we-do/

Chunwijitra, S. (2013). *An Advanced Cloud-Based e-learning Platform for Higher Education for Low Speed Internet.* Doctoral Dissertation. The Graduate University for Advanced Studies (SOKENDAI).

Commission of Inquiry into the Education System of Kenya (1995). Totally Integrated Quality Education and Training Report

Cooper, R. and Schindler, P. (2014). *Business Research Methods* (12th Edition). New York: McGraw-Hill

Dighe, A., Hakeem. H.A. & Shaeffer, S., (2009). ICTs in Non-Formal Education in Asia Pacific' in Digital Review of Asia Pacific, 2009-2010, ed. Shahid Akhtar and Patricia Arinto, Sage, New Delhi

Ferguson, R., Brasher, A., Clow, D., Cooper, A., Hillaire, G., Mittelmeier, J., ... & Vuorikari, R. (2016). Research evidence on the use of learning analytics: Implications for education policy.

Grajcevci, A., & Shala, A. (2016). Formal and non-formal education in the new era. Action Researcher in Education, 7(7), 119-130.

Jadallah, E. (2000). Constructivist learning experiences for social studies education. *Social Studies, 91*(5), 221-225.

Kaugi, E., Bunyi, G., Waweru N.S. (2012). Access to quality education: The role of non-formal Schools in urban Informal Settlements in Kenya. Unpublished

Kaufman, D. M. (2018). Teaching and learning in medical education: how theory can inform practice. *Understanding medical education: evidence, theory, and practice*, 37-69.

Kenya Household Population census (KHPC) 2009

Kenya National Audit Literacy Survey 2008

Kiilu, R. and Muema, E. (2012). "An E-Learning Approach to Secondary School Education": E-Readiness Implications in Kenya. *Journal of Education and Practice,*

Makwati, G., Audinos, B., & Lairez, T. (2003). "The Role of Statistics in Improving the Quality of Basic Education in Sub-Saharan Africa." Working Document, Association for the Development of Education in Africa, African Development Bank, Tunis, Tunisia.

Manzoor, A., Wang, L., Qutub, K.., Hongwei, M. (2016). *Education and Training for Rural Transformation: Skills, Jobs, and Green future for combating poverty*. Thousand Oaks: CA, Sage Publications

Miguel Subosa, Mark West, (2018) *Re-orienting Education Management Information Systems (EMIS) towards inclusive and equitable quality education and lifelong learning (link is external)*, UNESCO.

Mourshed, M., Chijioke, C., & Barber, M. (2010). "How the World's Most Improved School Systems Keep Getting Better." Social Sector Unit, McKinsey & Company, New York.

Mutisya, M., Orindi, B., Emina, J., Zulu, E., & Ye, Y. (2010). Is mortality among under-five children in Nairobi slums seasonal? Tropical Medicine & International Health, 15(1), 132-139.

Ng'ang'a, M W. (2017770): Adoption and Use of ICT in Enhancing Management of Public Secondary Schools in Wareng District". *Journal of Education Management.* Kenya Education Staff Institute. Nairobi. Kenya

Ngware, M., Oketch, M., A. Ezeh, N. Mudege (2009). Do Household Characteristics Matter in Schooling Decisions in Urban Kenya? Equal Opportunities International, 28(7):591-608.

NPR. (2014). "Do For-Profit Schools Give Poor Kenyans a Real Choice?" April 22, 2014Kenya Institute of Education (1995):

Ojwang, C. (2012). *E Learning Readiness and E Learning Adoption among Public Secondary Schools in Kisumu County, Kenya.* Masters of Business Administration Project. University of Nairobi

Oketch M. and Sommerset. A. (2010). Free primary education and after in Kenya: Enrolment impact, quality effects, and the transitions to secondary school.

Oketch, M. & Rolleston, C. (2007). Policies on free primary and secondary education in East Africa: Retrospect and prospect. *Review of Research in Education*, 31, pp.131-158.

Oketch, M., M. Mutisya, M. Ngware, A.C. Ezeh (2010). Why are there proportionately more poor pupils enrolled in non-state schools in urban Kenya in spite of FPE policy? *International Journal of Educational Development*, 30(1), 23-32.

Olaleye, F.O. (2011). 'Teachers' characteristics as predictors of academic performance of students in secondary schools in Ogun state, Nigeria. *In European Journal of Educational studies* pg. (30, 2011.

Orodho, J.A. & Kombo, D.K. (2002). Research methods. Nairobi: *Kenyatta University, Institute Of Open Learning.*

Romulo, R. and Akhtar S. (2003), The Promise of ICTs in Education. http://www.eprimers.org and www.apdip.net

Samantha de Silva, Pradeep Valsangkar, (2015) *The impact of education management information systems: the case of Afghanistan [Blog post] (link is external)*, World Bank.

Selwynn N. (2003), ICT in Non-Formal Youth and Adult Education: Defining the Territory, NCAL/OECD International Roundtable, Nov. 12-14, 2003, Philadelphia

Shunk, D. H. (1996). *Learning theories: An educational perspective*. (2nd Ed.) New Jersey: Prentice-Hall.

Singh, S., & Yaduvanshi, S. (2015). Constructivism in science classroom: Why and how. *International Journal of Scientific and Research Publications*, *5*(3), 1-5.

Song, S. (2010). *E-learning: Investigating students' acceptance of online learning in hospitality programs.* Doctoral dissertation. Iowa state University.

Survey of Non-Formal Education in Kenya: Final Report

Taniguchi, K., & Hirakawa, Y. (2016). Dynamics of community participation, student achievement and school management: the case of primary schools in a rural area of Malawi. *Compare: A Journal of Comparative and International Education*, *46*(3), 479-502.

The Independent. (2015). "Bridge International Academies: Scripted schooling for $6 a month is an audacious answer to educating the poorest children across Africa and Asia." July 27, 2015.

Tooley, J., Dixon, P., & Stanfield, J. (2008). Impact of Free Primary Education in Kenya: A Case study of private schools in Kibera. London: Sage

Tikly, L. (2011). Towards a framework for researching the quality of education in low- income countries. Comparative education, 47(1), 1-23.

UNESCO (2008). *ICT Competences Standards for Teachers*. United Kingdom, UNESCO Press

UNESCO (2014). "Education Management Information System (EMIS)." UNESCO, Paris. Available at: http://www.unesco.org/new/en/education/themes/planning-and-managing-education/policy-and-planning/emis/. Accessed April 1, 2014.

Valentine, G., Marsh, J., Charles, P. (2005), "Children and young people's home use of ICT for educational purposes: the impact on attainment at key stage 1-4", DFES Issue Brief No. RR672.

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003), User acceptance of Information technology: Toward a unified view. *MIS Quarterly*, 27(3), 425-478.

Villanueva, C. C. (2014). Education management information system (EMIS) and the formulation of Education for All (EFA) Plan of Action. *Unesco*, *1*(1), 1-60.

Von Glasersfeld, E. (1998). Why constructivism must be radical. In M. Larochelle, N. Benarz, & J. Garrison (Eds.), *Constructivism and education*. (pp. 23-28). Cambridge: Cambridge University Press.

Willcocks L., & Lester, S. (1996), "In search of productivity assessment issues", *Proceedings of the 4th European Conference on Information Systems,* Lisbon,

Windschitl, M. (1999). The challenges of sustaining a constructivist classroom culture. *Phi Delta Kappan*, *80*(10), 751-754.

Windschitl, M. (2002). Framing constructivism in practice as the negotiation of dilemmas: An analysis of the conceptual, pedagogical, cultural, and political challenges facing teachers. *Review of Educational Research, 72*(2), 131-175.

Wu, H. (2012). Designing a reusable and adaptive e-learning system. *Journal of Business and Management, 2(3), 14–20.*

Yusuf, M.O. (2011). Information and communication education: Analyzing the Nigerian national policy for information technology. *International Education Journal 6* (3), 316-321.

Zaidi, M. (2014). "EMIS in Pakistan: Process, People, and Structures." USAID, Washington DC.

## APPENDICES

### APPENDIX I: LETTER OF INTRODUCTION

**July, 2019,**

**TO WHOM IT MAY CONCERN**

**Dear Respondent,**

**RE: INTRODUCTORY LETTER**

I am a student in the department of Social Sciences at The Catholic University of Eastern Africa in Karen Langata Campus. I am doing a study on ***"Education Management Information System (EMIS) and Learning in Informal Schools: A Case of Bridge International Schools in Kenya".***

This study is part of part of the requirements for the award of a master's degree in development studies. Therefore I am kindly asking for you valuable cooperation and collaboration. Remain assured that the information gathered from you will be handled with care and great confidentiality for the purpose of this very study.

Yours faithfully,

**Lillian W. Mwangi**

**REG. NO: 1025660**

## APPENDIX II: INTERVIEW GUIDE FOR HEAD TEACHERS

**What is your approximate age in years?**

1. What is your level of education?
2. How long have you been involved in the EMIS program?
3. What is your experience with the above program?
4. How would you describe your relationship with other colleagues using the Program?
5. What is your understanding of "Education Management Information System (EMIS) and Learning in Informal Schools in relation to the formation of learners?
6. In your own opinion, does this system have any impact on the lives of the learners? Yes? No? For each answer please tell why.
7. What are some of the available teaching techniques you use for the learners under this system?
8. As a teacher, what would you say are some of the possible ways we could use to integrate EMIS in the Educational programme for the schools that haven't adapted to this system?

**APPENDIX III: QUESTIONAIRES FOR THE TEACHERS.**

Kindly provide the genuine answers to the following question. Information given shall be treated with high level of confidentiality.

Tick where appropriate **A : Demographic information**

1. What is your approximate age looking at the ranges provided below?

25 and below [ ] 26-35 [ ] 36-45[ ] 46-55 [ ] 41-45 [ ] 46-55 [ ] 51-55[ ] 56 and above [ ]

2. What is your highest level of education?

1. **Please indicate (✓) your highest level of education**

i. Primary Education [ ] Secondary Education [ ]

ii. College Education [ ] University Education [ ] If other specify……..

**What class (es) do you teach?**

Lower Primary [ ] Upper Primary [ ]

3. What is your opinion about the use of EMIS program in your specified class above?

Friendly to the learner [ ] Not friendly to the learner [ ] Not integrated [ ] complex [ ] Other…….

4. How is your relationship with the learners while integrating EMIS in teaching?

Good [ ] moderate [ ] just fine [ ] don't know [ ] other [ ]

**PART B: HOW EMIS ENHANCES STUDENT MANAGEMENT EFFICIENCY IN NON-FORMAL SCHOOLS IN KENYA.**

1. How in your own opinion does EMIS enhance students' management efficiency in non-formal schools?

a. ……

……

……

…….

**2. Do you personally, consider EMIS as important?**

a. Yes [ ] No [ ] other [ ] If yes, explain ……..

3. How important is this system towards the formation of learners?

a. Important [ ] very important [ ] Not very important [ ] Not sure [ ]

4. A statement about How EMIS enhances student management efficiency in non-formal schools in Kenya.

**DIRECTIONS**: Below are four statements with which you may agree or disagree. Using the 1-5 scale below, where 1 SA is-Strongly Agree,2 D-Disagree,3 U- Undecided,4 A-Agree and 5 SD-Strongly disagree, indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be as open minded as possible and honest when responding.

| **No** | **Statements about how EMIS enhances student management efficiency in non-formal schools in Kenya.** | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | EMIS enhances better understanding of the learner | | | | | |
| 2 | Integration of EMIS in non-formal schools makes teaching Interesting | | | | | |
| 3 | EMIS guarantees security of students data | | | | | |
| 4 | EMIS enhances consistency in daily growth of both the teacher and the learner | | | | | |

**Part C. HOW EMIS ENHANCES TEACHER MANAGEMENT EFFICIENCY IN NON-FORMAL SCHOOLS**

In your own opinion how does EMIS enhance teacher management efficiency in non-formal schools?

……

……

……

**DIRECTIONS**: Below are six statements with which you may agree or disagree. Using the scale of 1-5 provided below, where 1 SA is-Strongly Agree,2 D-Disagree,3 U- Undecided,4 A-Agree and 5 SD-Strongly Disagree. Indicate your agreement with each item by placing the appropriate number in the line preceding that item. Please be as open minded as possible and honest when responding.

| No | Statements about how EMIS enhances teacher management efficiency in non-formal schools | SA | D | U | A | SD |
|---|---|---|---|---|---|---|
| **1** | EMIS simplifies teaching in non-formal schools | | | | | |
| 2 | EMIS is central part of the teaching process in non-formal schools | | | | | |
| 3 | EMIS enhances teacher management efficiency in non-formal schools | | | | | |
| 4 | Teaching using this system means engagement in specific practices and disciplines | | | | | |
| 5 | Quality teaching using EMIS involves General conferences and spiritual retreats | | | | | |
| 6 | Total commitment, teamwork, and accountability are inevitable during the teaching process | | | | | |

**Part D**. **HOW EMIS ELIMINATES LEARNING CHALLENGES IN NON-FORMAL SCHOOLS**

In your own opinion how does EMIS eliminate learning challenges in Non-formal schools?

……

……

……

**DIRECTIONS:** Below are four statements with which you may agree or disagree using scale of 1-5 provided below, where 1 SD is strongly disagree, 2 D Disagree, 3 U undecided 4 A agree 5

SA strongly agree. Indicate your agreement with each item by placing the appropriate number in the line preceding that item.

| | **Statements on how EMIS eliminates learning challenges in non-formal schools** | SD | D | U | A | SA |
|---|---|---|---|---|---|---|
| 1 | EMIS guarantees effective time management during the teaching process | | | | | |
| 2 | EMIS guarantees completion of the syllabus and good teacher student relationship within and without the learning environment | | | | | |
| 3 | It enhances holistic learning and formation through expanding the learner's perception of education | | | | | |
| 4 | It incorporates both the theoretical and practical aspects of learning | | | | | |

***THANK YOU FOR YOUR PARTICIPATION***

## Appendix IV: NACOSTI RESEARCH AUTHORISATION LETTER

**THE CATHOLIC UNIVERSITY OF EASTERN AFRICA**

Faculty of Arts and Social Sciences

Department of Social Sciences and Development Studies

Our Ref: CUEA/ACA/DDS/ 16/2 15th January 2020

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam,

**RE: REQUEST TO ASSIST MASTERS STUDENT ON RESEARCH - LILIAN WAMUYU MWANGI**

I wish to introduce to you and confirm that the above named is a finalist post graduate student undertaking MA in Development Studies and registered as Reg. No. MDS/1025660.

Lilian is herewith duly authorized by the university, through the Department of Social Sciences and Development Studies, to undertake her research in the sector of EDUCATION.

Her study activity location will be in NAIROBI CITY COUNTY, where she intends to carry out her study titled: "EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND LEARNING IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS IN KENYA"

Please give her any required assistance, permit or authority to either access information or facilitate contacts in the field to enable her to collect the relevant data during her research activities.

I wish to assure you that Lilian's study is purely for academic purposes in the university, it is being part of the mandatory requirements for acquiring the masters' degree.

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
HEAD OF DEPARTMENT
15 JAN 2020
DEVELOPMENT STUDIES
P.O. Box 62157-00200, NAIROBI

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157-00200 Nairobi
Tel: [illegible], Fax: [illegible], Email: [illegible]
Free [illegible] by AMECEA (Association of the Member Episcopal Conference in Eastern Africa)

The two duly appointed supervisors of the student have declared that Lilian is ready for the field having revised the proposal and the research tools she intends to use in the field.

Should you require any further details regarding this recommendation, I will be quite happy to respond to you immediately. Thank you in advance.

Yours sincerely,

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
HEAD OF DEPARTMENT
15 JAN 2020
DEVELOPMENT STUDIES
P. O. Box 62157 NAIROBI

(Michael T. Okuku)
**Lecturer & Co-ordinator, Development Studies**
Department of Social Sciences and Development Studies
Cell: + 254 722 551 382 or + 254 787 220 658
Naubuga Hall No.12 Ground Floor Ext 1157

cc
**Dr. Michael Sitawa** 1st **Supervisor**
Senior Lecturer CUEA

**Fr. Cleophus Tesha (O.P.)** 2nd **Supervisor**
Lecturer FASSc
Faculty of Arts and Social Sciences

**Prof. Samuel A. Nyanchoga,**
Dean,
Faculty of Arts and Social Sciences

**Rev Prof. Peter Gichure**
Director of Graduate Studies - CUEA

**Director-General/ C.E.O.**
National Council for Science, Technology and Innovation (NACOSTI)
NACOSTI Building, Off Waiyaki Way, NAIROBI

## Appendix V: Research Clearance Permit.

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **928992**

Date of Issue: **22/September/2020**

**RESEARCH LICENSE**



**This is to Certify that Ms.. lillian Wamuyu mwangi of Catholic University of Eastern Africa, has been licensed to conduct research in Nairobi on the topic: EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND LEARNING IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS IN KENYA for the period ending : 22/September/2021.**

License No: **NACOSTI/P/20/6851**

**928992**

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

**Appendix vi: Plagiarism Report**

THE CATHOLIC UNIVERSITY OF EASTERN AFRICA
INFORMATION SYSTEMS LIBRARIAN
TURNITIN ORIGINALITY REPORT

REF: PGS/FASS/225/FIN/LANGATA,

Turnitin Originality Report

Processed on: 26-Sep-2023 12:14 EAT
ID: 2177358731
Word Count: 13562
Submitted: 1

EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND LEARNING MANAGEMENT IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS NAIROBI By Lillian W. Mwangi 1025660

| Similarity Index | Similarity by Source | |
|---|---|---|
| 8% | Internet Sources: | 6% |
| | Publications: | 2% |
| | Student Papers: | 4% |

I HEREBY CONFIRM THAT **LILLIAN WAMUYU MWANGI** REG NO: **1025660**, SUBMITTED A CHECK OF ANTIPLAGIARISM ON CRITICAL EVALUATION OF **EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND LEARNING MANAGEMENT IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS NAIROBI. A RESEARCH THESIS PRESENTED TO THE FACULTY OF ARTS AND SOCIAL SCIENCES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR MASTER OF ARTS DEGREE IN PROJECT PLANNING AND MANAGEMENT (MPM) AT THE CATHOLIC UNIVERSITY OF EASTERN AFRICA.**

Verification by Systems Librarian:

Name: HARUN ..... MWANGI ..... Signature: ..... Date: 26/9/2023

The Catholic University of Eastern Africa
INFORMATION SYSTEMS LIBRARIAN
P. O. Box 62157-00200, NAIROBI

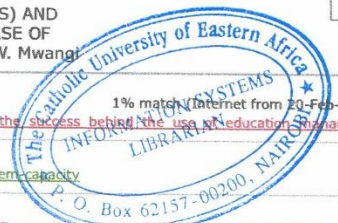
THE CATHOLIC UNIVERSITY OF EASTERN AFRICA (CUEA) P.O. BOX 62157 00200 Nairobi – KENYA
Tel: 020-2525811-5, 8890023-4, Fax: 8891084, Email: antiplagiarism@cuea.edu Website: www.cuea.edu
**Founded in 1984 by AMECEA (Association of the Member Episcopal Conferences in Eastern Africa)**

# Turnitin Originality Report

Processed on: 26-Sep-2023 12:14 EAT
ID: 2177358731
Word Count: 13562
Submitted: 1

EDUCATION MANAGEMENT INFORMATION SYSTEM (EMIS) AND LEARNING MANAGEMENT IN INFORMAL SCHOOLS: A CASE OF BRIDGE INTERNATIONAL SCHOOLS NAIROBI By Lillian W. Mwangi 1025660

| Similarity Index | Similarity by Source | |
|---|---|---|
| 8% | Internet Sources: | 6% |
| | Publications: | 2% |
| | Student Papers: | 4% |




1% match (Internet from 20-Feb-2023)
https://www.researchgate.net/publication/328270642_Assessing_the_success_behind_the_use_of_education_management_information_systems_in_higher_education

1% match (Internet from 13-Apr-2019)
https://ec.europa.eu/epale/en/blog/need-enhancement-emis-system-capacity

< 1% match (Internet from 18-May-2023)
https://www.researchgate.net/publication/228856797_Slums_As_Expressions_of_Social_Exclusion_Explaining_The_Prevalence_of_Slums_in_African_Countries

< 1% match (Internet from 18-Feb-2023)
https://www.researchgate.net/publication/355946804_Innovation_in_Higher_Education_Management_and_Leadership

< 1% match (Internet from 28-Jun-2022)
https://www.researchgate.net/publication/346483239_Information_Systems_Usage_in_Universities_of_Madhya_Pradesh_An_Empirical_Investigation

< 1% match (Internet from 12-Jan-2023)
https://www.researchgate.net/publication/347562564_Qualitative_analysis_of_virtual_reality_adoption_by_tourism_operators_in_low-density_regions

< 1% match (Internet from 14-Nov-2022)
http://ir.cuea.edu/jspui/bitstream/1/6198/1/SR.%20MARY%20FINAL%20THESIS.pdf

< 1% match (Internet from 30-Mar-2022)
http://careersdocbox.com/Nursing/71475828-The-catholic-university-of-eastern-africa-faculty-of-arts-and-social-sciences-department-of-social-sciences-and-development-studies.html

< 1% match (student papers from 12-Oct-2022)
Submitted to University of Pretoria on 2022-10-12

< 1% match (Internet from 12-Dec-2022)
https://www.gingoutweb.com/why-is-education-important-necessity-of-education-to-life/

< 1% match (student papers from 07-Jun-2023)
Submitted to London School of Commerce and IT on 2023-06-07

< 1% match (student papers from 16-May-2023)
Submitted to The University of the South Pacific on 2023-05-16

< 1% match (José Martins, Frederico Branco, Ramiro Gonçalves, Manuel Au-Yong-Oliveira et al. "Assessing the success behind the use of education management information systems in higher education", Telematics and Informatics, 2018)
José Martins, Frederico Branco, Ramiro Gonçalves, Manuel Au-Yong-Oliveira et al. "Assessing the success behind the use of education management information systems in higher education", Telematics and Informatics, 2018

< 1% match (Internet from 13-Feb-2023)
http://www.suaire.sua.ac.tz/bitstream/handle/123456789/4924/Boaz%20.S.%20Kiberiti.pdf?isAllowed=y&sequence=1

< 1% match (Internet from 04-Feb-2020)
https://www.chuka.ac.ke/advert%2017/3rd%20International%20Research%20Conference%20Proceedings%202016.pdf

< 1% match (Internet from 20-Aug-2023)
https://www.mdpi.com/2032-6653/14/8/227