

**THE EFFECT OF VISUAL LEARNING AIDS ON STUDENTS' ACADEMIC  
PERFORMANCE IN PUBLIC SECONDARY SCHOOLS: A CASE OF MAGU  
DISTRICT SECONDARY SCHOOLS**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE  
REQUIREMENTS FOR THE DEGREE OF MASTER OF EDUCATION IN  
ADMINISTRATION, PLANNING AND POLICY STUDIES OF THE OPEN  
UNIVERSITY OF TANZANIA**

**2015**

**CERTIFICATION**

The undersigned certifies that she has read and hereby recommends for acceptance by the Open University of Tanzania a dissertation titled: “*The Effect of Visual Learning Aids on Student’s Academic Performance in Public Secondary Schools, A Case of Magu District Secondary Schools*” in partial fulfilment of the requirements of the degree of Master of Education in Administration, Planning and Policy Studies of the Open University of Tanzania.

.....

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Date

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**DECLARATION**

I, **Joseph Mitanda Kaswa** do hereby declare that this dissertation is my own original work, and that it has not been submitted for a similar degree in any other University.

.....

Signature

.....

Date

**DEDICATION**

This dissertation is dedicated to my beloved wife Leah for her financial support during undertaking my daily studies together with my precious children Leocadia and Philipo for their tolerance during my absence. May the loving God bless you abundantly.

## ACKNOWLEDGEMENT

I unquestionably cannot claim that the end product of this dissertation was only the result of my own sweat. I am obliged to a list of resourceful personnel who played the remarkable roles towards the accomplishment of this work.

Firstly, I would like to thank my Almighty God for giving me a gracious opportunity to be admitted at the Open University of Tanzania and his love and care that I have experienced throughout my study.

Secondly, I register my deeper appreciation to my supervisor, Dr. Magreth Bushesha who spent much of her time going through each word of my work, recommending on what had I have to do so that I could end up with a standard dissertation.

Thirdly, I would be unwise if I do not thank Gervas Lubambe who spent much of his time editing this work, with his effort grammatical error has been minimized.

Fourthly, My sincere appreciation goes to my wife Leah, all respondents and authorities who participated in any way during my study because without them nothing would have been accomplished.

Lastly, but not least I would like to pass on my thanks to my colleagues such as Slivia Ntigiri at the Open University of Tanzania who persistently worked hand in hand with me even when I felt to be dead beat and discouraged.

**ABSTRACT**

This study thought to establish effect of visual learning aids on student's academic performance in public secondary schools of Magu District. The study used a sample size of 102 people. The study examined the performance of four schools of Magu in the 2013 and 2014 National Form Four Examinations in which two schools used visual learning aids and two schools were not using. The study inquired also about the kind of aids used and their quality. The study also examined the factors that made some schools use the aids and the barriers in other schools, and lastly, the study inquired about other barriers that inhibited performance in public secondary schools in the District. Questionnaires, documentary reviews and cross-examination interviews were used to collect data. The outcomes were that Magu and Kitumba Secondary Schools which used learning aids had better results for the consecutive years of 2013 and 2014 in which 21.56% and 40.74% (Magu) and 23.77% and 45.7% of Kitumba Secondary School got division one to three while for Kandawe Secondary School only 11.30% and 22.41% and for Itumbili it was 13.06% and 29.73% students respectively who got division one to three. District wise, Magu and Kitumba Secondary Schools held the position of 8th and 7th and Kitumba held 10th and 3rd positions in the two years. Kandawe held 16th and 17th and Itumbili held 10th and 14th positions out of 19 schools in the same years. It was further found that schools used learning aids which were in poor state, the greatest barrier being inadequate budget allocations. There were however other factors that affected the performance of students in the District which include; shortage of teachers, poverty of parents, lack of books and lack of laboratories.

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**LIST OF ABBREVIATIONS**

BC	Before Christ
DED	District Executive Director

EFA	Education for All
EFL	English as Foreign Language
MOEVT	Ministry of Education and Vocational Training
NECT	National Examination Council of Tanzania
SEDP	Secondary Education Development Plan
DSEO	District Secondary Education Officer
DCIS	District Chief Inspector of Schools



## **CHAPTER ONE**

### **BACKGROUND INFORMATION**

#### **1.1 Introduction**

Usual of visual learning aids on teaching has proved to be effective in the learning outcomes. But public secondary schools in Tanzania are faced with multitude of problems which contribute in poor performance in national examinations. This study sought to examine whether use or non-use of visual learning aids was the sole cause of performance differential in secondary schools in Magu District, Mwanza Region. Chapter one introduces the construct of the study including the problem statement, objectives of the study, scope and the significance of the study. It also spells out the limitation and how these were overcome.

#### **1.2 Background to the Problem**

Visual learning aids such as pictures, drawings or dynamic video is often designed to facilitate learning and have a positive effect. From the learning and instruction point of view, the effectiveness of the visual information is concerned with cognitive learning and retention. Moreover, the performance criteria of learning materials are mainly focused on comprehension and recall.

However, Watson *et al.* (2010) state that, the performance criteria should be focused on the effect of the actual action than on the retention if the learning aids real applied to a procedural motor task. Then, when preparing and using visual learning aids, teachers should think in terms of how they will promote learning. It is therefore more correct to refer to them as learning aids rather than teaching aids.

Surveys show that many teachers in developing countries such as Tanzania stop using visual learning aids after leaving college. This is probably because they tend to be involved in extra work and more demanding organizational techniques on the part of the teachers. Macharia and Wario (1989) provide that; “I hear and I forget, I read and I remember and I see and I understand”.

The utilization of learning aids in instructional process reflects back to ancient periods. This period is characterized by Greeks and Latin people, especially during early 150 BC when people were taught and learned things practically. Callahan (1988) states that, “Once upon a time when the mankind was young; reading and writing had not been invented, therefore men and women taught their children by means of very simple local tools.” It was an important technique which created the quality outcomes in learning and teaching processes, since the learners observed physically and practically on the learning aids related to the particular lesson or issue.

For instance boys were taught hunting wild animals such as an elephant by using spears and arrows, while girls were taught on how to prepare food. Apart from that, parents taught their children about the World location by using local maps drawn on the ground, and religion was taught by using pictures drawn on the walls and caves. All these give us the picture on how the visual learning aids influence the process of instruction in Secondary Schools. Any kind of an instruction whether in public schools, private schools or informal education is an existing activity which is in need of enhancement of educational atmosphere particularly visual learning aids (Anderson, 2009).

Public secondary schools started in America during 19<sup>th</sup>c. It was the first nation which advocated public supported schools which believed that; the American people had a responsibility to acquire quality education in order to achieve desired basic democratic goals such as to improve social condition, to promote cultural unity, eradication of inequalities in education and ensuring basic level of quality among schools. This situation enabled the society and community as a whole to live peacefully and in harmony (Bergen, 1997).

In Tanzania, public secondary schools were introduced after independence in 1964 in order to implement the curriculum reform about education for all (EFA). The purpose of this education policy was to let many students to access primary and secondary education. Due to this education expansionism policy, many challenges occurred, including inadequacy of learning aids. For example, in 1961 the number of students in public secondary schools were 11,832, but on the year 1967, the number increased to 25,000, therefore, this is an evidence of the increase of public secondary schools (Nyerere, 1968). But EFA policy was not well implemented. This was revealed when the government failed to finance human and physical resources, hence the program ended up with negative outcomes, such as, shortage of buildings, incompetent teachers and inadequate of teaching and learning materials.

Magu District Council is located in the eastern part of Mwanza City, some 65 Kilometers away. It has 19 public secondary schools, among them; 4 schools are located in urban and 15 schools are located in rural areas. Urban secondary schools receive more resources than those of rural areas and the occurrences of such situation lead to the difference on students' academic performance. The clear use of learning

visual aids such as posters, wall painting, flash card, pie chart, let the students remember the facts and altitudes for longer and more clearly (Brown et al, 1982). Despite the necessity of using learning visual aids, different threats hinder the application and availability of such aids. The government of Tanzania through the Ministry of Education and Vocational Training (MOEVT), does not ensure availability of the visual learning aids, therefore some are not there. Due to the failure of preparing and using of learning visual aids, schools provide low quality academic performance to the students.

### **1.3 Statement of the Problem**

Magu District council possesses 19 public secondary schools. Performance in the 2013 and 2014 National Form Four Examinations was very poor whereby over 58% of all students got division zero and less than 42% of all students got division I to III (NECT, 2013, NECTA, 2014). While there can be several factors contributing to the failure, use and non-use of visual learning aids might have a potential impact.

Existing literature shows that, visual learning aids have impacts on students' academic performance. Mavida *et al.* (1966) reiterate that the utilization of instruction materials such as visual learning aids make students participate effectively in the learning process, hence ending with quality education that enable them to suit in the current society in relation to technological changes. Rasul, et al. (2011) report that, audio visual aids play important role in teaching and learning process. Aids make teaching and learning process effective, aids provide knowledge in depth and detail and they bring change in class room environment. Further, Stokes (undated) discusses literature on visual elements in teaching and learning, saying it

suggests positive results, but in order for visual enhancements to be used most effectively, teachers should possess skills that include the language of imagery as well as techniques of teaching visually and that guidance in the area of visual literacy for instructors is warranted. Mathew and Alidmat (2013) concluded that aids are often viewed to be an inspiration and provide motivation in classroom instruction and that effective use of audio-visual aids substitutes monotonous learning environments. Arora, (2013) further concluded that there is a great impact of audio-visual aids in the teaching-learning process, wherein students find the method of teaching very effective.

So generally it is agreed that visual learning aids assist in the learning process and students find it easy to grasp the materials in classroom when visual learning aids are used. However, use or non-use of learning aids was not the only problem in public secondary schools in Tanzania; materials shortages, motivational inadequacy and poor learning environment were some of the problems. However, the relationship between usage and non-usage of visual learning aids and students' academic performance in Magu district have had not so far been established, despite other problems. The objective of this study was to examine to what extent use and non-use of visual teaching aids effected on the students' academic performance in Magu district.

#### **1.4 General Objective**

The main objective of this study was to examine the effect of use and non-use of visual learning aids on students' academic performance in Magu district.

### **1.4.1 Specific Objectives**

The study was guided by the following specific objectives.

- (i) To examine the National Form Four examination performance in 2013 and 2014 between schools which use visual learning aids and those which do not use in Magu District.
- (ii) To identify the type of visual learning aids that secondary school teachers in Magu District used and their effect on students learning outcomes.
- (iii) To identify the barriers which made use of visual learning aids difficulty in Magu District Secondary Schools.
- (iv) To explore what factors affected the performance of students in examinations in Magu District.

### **1.5 Research Questions**

The study was guided by the following research questions:

- (i) What was the performance difference in the National Form Four examination in 2013 and 2014 between secondary schools in Magu District which used visual learning aids and those which were not using?
- (ii) What were the types of visual learning aids used in Magu District secondary schools, and to what extent were they effective in student learning outcomes?
- (iii) What were the barriers towards the use of visual learning aids in Magu District secondary Schools and how could these barriers be eliminated?
- (iv) What other factors affected the student performance in the examinations in Magu district?

## **1.6 Significance of the Study**

The study on the effects of using visual learning aids on student's academic performance in public secondary schools was expected to be of significance to the following:

The study will help young academicians in the field of education by finding research gaps by conducting more researches in field of education. Also the study will help the government understand and so plan in advance in relation to the provision of visual learning aids in public secondary schools. The study will increase awareness of the magnitudes of the problem by showing suggestions on how to improve visual learning aids in public Secondary Schools. Finally it was further expected that the concerned authorities at district, regional and national level would address the problem seriously by providing adequate teaching and learning aids such as science apparatus to community secondary schools in order to achieve quality education as anticipated in the Secondary Education Development Plan (SEDP).

## **1.7 Scope of the Study**

The study was conducted in Magu District and involved four public secondary schools; two schools chosen from those schools using visual aids and another two from those not using visual aids in learning and teaching process. The impacts of the aids would be learned through the performance levels between the four schools in the Form Four National Examination results of 2013 and 2014. Students' and teachers' opinions about the impact of visual aids were examined as well. The kinds of aids used and their effect were scrutinized and determined their effectiveness, the barriers that make them less effective and whether there were intervention measures required.

### **1.8 Limitation of the Study**

These are the methodological features that hinder the application or interpretation of the results of a research problem. Keya et al (1989), states that, being aware of the limitation helps the researcher to avoid the setback over prospect in course of study. In going this study, the researcher was expected to face the following challenges; first, limited in terms of budget restriction and the time for conducting the study.

Thus, the researcher chose nearby four public Secondary Schools which were enough to congregate the researchers' requisite in this study, rather than selecting a large area. A Second challenge was data collection due to the research instruments and the nature of the study as Secondary School teachers were thinking of being inspected. Thus the researcher was patient and tried to convince them.

### **1.9 Delimitation of the Study**

The study concentrated on four public Secondary schools found in Kahangara, Itumbili and Sanjo division located in Magu District Council in Mwanza Region. These divisions are convenient in terms of accessibility, reach ability and familiarity, all of these made easier to get the information from respondents. This study aimed to collect data from 4 public Secondary Schools out of 19 Schools. The study had boundaries, since it dealt with only form four students, subject teachers, heads of schools, District Chief Inspector of Schools and District Secondary Education Officer There was no doubt because will give a relative and reliable picture of this situation in other similar areas of Mwanza region and Tanzania in general.



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter reviews literature on an assessment of the effects of visual learning aids on students' academic performance in public secondary schools. Clark et al (1986) state that good teachers can be better teachers when they prepare plenty of visual learning aids for instruction process. Makyikyeli also states that, the general function of visual learning aids is that of delivering message and creating sense of understanding between the teacher and the student. This chapter contains sub-chapters including theoretical literature, the empirical literature the relation of literature to the study and the research gap.

#### **2.2 Theories of Visual Aids in Learning**

##### **2.2.1 Dual-Coding Theory**

According to Paivio (1990), images and words have different cognitive presentations; therefore, the brain uses separate memory systems for different types of information. He states that, verbal memory is rotated to language system, while image memory includes graphics and tastes. Paivio indicated that, verbal information is acquired from sensory memory to visual processors. The question here is to what extent has the secondary subject teachers improved on improvising visual learning aids for the achievement of quality education? This study will help to enlighten on this issue.

Paivio's dual-coding theory was appropriate when referring to the retrieval of information from memory systems, this theory claimed that memory is set up as a

network with different paths, verbal and image that lead to the same information. Pavio concluded that, the more path ways learners use to remember information, The more cures learners can recall that information later on.

### **2.2.2 Multimedia Theory**

Richard Mayer was an expert in multimedia learning. His multimedia theory was drawn on paivio's Dual code theory (1990), Sweller's Cognitive Load theory (1994) and Bruner's constructivist theory. Mayer and his associate Mareno (2000), conducted a study in delivering instructional design principles from cognitive theory in Multimedia learning. Their main argument is that, active learning occurs when a learner engages three cognitive processes, selection, organization and integration. Also this study will help to verify this issue.

#### **2.2.2.1 Selection**

On miller's findings stated earlier, students are able to process shucked information. During that time, must select relevant words and images to be stored, Multimedia theory believed that, the learner selects relevant words for verbal processing and select relevant images for visual processing. Based in verbal and visual memory systems to overcome the limitations of memory.

#### **2.2.2.2 Organization**

Here the theory states that, the learner organizes words into coherent verbal models and organizes images into coherent visual models. It concluded that, the more the learner he/she think about and organize information in meaningful ways, the more he/she repeat information in his/her working memory, and the more likely he/she remembers it.

### **2.2.2.3 Integration**

Mayer's Multimedia theory has shown that, learners such as students learn better when corresponding verbal and visual information are held together because it makes learning more meaningful. He believed that, verbal and visual information are linked and assist each other, therefore, when receiving verbal information and images simultaneously the student processes different models of information all at once. The main argument here is that how these theories will help subject teachers to create effective visual learning aids to improve students' academic performance? This study will help to enlighten on this issue.

### **2.2.3 Instructional Theory**

An instructional theory is the theory which explains on how students can learn and understand the concept very easily. The chief proponent of this theory is Skinner in theories of behaviourism. In this approach it is observed that theory is the most influential in educating, since it emphasizes on the use of visual learning materials, which promote quality education to human being. In the learning process, instructional theory describes on how to organize, coordinate learners, introduce visual learning materials to the students and govern them towards the use of such tools.

The researcher can conclude that, instructional theory directs on how teaching and learning processes take place. The theory could help subject teachers to know the importance of using visual learning aids and they can ask learners to improvise visuals learning aids. This theory is potential for learning objects to structure and delivery the constant (Reigeluth, 1999 and Engelmann, et al, 1999). Consequently,

this doctrine has the weakness due to the fact that, it doesn't look on the output of education process. That is to say, it puts emphasis on learning process but less or no emphasis on the students as the future education products. This study will verify this issue.

#### **2.2.4 Learners Centred Approach**

This is a perspective which functions against teachers centred. It puts emphasis on students as an input in teaching and learning processes. This approach has become more famous so as to influence the effectiveness and efficiency of teaching and learning activities specifically to the side of learner concerning with observing, improvising, gaining and acquiring skills and knowledge. Due to this theory, teaching is seen as directive that object is to produce a certain kind of performance to the learners. That is to say, what the learner does after acquiring knowledge and skills and how is integrating into his/her personality (Akinpelu, 1981).

In instructional context, learners centred approach focuses on how education system develops meanings and quantities associated with learning participation and how those meanings and quantities influence learners' behaviour and relationship with their teacher. On the other hand, teachers consider much their students when making preparation for teaching process. This includes the preparation of schemes of work, lesson plans, instructional visual learning materials such as pictures, charts, models that lead to the attainment of teachers' desired goals and objectives together with quality education. By implementing this theory, many educational advisors and planners in developing countries such as Tanzania, Kenya and Uganda, advocate that

all intervention in education must be learner centred (Mosha, 2006 and Entwistle, 1970).

Despite the fact that, learners centred approach is very important to the students in instruction, to some extent there is a weakness which have been observed, some of intellectuals assume that, the theory doesn't mean students direct choosing what they wishes to learn because the high authority in learning might create indiscipline to students. This theory also does not put clear on how students will be assessed on their learning process (Kember, 2009).

### **2.2.5 Integrationist Theory**

Integrationist theory includes Herbert G. who developed symbolic interactions. This theory argues that mind and self are not part of the innate human equipment but arise through social interaction. So that we can say, modification occurs when learners or students become exposed to other learners and using simple visual learning aids (Solomon, 1981). This theory is based on the definition of the environment that people create as they interact with simple materials and other people respectively. From this theory, human beings don't simply in an automatic fashion to the world around them instead, they choose to behave in a certain ways in anticipation of the impact they think their behaviour will have on themselves, the pole around them and social world in which they live.

In teaching and learning context, integrationist theory focuses on how students develop things and ideas associated with learning participation and how those meanings and ideas influence learners' behaviour and relationship with their teachers

and among themselves. Students use simple learning materials such as charts, models and real objects to develop new knowledge, skills and values as they perceive meanings from such learning tools. Through interacting with their teachers plus visual learning aids, students can ask various questions so that to reinforce their understanding and teachers respond to those questions in order to fulfil their learner's needs. This is the relevance that education depends upon acts of communication. Consequently, the theory extremely focuses on personal meanings and perceptions of the situation and on interaction dynamics without identifying the ways in which meanings and interactions processes are related to the social structure of society as a whole. However, this theory ignores on individual person and physical experiences when they consider issues of meaning, identity and relationship, this study will help to enlighten on this issue.

#### **2.2.6 Effectiveness of Visual Learning Aids for the Intended Learners**

Using of visual learning aids in teaching and learning process provides good performance to the learners. Therefore, public secondary school subject teachers should use visual leaning aids effectively so that to fulfil students needs in relation to the intended goals and objectives. Subject teachers should be creative enough on selecting improvising visual learning aids. Visual learning aids such as pictures and real objects are proper and effective only if they help learners to achieve the goal (Nacino et al, 1982).

#### **2.2.7 Physical Qualities of Visual Learning Aids**

Visual learning aids have exceptional qualities that should be considered by the subject teachers while preparing them for specific topic. Visual learning aids such as

pictures and real objects should be attractive and portable so that to encourage learners to participate fully during the learning process. Effective visual learning aids are capable of attracting attention, simplicity and sometimes familiarity especially for visual aids (Nacino et al, 1982). This is due to the fact that, the presence of such physical qualities of visual learning aids provides knowledge acquisition and skills adaptation, hence the achievement of quality education to the students.

### **2.2.8 Appropriateness Use of Visual Learning Aids on Students Learning**

#### **Process**

Instruction process takes place so that to fulfil certain specific goals and objectives. This could be attained by using different teaching methods, techniques together with several visual learning aids. Different types of teaching and learning processes demand different types of visual learning aids. Some are useful in teaching skills, presenting facts, showing relationship or changing behaviour or attitudes, while others are more effective in giving back ground information summarizing a unit of work. Therefore, subject teachers select visual learning aids that would be the best aid in achievement the target goals. Only visual learning aids that would serve instruction purposes should be used. Arguel A.J.F (2009) and Mtana et al (2004) also reiterated on the essence of teaching and learning visual resources on quality education as they observed that, the quality of education was enhanced by the availability of relevant teaching visual learning aids. This is more demanding in developing countries such as Tanzania, where most of the parents cannot afford to buy learning materials for their children. Visual learning aids are vital in ensuring that quality is addressed. Jonson (1980) conducted studies and observed that,

effective learning is facilitated by the availability of teaching resources such as visual learning aids.

## **2.3 Empirical Literature**

### **2.3.1 A Study on the Usefulness of Audio-Visual Aids in English Language**

#### **Teaching**

Mathew and Alidmat (2013) report on a study conducted to find out the usefulness of resourceful English language teacher equipped with eclecticism in English as a foreign language classroom. The study was conducted at undergraduate level at Aljouf University, Saudi Arabia. The findings of the study give insights on EFL students' approach to using technological aids, that EFL textbooks with technological aids are often viewed to be an inspiration and to provide motivation in classroom instruction. However, a close examination of classroom teaching aids and resources unveil many issues in EFL teaching and learning contexts.

The findings of the study suggest that using audio-visuals as a teaching method stimulates thinking and improves learning environment in a classroom. Effective use of audio-visual aids substitutes monotonous learning environments. Students develop and increase personal understanding of the areas of learning when they experience a successful and pleasant learning in the EFL classroom. Findings suggest that students find audio-visual sessions useful and relevant when it has some direct relation to the course content. The present research gave insights on students' perception and opinions on the use of audio-visual aids and resources. However, it is also important to consider EFL teachers opinions, perceptions, experiences, failures and success while using audio-visual resources.



### **2.3.2 A Study to Compare Traditional and Modern Methods of Learning by Using Audio Visual Aids**

Arora, (2013) studied the development of students with the use of audio visual aids with complete virtual learning and their impact. The researcher compared the use of traditional method with the modern teaching methodology where the impact and use of audio visual aids learning on the student of Indore at university level, an objective type questionnaire was developed to collect the data. A sample size of 30 students was taken and the questionnaire was made to fill by them. It was concluded that there is a great impact of audio-visual aids in the teaching-learning process in Indore. According to the students, they find this method of teaching very effective. They said that if the topic shown to them are all related to their curriculum and gives them additional knowledge then they get more attracted towards this technology. It motivates students to attend lectures, as they are very curious to see or hear what the teacher is going to show them in the upcoming class. They say by seeing animated effects, colourful presentation and hearing recording they are able to concentrate more in class.

Further it was found; it develops a strong bonding between students and teacher and students open up with their queries and those who used to hesitate to ask as question they do not feel shy now. Thus, it makes an interactive learning and makes the teaching-learning process more effective. Students also say that text-books are knowledgeable but if they need updated knowledge then they refer to presentation and videos shown them in class and they also said that it saves there time from copying notes from the board and thus increasing more of communication in class.

### **2.3.3 The Importance of Visual Learning Aids in Tanzania Public Secondary Schools**

Visual learning aids play a great role on students' academic performance. This is verified clearly when these tools stimulate, encourage and make students to understand the subject matters. However, these learning aids are used to clarify non-verbal symbols and promote interaction among the students and their subject teachers. Due to the mentioned advantages above learners enjoy the lesson so that they participate fully. Mavida et al (1966), states that, the utilization of instructional materials such as visual learning aids make students participate effectively in the learning process, hence ending with quality education that enable them to suit in the current society in relation to technological changes.

### **2.4 The Gap in the Literature**

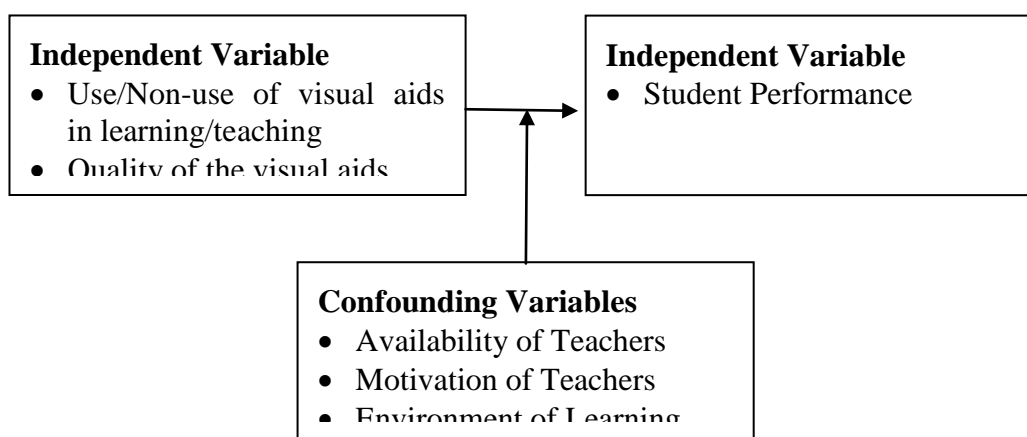
This study reviewed using theories and different researchers revealed their evidence in empirical form. But to some extent some of the areas had been not covered enough. For example, the utilization of instructional materials such as learning aids emphasizes on students classroom understanding but does not base on learning outcomes.

Douglas points in Brown *et al* (1982), about teachers teaching effectively together with application of variety of visual learning aids. On the other hand, public secondary schools in Tanzania still performing poorly in the National Examination results although different colleges are still providing teaching education related to learners centred approach. This is the other reality pushed forward the researcher to conduct this study. The majority of the findings and theories did not state clearly the

directives which enforce subject teachers to guarantee all conditions of acquiring teaching and learning tools in public secondary schools. This gap motivated the researcher to put forward this study so that to see the effectiveness of using visual learning aids on providing quality education in Magu public secondary schools.

## 2.5 Conceptual Framework

Conceptual framework explains either graphically or in a narrative for the main concepts or variables as well as their presumed relationship with each other (Miles and Huberman, 1994). This is a set of coherent ideas and concepts organized in a manner that makes them easy to communicate. Ravith, (2011) states that, conceptual framework is both a process and a framework that helps to direct and ground researchers as they work through research challenges.



**Figure 2.1: Conceptual Framework on the Effect of Visual Aids in Learning/Teaching**

Source: Researcher devise from literature

Therefore, the study will be conducted with the following concepts as variables: The effects of using visual learning aids as an independent variable and dependent variable will be based on students' academic performance, also there are

confounding variables which are not part of the current study, but they have the potential to interfere with the results of the study. These are availability of teachers, motivation of those teachers and the instructional/learning environment as well as Instructional and learning environment highlight on the importance of having decent classrooms, availability of books, good management and adequate training strategy.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter presents the research methodology that was used in the study. It involved description of the study area, research design, methods of data collection, research instruments sampling techniques, data presentation and analysis, piloting and ethical implications. Mukul and Deepa (2011), states that, research methodology involves all methods and techniques that are used for conducting a research.

#### **3.2 Research Design**

Krishnashwan (2007), states that, research design as a logical and systematic arrangement prepared for the aim of directing on how to undertake a research study. This study adopted both quantitative and qualitative research design. Mason (1998), qualitative research as Muilt-method in focus, involving an interpretive and naturalistic approach to its subject matter. It implies an emphasis on qualities of entities, process and meaning that cannot be experimentally examined or measured in quantity or frequency.

Qualitative research design was used because it enabled the researcher to obtain and interpret informants meaning and experiences in their natural settings. Since this study used both quantitative and qualitative means of data collection, analysis and interpretation, it deserves to be mixed research design. While data on the usefulness of visual learning aids were collected through respondent's opinion, views and perspectives qualifying as qualitative research design. Data on examination

performance comparisons were collected, analysed and interpreted quantitatively. As qualitative study, opinion from teachers, students, DSEO and DCIS made the design qualitative. But using visual learning aids as a test group and none using of aids as a control group .Analysis and interpretation of these data were based on quantitative, thus rendering the whole design as mixed.

### **3.3 Description of the Study Area**

This study was conducted in Magu District council located in the Eastern part of Mwanza City 65 kilometres away. Magu district council had (24) administrative wards and a total of 19 public secondary schools, named, Magu, Nyanguge, Kahangara, Lugeye, Bukandwe, Kinango, Bujashi, Shishani, Sukuma, Lubugu, Kabila ,Kongolo, Lutale, Mwamanga, Kandawe, Kitumba, Itumbili, Ng'wmabanza and Ng'haya. The researcher dealt with 4 public secondary schools named, Magu, Kitumba, Kandawe and Itumbili. The criterion for selecting these four schools was based on time and financial constraints of the researcher. The four schools had been identified as two using visual aids in learning (Magu and Kitumba) and the other two as non-using (Kandawe and Itumbili).

### **3.4 Study Population**

In this study the population was the students and teachers in the four Public Secondary schools of Magu, Kitumba, Kandawe and Itumbili. In total all four schools had 1084 Form Four students and 125 teachers (including 4 heads of schools). One District Education Officer (DEO) and one District Chief Inspector of Schools (DCIS) were also involved in the study, therefore the total population was 1,215.

### 3.5 Sampling Techniques

A combination of random and purposive sampling was used in order to get the sample size of the study. Random selection was made to the students because of the presumption that all (students) had same experience in the effects of using or not using visual learning aids in the performance. For teachers a purposive selection was made, selecting those teachers who used visual learning aids and those who were not using.

Each of the schools was treated as a cluster, from which 20 students were selected. And each school provided 4 teachers, four with the experience to use visual learning aids and four without. One District Education Officer (DEO) and one District Chief Inspector of Schools were also selected purposively to make the sample size 102

In summary the sampling frame was as follows:

**Table 3.1: Sampling Frame**

Category	Total Number	Selection	Selection Criteria	Percentage
Students	1084	80	Randomly from form four students	7.38
Classroom teachers	121	16	Purposively	13.22
Headmasters/Mistress	4	4	Purposively	100.00
DEO	1	1	Purposively	100.00
DCIS	1	1	Purposively	100.00
<b>Total</b>	<b>1211</b>	<b>102</b>		<b>8.42</b>

Source: Researcher, (2015)

### 3.6 Data Collection Methods and Instruments

In this study data were collected through questionnaires, documentary review and direct interviews.

### **3.6.1 Questionnaires**

Questionnaires carried structured questions in which students and teachers provided their answers pertaining to the effects of using or not using visual aids in learning and teaching.

### **3.6.2 Documentary Review Guide**

According to Omar (2008), documentary review includes the review and analyzing accurate information recorded or published regarding the area of the study. In this study, the researcher collected Form Four National Examination performance records for the years 2013 and 2014 to make comparisons of the two schools performance.

### **3.6.3 Interview questions**

Direct interviews was conducted to heads of schools with the aim to clarify on the effects of using or not using visual aids in learning and training, the barriers to such use and what the schools were doing in pursuit of using visual aids in learning. Interviews were also used to clarify answers from both schools and teachers in cases of ambiguous answers.

### **3.6.4 Data Processing and Analysis**

It implies editing, classification, coding and tabulation whereas analysis refers to computation of measures along with searching for patterns of relationships that exist among data-groups (Kothari, 2011). Data analysis was done using descriptive statistics for quantitative data and thematic analysis for qualitative data.

## **3.7 Validity and Reliability**

The good quality in research is represented by levels of validity and reliability.



### **3.7.1 Validity**

Validity refers to the quality that a procedure or an instrument (tool) used in the research is accurate, correct, true, meaningful and right (Enon, 1995). Therefore the study is believed to be valid because it used respondents (teachers and students) who are practitioners in the field of learning and therefore were well informed about the study problem.

### **3.7.2 Reliability**

Reliability refers to how consistent a research procedure or an instrument is. It therefore means, the degree of consistency demonstrated in a study (Enon, 1995). The researcher pre-tested the questionnaires to examine whether they were understood as intended by the researcher. When pre-testing was found to be successful, it was the confidence of the researcher that the results would be consistent every time the study would be conducted, and so means the study is reliable.

## **3.8 Ethical Considerations**

Ethical considerations play a fundamental role in all research studies. In research ethical issues entail building on trust between the researcher and participants so that researchers have the responsibility to behave in a trust worth manner, just as they expected participants to provide data that can be trusted (Gay et al, 2006). Suzgo (2002) states that, ethical implication is a study of systems and customs as seen in life of certain people therefore the researcher was open and honest to the respondents in collecting the required information. The researcher obtained informed consent

from any subjects used in the study and ensured that all participants participated voluntarily. Also the researcher had to ensure the confidentiality to the respondents and considered much about the tradition and customs of the selected sample size. The researcher sought the permission from the secondary schools employer (DED).

## CHAPTER FOUR

### FINDINGS, ANALYSIS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the findings of the study, analysis and discussion of the outcomes. The study has attempted to find out “the effect of visual learning aids on student’s performance in public secondary schools”, a case study of Magu District Secondary Schools. The study used a sample of 100 instead of the earlier selected 101 where one was absent at the time of questionnaires collection. The sample comprised of class teachers, students and headmasters from four secondary school of Magu, Kitumba, Kandawe and Itumbili.

#### 4.2 Characteristics of Respondents

The characteristics to be referred here are gender and ages of respondents.

Gender Distribution.

**Table 4.1: Gender Distribution**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Male	54	54.0	54.0	54.0
Female	46	46	46.0	100.00
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	

Source: Researcher, 2015

After many years of gender imbalance in many workplaces and schools, at the time of conducting this study the situation was changing rapidly. It was then common to find the number of men and women balancing. Number of girls in schools was slowly surpassing boys.

### 4.3 Age Distribution

**Table 4.2: Age of Respondents**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Valid	1	1.0	1.0	1.0
15	23	23.0	23.0	24.0
16	32	32.0	32.0	56.0
17	16	16.0	16.0	72.0
18	4	4.0	4.0	76.0
19	1	1.0	1.0	77.0
20	1	1.0	1.0	78.0
24	1	1.0	1.0	79.0
25	1	1.0	1.0	80.0
26	2	2.0	2.0	82.0
29	1	1.0	1.0	83.0
30	2	2.0	2.0	85.0
31	1	1.0	1.0	86.0
34	3	3.0	3.0	89.0
35	1	1.0	1.0	90.0
38	1	1.0	1.0	91.0
40	1	1.0	1.0	92.0
41	1	1.0	1.0	93.0
44	1	1.0	1.0	94.0
45	1	1.0	1.0	95.0
46	1	1.0	1.0	96.0
47	1	1.0	1.0	97.0
49	1	1.0	1.0	98.0
50	1	1.0	1.0	99.0
52	1	1.0	1.0	
55				
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>

Source: Researcher, 2015

The concentration of respondents was in 16,17 and 18 years because these were students of secondary schools. Normally these are the age ranges of secondary school students in form three and four. Others were teachers with age ranges from 20 to 55. Retirement age was 60 years.

#### 4.4 Data Presentation

National Form Four examination performance in 2013 and 2014 between Magu and Kitumba (using learning aids) and Kandawe and Itumbili (not using learning aids). The information was provided by the District Education Officer (DEO) and heads of schools.

**Table 4.3: Kandawe Secondary School 2013 National Form Four Examination Performance**

<b>Division</b>	<b>Number of Students</b>	<b>Percentage</b>
I	0	0.00%
II	1	0.87%
III	12	10.43%
IV	33	28.70%
O	69	60.00%
<b>Total</b>	<b>115</b>	<b>100.00%</b>
Position of school in ward		2/2
Position in District		16/19
Position of school region wise		191/204
Position Country wise		2538/3256

Source: NECTA (2014)

Table 4.3 depicts the Kandawe Secondary School National Form Four examination results for the year 2013 in which it stood the second (last) in the ward and 16<sup>th</sup> out of 19 schools in the District. The school was not using learning aids in teaching.

**Table 4.4: Kandawe Secondary School 2014 National Form Four Examination Performance**

<b>Division</b>	<b>Number of Students</b>	<b>Percentage</b>
I	0	0.00%
II	3	2.61%
III	10	8.70%
IV	23	20.00%
O	22	19.13%
Total	58	50.43%
Position of school in ward		2/2
Position in District		17/19
Position of school region wise		143/174
Position Country wise		1580/2322

Source: NECTA, (2015)

Table 4.4 depicts the Kandawe Secondary School National Form Four examination results for the year 2014 in which it stood the second (last) in the ward and 17<sup>th</sup> out of 19 schools in the District. The school was not using learning aids in teaching.

**Table 4.5: Magu Secondary School 2013 National Form Four Examination Performance**

<b>Division</b>	<b>Number of Students</b>	<b>Percentage</b>
I	0	0.00%
II	3	1.80%
III	33	19.76%
IV	81	48.50%
O	50	29.94%
Total	167	100.00%
Position of school in ward		1/2
Position in District		8/19
Position of school region wise		74/204
Position Country wise		1128/3256

Source: NECTA (2014)

Table 4.5 depicts Magu Secondary School National Form Four examination results for the year 2013 in which it stood the first in the ward and 8<sup>th</sup> out of 19 schools in the District. The school was using learning aids in teaching.

**Table 4.6: Magu Secondary School 2014 National Form Four Examination Performance**

Division	Number of Students	Percentage
I	2	1.23%
II	21	12.96%
III	33	20.37%
IV	65	40.12%
O	41	25.31%
Total	162	100.00%
Position of school in ward		1/2
Position in District		7/19
Position of school region wise		100/174
Position Country wise		1867/2322

Source: NECTA (2015)

Table 4.6 depicts Magu Secondary School National Form Four examination results for the year 2014 in which it stood the first in the ward and 7<sup>th</sup> out of 19 schools in the District. The school was using learning aids in teaching.

**Table 4.7: Kitumba Secondary School 2013 National Form Four Examination Performance**

Division	Number of Students	Percentage
I	1	0.77%
II	8	6.15%
III	21	16.15%
IV	49	37.69%
O	51	39.23%
Total	130	100.00%
Position of school in ward		1/1
Position in District		10/19
Position of school region wise		84/204
Position Country wise		1273/3256

Source: NECTA (2014)

Table 4.7 depicts Kitumba Secondary School National Form Four examination results for the year 2013 in which it stood the first in the ward and 10<sup>th</sup> out of 19 schools in the District. The school was using learning aids in teaching.

**Table 4.8: Kitumba Secondary School 2014 National Form Four Examination Performance**

Division	Number of Students	Percentage
I	1	1.43%
II	9	12.86%
III	22	31.43%
IV	27	38.57%
O	11	15.71%
Total	70	100.00%
Position of school in ward		1/1
Position in District		3/19
Position of school region wise		58/204
Position Country wise		91/3256

Source: NECTA, 2015

Table 4.8 depicts Kitumba Secondary School National Form Four examination results for the year 2014 in which it stood the first in the ward and 3<sup>rd</sup> out of 19 schools in the District. The school was using learning aids in teaching.

**Table 4.9: Itumbili Secondary School 2013 National Form Four Examination Performance**

Division	Number of Students	Percentage
I	0	0.00%
II	4	1.80%
III	25	11.26%
IV	104	46.85%
O	89	40.09%
Total	222	100.00%
Position of school in ward		2/2
Position in District		14/19
Position of school region wise		112/204
Position Country wise		1619/3256

Source: NECTA (2014)



Table 4.9 depicts Itumbili Secondary School National Form Four examination results for the year 2013 in which it was placed the second (last) in the ward and 14<sup>th</sup> out of 19 schools in the District. The school was not using learning aids in teaching.

**Table 4.10: Itumbili Secondary School 2014 National Form Four Examination Performance**

Division	Number of Students	Percentage
I	0	0.00%
II	7	6.31%
III	26	23.42%
IV	34	30.63%
O	44	39.64%
Total	111	100.00%
Position of school in ward		2/2
Position in District		12/19
Position of school region wise		217/204
Position Country wise		3042/3256

Source: NECTA, 2014

Table 4.10 depicts Itumbili Secondary School National Form Four examination results for the year 2014 in which it was placed the second (last) in the ward and 12<sup>th</sup> out of 19 schools in the District. The school was not using learning aids in teaching.

#### **4.4.1 Discussion of the Findings**

Observations of the two school performance for the two consecutive years (2013 2014) show that Magu and Kitumba Secondary Schools did very well compared to Kandawe and Itumbili Secondary Schools. For example, if we look at the percentage of students who got division one to three in each year, we find that 21.56% and 40.74% of Magu SECONDAR SCHOOL and 23.77% and 45.7% of Kitumba Secondary School got division one to three in 2013 and 2014 respectively.

But if we look at the performance of Kandawe we find that 11.30% and 22.41% and for Itumbili it was 13.06% and 29.73% students who got division one to three in the two years respectively.

Further at district level Magu Secondary School held the position of 8th out of 19 and 7th out of 19 schools while Kitumba held 10th and 3rd positions in the two years. Kandawe held 16th and 17th and Itumbili held 10th and 14th positions out of 19 schools in the same years. If we assume that there were similar learning environments in the District (availability of books, teachers and motivation of teachers), we then deduce that from these performance indicators we conclude that, use of visual learning aids were useful in improvement of learning outcomes. When we asked the respondents (DEO, DCIS, teachers and students) whether they understood what were learning aids, 75 percent said 'yes' against 25 percent who said 'no' (see Table 4.11).

**Table 4.11: Knowledge about Learning Aids**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Yes	75	75.0	75.0	75.0
No	25	25.0	25.0	100.0
Total	100	100.0	100.0	

Source: Researcher (2015)

#### **4.5 To Identify the Type of Visual Learning Aids that Secondary School Teachers in Magu District Used and their Effect on Students Learning Outcomes**

The headmasters of Magu and Kitumba Secondary Schools mentioned four kind of learning aids used at their schools as; maps, printed materials, wall paintings and few

models. Magu headmaster said that models were excellent in presentation of the messages in classrooms, especially on science subjects. However he said the school was unable to get enough models because they were expensive.

When respondents were asked whether learning aids had impact on learning outcomes, 61 percent said ‘yes’ against 39 percent who said ‘no’ (see Table 4.12). Those who said ‘no’ probably they were those who have had not been exposed to the aids before.

**Table 4.12: Opinions about the Impact of Learning Aids**

	<b>Frequency</b>	<b>Percent</b>	<b>Valid Percent</b>	<b>Cumulative Percent</b>
Yes	61	61.0	61.0	61.0
No	39	39.0	39.0	100.0
<b>Total</b>	<b>100</b>	<b>100.0</b>	<b>100.0</b>	

Sourced: Researcher (2015)

#### **4.5.1 Discussions of the Findings**

Literature of visual learning aids put emphasis on the quality of learning aids to be more effective. Nacino et al. (1982) suggest that although learning aids attract the attention of students and make them involved in lesson, the quality of such aids must be good also. This study observed some of the aids used by Magu (even Kitumba) Secondary School were in poor condition due to lack of decent storage, being old and too few so that they were used frequently. However, irrespective of the poor condition of the aids, Magu and Kitumba Secondary Schools were found to be performing well above most schools in the District. The interview with the headmaster of Kitumba and Magu Secondary Schools revealed that good

performance of the schools in examinations was partly attributed to the use of visual learning aids.

#### **4.6 The Barriers which Make Use of Visual Learning Aids Difficulty in Magu District Secondary Schools**

Information of this aspect were provided by heads of schools (Magu, Kitumba, Itumbili and Kandawe) and the District Education Officer for Magu District.

##### **4.6.1 Heads of Schools**

Magu Headmaster reiterated that his school bought learning aids many years ago and most of them were now (during the study) in poor condition. He said since then, the school had not receive any funds from the government for purchase of learning aids. “We have a lot of basic problems which the government has never managed to finance including shortage of desks, books, office equipment and sometimes even chalks for blackboard writing”, said the headmaster, adding that learning aids were considered as of secondary importance.

For Kitumba the aids were donated at fund-raising campaign at a school more than ten years ago. He said they were still useful but the school was looking into alternative to acquire funds ad replace some of them. Kandawe and Itumbili headmasters said their schools have had never received any funding for purchase of learning aids. Kandawe headmaster said, “we have some teachers who attempt to work with students to make such aids but at a very small scale.” He also mentioned that lack of learning aids was not the only shortage at his school, “we have many

more shortages of chairs for my teachers in office, some classes have to attend on shift because chairs and writing tables are not enough, windows have no shutters and teachers have long-term claims of allowances”.

#### **4.6.2 The District Education Officer**

The District Education Officer said the government was aware of the shortages in secondary and primary schools, including lack of learning aids and was working on them. However he said budgetary inadequacy was the main problem.

#### **4.6.3 Discussions of the Findings**

The study found that most respondents (DEO, heads of schools, class teachers and students) were aware of the impact of learning aids on student performance where 61 percent said they understood against 39 percent who didn't. This understanding therefore supports the literature reviewed in this work that learning aids are very essential for the good learning outcomes. Therefore, the study found that the main barrier to use of learning aids in the schools was not related to knowledge of the teachers and the district administration but rather due to shortage of finance.

### **4.7 Other Factors which Affect the Performance of Students in Examinations in Magu District**

#### **4.7.1 Shortage of Teachers**

According to the District Education Officer, Magu District had a total of 125 teachers in the public secondary schools with an overall shortage of 44. This, he said, was a big problem to student performance. He said the problem was fuelled by high labour turnover especially in the rural schools, where teachers tended to leave for

other employment in towns. He said lack of infrastructure like electricity, reliable transport to town, lack of decent houses and water were some of the problems which demoralized teachers to remain in the schools. And so some subjects went without teachers.

#### **4.7.2 Poverty of Parents**

The District Education Officer said, apart from shortage of materials in schools, poverty of parents also contributed to poor performance. He said some students remained at home for many days because they lacked basic needs like shoes, exercise books and uniforms. He said, this was a big problem in rural schools where most of his schools were. Comparing with students from towns, he said these were small things which parents were able to supply but because of poverty in the rural many families were unable to give their children at the right times.

#### **4.7.3 Students Views on Poor Performance**

The study made cross examination with some students to get their views on poor performance at their schools. The students mentioned three main factors; lack of extra tuition classes, lack of books and lack of laboratory practices. They said, usually due to shortage of teachers students in town attend extra classes conducted outside the school where they get a lot of exercises and guidance on subjects for which they don't have teachers. They said, this was common in town school students and many such students performed well in their examinations compared to rural schools. They said, it was not common to find such extra-class tuition centres in the rural.

On the part of books, they said some subjects were without books so students could not make any more references but depend only on the notes given by their teachers. Books in the schools had to be supplied by the Ministry of Education in Dar es Salaam via the District Officers. The study found that books used in secondary schools in Tanzania cost something from Tanzanian Shillings ten thousand to fifty thousand.

At the time of the study, the government of Tanzania was working on a grand programme of building laboratories in all public secondary schools. Before the initiation of this programme, most rural schools had no laboratories a situation which worsened the situation in science subject teaching. The study found that building of the laboratories was gradually progressing but with a lot of political interferences, where some opposition folks advised residents not to contribute to the financing of the laboratories as this was the government role.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

Chapter four has presented the data and discussed the findings on the research question “To what extent non use of visual learning aids negatively impacted on the students’ academic performance in Magu district?” In this chapter we present the summary, conclusion and recommendations of the study.

#### **5.2 Summary of Chapter 4 - 5**

##### **5.2.1 National Form Four Examination Performance in 2013 and 2014**

The study has established that Magu and Kitumba Secondary Schools which used learning aids in classrooms performed better than Kandawe and Itumbili Secondary Schools which had no learning aids. The study found that in 2013 and 2014 National Form Four Examination 21.56% and 40.74% of Magu Secondary School and 23.77% and 45.7% of Kitumba Secondary School got division one to three while for Kandawe Secondary School only 11.30% and 22.41% and for Itumbili it was 13.06% and 29.73% students respectively who got division one to three. In District wise, Magu and Kitumba Secondary School held the position of 8<sup>th</sup> and 7<sup>th</sup> and Kitumba held 10<sup>th</sup> and 3<sup>rd</sup> positions in the two years. Kandawe held 16<sup>th</sup> and 17<sup>th</sup> and Itumbili held 10<sup>th</sup> and 14<sup>th</sup> positions out of 19 schools in the same years.

When the study tested the knowledge of respondents about the effect of learning aids, we found that 75 percent were aware against 25 percent who were not. This awareness was taken as a confirmation that learning aids had positive contribution in



the performance of Magu Secondary School compared to Kandawe Secondary School.

### **5.2.2 The Type of Visual Learning Aids in Magu District**

Although it was found that Magu and Kitumba Secondary Schools were performing well in examinations compared to Kandawe and Itumbili due to use of learning aids in classrooms, however, it was found that the schools used learning aids which were in poor state given the length of period since they were acquired. These were; maps, printed materials, wall paintings and few models. Literature on learning aids insists on the quality of the aids in order to have a positive impact (Nacino et al.(1982).

### **5.2.3 The Barriers which Make Use of Visual Learning Aids Difficulty**

Barriers to use of learning aids were found to be fuelled by slim budgetary allocation from the government, from which buying of the aids was found to be of secondary importance after other necessities.

### **5.2.4 Other Factors which Affect the Performance of Students**

Other factors which were not part of the study, but were found to negatively contribute to the poor performance of students of public secondary schools in Magu District which were; shortage of teachers, poverty of parents, lack of extra tuition classes, lack of books and lack of laboratory practices. Shortage of teachers was said to be caused by high labour turnover from the rural schools which were characterized with poor infrastructures. Lack of books and lack of laboratory practices also were mentioned as potential contributors in the poor performance.

### **5.3 Conclusion of the Study**

Literature visited in this study has, without criticism, supported learning aids as effective in the classroom learning compared to presentations overwhelmed by words. Using a sample size of teachers, students of Magu, Kitumba, Kandawe and Itumbili Secondary Schools in Magu District and one District Education Officer of Magu, the study has found that students of Magu and Kitumba Secondary Schools did better in the National Form Four Examination for 2013 and 2014 (which used learning aids) compared to Kandawe and Itumbili Secondary Schools which were not using learning aids.

Apart from these findings, the study has also established that the majority of respondents were aware of learning aids and their effect on learning outcomes in classrooms. Even with this knowledge on the essence of learning aids, the study has found that most schools in Magu District don't use the aids because of slim budgets provided to public secondary schools in the district, which could not enable the schools to buy the aids.

Apart from lack of learning aids, the study has found also that many public secondary schools in Magu lacked enough teachers, books, chairs and tables in office and classrooms. Alongside, poverty of parents in some parts of the rural areas of Magu negatively impacted the performance of students who would sometimes spend days at home for lacking basic school needs like exercise books, uniform and shoes. It was also found that students preferred extra classes to cover for the shortages made by lack of teachers at their schools but wouldn't get these classes. Students in towns of Tanzania use these classes to bridge the shortages of class learning.

## **5.4 Recommendations**

Following the findings of this study; that learning aids are important in the performance of students in class, supporting the literature on learning aids, the following are recommendations the author would like to make.

### **5.4.1 Affirmative Action on Availability of Learning Aids**

The study has found that schools in Magu, like other schools in other parts of Tanzania don't have learning aids for affecting the learning outcomes in classrooms. The defence for this is lack of funds to finance the aids. In this pretext, therefore, the country is making sub-literate scholars. This phenomenon is not much far from lack of laboratories for which many students have graduated secondary education without even seeing a 'pipette'. To enrich Tanzanian education, affirmative action's must be taken to ensure that what are required in classrooms real are available. To this action, the country will be serious on its goal of providing good education to her people. Affirmative action in form of school supporting fund, school community fund and even state sponsored learning aids manufacturing units could be established.

### **5.4.2 Re-Invigorating Professionalism in Teachers**

The study has revealed that many rural schools (public) do not have enough teachers simply because those who are posted there do not spend much time before they manoeuvre and go back to town schools or quit the professional altogether for other employment. The big reason for this is poor living environment which the teachers are made to face, including indecent accommodation and poor office environment.

While this state of affairs is happening, workers in other professions are better off and are living better life. But it is important to understand that, for any good reason

that might be there in support of this impoverished recognition of teachers, yet, teaching remains to be the mother profession of all professions. And perhaps teachers deserve the highest degree of respect above most of other professionals. The author of this study, therefore, calls for another affirmative action in recognition and improvement of teachers living and working environments. Such things like decent houses, effective medical insurance schemes, prompt payment of remuneration and other entitlements, and regular training opportunities could make a big sense of respect and recognition in the teachers.

#### **5.4.3 Area for Further Research**

It was not part of the study, but being at the field we found that many teachers if not all were of the view that their profession as teachers received less respect right from their students to the community around them compared with other professionals. The author sees this as a psychological trauma, which must have adverse impacts also in the students learning outcomes. Most teachers were of the hunt to quitting the profession when opportunities avail. The author recommends a study; why teachers have so been reduced and what are the impacts of this state of affairs, and how can the sense of respect be turned around?

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## APPENDICES

### Appendix I: Questionnaire for Students

Name of School .....

Sex..... Class .....Stream .....

No.	STATEMENT /QUESTION	Strongly agree	Agree	Disagree	Strongly disagree
1	You understand well about visual learning aids				
2	Your subject teachers prepare and use visual teaching aids in the learning process.				
3	You are always involved in preparing teaching aids				
4	Non- use of teaching aids provides low quality academic performance to students.				
5	Visual learning aids, can help learning by providing a basic for discussion				
6	Visual learning aids, can make difficult ideas easy to understand.				
7	Your Classroom have wall display showing newspaper of student news and opinion				
8	Visual leaning aids such as pictures and models are more than imparked audio learning aids such as Radio				
9	The general function of visual learning aids is that of delivering message and creating sense of understanding between the teacher and the students.				
10	You are involved in preparing learning aids using locally available resources				

**Instruction:** Put a tick (√) where you think is correct.

## Appendix II: Questionnaire for Subject Teachers

Put a tick where you think is correct among the provided answers in the table below.

Name of School: ----- Sex: ----- Age: -----

No	Statement	Strongly Agreed	Agreed	Strongly disagree	Disagree
1	Using visual learning aids frequently, can raise students' academic performance.				
2	Visual learning aids such as pictures And real. Objects should be attractive and portable so that to encourage learners to participate fully during the learning process.				
3	Are you preparing and use teaching aids during the learning process?				
4	Does you student be involved in preparing visual learning aids.				
5	Students are involved in preparing teaching aids to increase creativity.				
6	Can you use local cheap materials from your school environment to prepare visual learning aids?				
7	Is there any commercially produced visual learning aids used at your school?				
8	Some of the positive contributions of visual learning aids on students' academic performance is to provide long-term memory and encourage interaction.				
9	If visual learning aids will be used effectively, students' performance will be excellent.				
10	Is there any assistance from the government ,DSEO or head of school on preparing visual learning aids?				

Qualification: -----Teaching subject-----

**Appendix III: Questionnaire for Heads of Schools**

Name of School -----

(-) Work experience ----- Sex -----, Qualification (√)

Dip, Degree Postgraduate ----- Age -----

Instructions: Put a tick where you think it is necessary or correct.

No.	Question	Strongly agree	Agree	Agree	Strongly Disagree
1.	Subject teachers use visual learning aids effectively during the instruction process.				
2	There is a relationship between use and non-use of visual teaching aids on students' academic performance.				
3	Your office has a plan and budget for preparing visual learning aids to assist subject teachers.				
4.	It is necessary social cultural and religious beliefs and practices need to be taken into account when the subject teachers preparing, designing and planning visual learning aids.				
5.	You have conducted a workshop or in house seminars before on preparing and using visual learning aids to your subject teachers.				
6.	There are commercially produced visual learning aids used at your school.				
7.	There is a place or special room where visual learning aids are stored after use				
8.	You make close supervision on preparing and using visual aids by the subject teachers				
9.	Your school classrooms have wall display showing newspapers of students news and opinions				
10.	There is enough assistance from the District Executive Directors (DED) or District Secondary Education Office on preparing visual learning aids at your school.				

Thank you in advance for your assistance.

**Appendix IV: Documentary Review:****Performance of Secondary School in 2013 and 2014 National Form Four Examination****Year: 2013 Examination Results**

<b>DIV</b>	<b>NO.STUDENTS</b>
I	
II	
III	
IV	
VI	
0	
<b>TOTAL</b>	

Place of the school in Ward.....

Place of the school in District.....

Place of the school in Region.....

Place of the School Nation wise.....

**Year: 2014 Examination Results**

<b>DIV</b>	<b>NO.STUDENTS</b>
I	
II	
III	
IV	
VI	
0	
<b>TOTAL</b>	

Place of the school in Ward.....

Place of the school in District.....

Place of the school in Region.....

Place of the School Nation wise.....

Thanking you in advance for your cooperation.