

**INFLUENCE OF LEARNING STYLES ON UTILIZATION OF TEACHING  
RESOURCES FOR ART AND DESIGN IN SECONDARY SCHOOLS IN  
BUNGOMA COUNTY, KENYA**

**BY**

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## DECLARATION

I declare that this thesis is my original work and has not been presented in any other university/institution for consideration of any certification. This thesis has been complemented by referenced sources duly acknowledged. Where text, data (including spoken words), graphics, pictures or tables have been borrowed from other sources, including the internet, these are specifically accredited and references cited using current APA system and in accordance with anti-plagiarism regulations.

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## **DEDICATION**

This work is dedicated to the Almighty God for giving me the gift of life ; to my mother Gertrude Akinyi Isalambo for her love for education and to my dear children,John Victor, Sharon,Wayne and Patience for their support and understanding as i undertook my studies.

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God bless you all

## ABBREVIATIONS AND ACRONYMS

<b>CD</b>	-	Compact Disc.
<b>CEMASTE</b>	–	Centre for Mathematics Science and Technology Education in Africa.
<b>CRE</b>	–	Christian Religious Education.
<b>DQASO</b>	–	District Quality Assurance and Standards Officer.
<b>DVD</b>	–	Digital versatile/video Disc.
<b>EDP</b>	–	Economic Development Programme
<b>EFA</b>	–	Education For All
<b>ESQAC</b>	–	Education Standards Quality Assurance Council
<b>IATO</b>	–	International Art Therapy Organization
<b>KCSE</b>	–	Kenya Certificate of Secondary Education
<b>KICD</b>	–	Kenya Institute of Curriculum Development
<b>KSES</b>	-	Kenya School Equipment Scheme
<b>KUGS</b>	-	Kenyatta University Graduate School
<b>LCD</b>	–	Liquid Crystal Display.
<b>MDGs</b>	–	Millennium Development Goals
<b>MOEST</b>	–	Ministry of Education Science and Technology.
<b>MOHES</b>	–	Ministry of Higher Education Science and Technology.
<b>NEPAD</b>	–	New Partnership for Africa's Development.
<b>ODEL</b>	–	Open Distance and e-Learning.
<b>QASO</b>	–	Quality Assurance and Standards Office
<b>SIMSC</b>	–	School Instructional Materials Selection Committee
<b>SPSS</b>	–	Statistical Package for Social Sciences

<b>SQ</b>	–	Students' Questionnaire
<b>QT</b>	–	Questionnaires to Teachers
<b>VAK</b>	–	Visual Auditory Kineasthetic
<b>VARK</b>	–	Visual Auditory Read Kineasthetic
<b>T/L</b>	–	Teaching and Learning

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## ABSTRACT

The fact that people learn differently dictates that a variety of resources should be used to reach all learners. This study proposed to establish the influence of learning styles on utilization of teaching resources for Art and Design in Secondary Schools in Bungoma County. Learning styles here refers to individual learners' learning preferences. The theoretical framework of this study is in line Edgar Dale's Theory of instruction, summarized in the Cone of Experience. The objectives of the study are (i) To establish the learning styles among the learners of Art and Design. (ii) To establish the resources available for use in teaching Art and Design. (iii) To investigate the extent to which learning styles influence utilization of resources for teaching Art and Design. The independent variables were Teacher characteristics namely attitudes, training, and experience resources; learner characteristics (learning styles) and the available resources. Appropriate selection and use of resources by teachers and in use are the dependent variables. This study adapted a descriptive survey design. The target population under study were form three students in schools that offer Art and Design, Art and Design teachers and principals in those schools and MOEST officials in Bungoma, county. The sample size total of 209 respondents was obtained using purposive and stratified sampling. Data was collected using questionnaires to teachers (TQ) and students (SQ); .interview was conducted on heads of schools and MOEST officials. Quantitative data was coded and analyzed using Statistical Packages for Social Sciences (SPSS) to derive percentages. Qualitative data was analyzed by arranging responses into meaningful categories according to research objectives and questions. Data analysis was done by SPSS to summarize the data in the main items and presented in frequencies through tables and charts. Descriptive statistics was computed for main items and accompanying measures of dispersion of the mean and standard deviation respectively. The data was analyzed using Pearson's Product Moment Correlation Coefficient. It was noted that from the percentages, there could be learners who cut across all the four learning preferences; furthermore it indicated that there is a variety of T/L resources being utilized. Lastly it was established that : attitude of the teacher, availability of the T/L resources, and T/L environment rather than learning styles influenced the utilization of T/L resources. Taken wholesomely, its concluded that much as learners learn differently it is disparity in availability of T/L resources which influenced utilization of T/L resources rather than students learning styles. This study may help establish whether a teacher needs to assess the learners' varied learning styles in order to select and use resources that will facilitate an effective T/L process.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the study**

The world has gone highly visual because of many people who need to receive information via a common language. This is so because all instructions and directions cannot be translated into the millions of languages spoken by people all over the world. It is also true that people have greatly advanced in their use of visual media like television, websites, and video, mobile phones, which has greatly changed meaning of being literate. Bleed (2005) observes that, literacy of the 21st century will increasingly rely not only on a common language that relies heavily on visual literacy but also on digital images and sounds. With visual literacy skills, everyone is able to go about their business around the world unaided: visuals serve as concrete clues to meaning.

In view of the above, it is noteworthy that there is need for platforms from which people can acquire knowledge to enable them acquire visual literacy skills. This could be through formal, informal and non-formal Education. Education also plays an important role in the implementation of the eight millennium development goals (MDGs), the eight MDGs are integrated in the school curriculum via the instructional objectives of each discipline. Art Education is one such discipline. On teaching and learning Art in secondary schools, Oludhe (2012) acknowledges that art contributes towards the learner's personal development. Maingi (2012) highlights the following as importance of art education; it prepares the learner for life after school in the career market, it is a vocational subject, and it gives the learner a real life perspective. The therapeutic role of art is seen in its contribution towards maintaining and improving the psychological,

mental, and emotional needs of an individual Otati, (2013). Through drawings, paintings, sculptures, photography, and other forms of visual expressions, a view reiterated by the International Art Therapy Organization (IATO, 2005) as quoted by Otati (2013). One cannot discuss a people's material culture, infrastructure and fashion trends without acknowledging the role of Art in developing and articulating these areas. Art also contributes to the spiritual aspects of our lives; places of worship spot works of Art, the architectural designs of the houses of worship, for instance churches, mosques, temples and even shrines.

Art education incorporates these as themes for projects done during the four year course at secondary school. This vividly enlightens the learners on international, national and local concerns that are abound to affect them In this case, the most important objective of a classroom should be to provide a set of experiences that add value to the learner and motivate them to desire to learn more. This implies that, the use of resources during the T/L process is significant and measures have to be put in place to ensure that the resources in use are selected appropriately by laying emphasis on the learning ( learning preferences) of the individual learners. This study purposed to establish whether teachers deliberately consider their learners' learning preferences while utilizing teaching and learning resources.

Mumbusho (1970) observes that, a teacher should use T/L resources not as a substitute to his role as a teacher, but as a complimentary action aimed at reaching all learners regardless of their different learning styles. In his study, he, however, does not spell out the impact of learning styles on the utilization of T/L resources. Teacher education has a bearing on a teacher's ability to effectively identify the different learning styles among

the learners Chao-ju Ho (2009) in his study observes that, “ ...teacher education programs should incorporate technological components in their teacher preparation programs for preschool teachers and integrate technology across the curriculum...”

This study however, does not highlight the importance of considering the learners’ learning styles; the current study purposes to emphasize the fact that, learning styles are critical even at Teacher Education level, as this would make teachers sensitive to learning styles of their learners and hence select and use T/L resources that would ensure that all learners benefit from the T/L process.

The use of resources has been encouraged as one of the 21st century strategies of the learning environment. Twoli et al (2007) have it that, instructional methods in education are a significant contribution to classroom practice. In this case, teachers’ use of resources geared towards creating a multi-sensory learning environment. Makewa, Meremo, Role and Role (2013) in their study state that; ‘The use of ICT in the school environment is considered to be part of the extensive technological modernization of administration and education, according to MOEST, (2005), as well as electronic government (e-Government) and electronic learning (e-Learning).’ This acknowledges the use of ICT as one avenue through which a multi-sensory learning environment. Such an environment would be conducive for the varied types of learners; the visual, the verbal, the visual-verbal. School gives the learner practice in selecting and closely responding to visual phenomena of importance to his learning. For example maps, photographs, pictorial graphs, cartoons, comics, process charts.

Given the opportunity, the learner should manage to create meaningful visual statements of his or her own and arrange ideas visually. The 8-4-4 Art and Design examination comprises of three papers namely paper one, a theory paper, which lays a foundation for the other two papers; two and three which are practical. To ensure that the learners effectively understand the fundamental concepts behind the practical, the teacher needs to create a multisensory environment that will appeal to all learners. For example for the kinesthetic learner, there may be need to create an opportunity for him or her to learn a theoretical concept by touching some material or object. Verbal learner in this case may only need to listen and internalize the facts at hand as the teacher narrates, an audio-visual learner may learn best if they were listening to a pre-recorded lesson or by watching a video related to the concept.

A read or text biased learner may learn best by carrying out some research on the topic in the library. All the above constitute the varied learning styles as presented in the VARK model by Fleming (1992). The revised syllabus (K.I.E, 2002) lays emphasis on the use of instructional media in every lesson because it makes the content real and imaginable to the learners. They can see and conceptualize what they are learning. This is in tandem with the current study that emphasizes the use of T/L resources in Art and Design but with learning styles in mind. According to Eshiwani (1983), there are three categories of factors that influence examination performance in secondary schools, namely, school resources and processes teacher characteristics and student traits. In line with that, the current study purposed to highlight learning styles as a student trait that is critical in the selection and use of T/L resources and hence effective classroom practices.

The use of simulated situations, role playing, recording and play-back techniques using television equipment visits to relevant institutions like prisons and workshops would be most appropriate. (Mukwa and Patel,1993).

The selection and use of resources, however, if not guided by sound interpretation of the syllabus, can frustrate the effort of ensuring that the learners actively participate in the learning process. This would be due to teacher misinterpretation of the syllabus, the inability of the teacher to cater for all learning styles, hence poor learner orientation to resources. This study did not overlook factors related to teacher preparedness such as interpretation of the syllabus, poor learner orientation to resources and how they impact on the effective use of resources learning styles. Kathuri (1986) states that, teaching strategies have a bearing on the kind of performance learners post. Art and Design KCSE results could also be dependent on the selection and use of resources during the T/L process. If the teachers fail to consider the learning styles of the learners as they select and use the resources at hand, the learners may be limited in their response to examinations.

The Art and Design KCSE results for the ten schools in Bungoma County are presented in table 1.0

Table 1.0: Art and Design KCSE results for the ten schools in Bungoma County from 2010 -2015

MEAN SCORE/YEAR						
SCHOOL	2010	2011	2012	2013	2014	2015
A	5.60	4.55	6.00	6.20	6.0	6.3
B	6.33	5.00	7.00	5.75	6.0	6.0
C	5.50	4.50	6.30	6.00	6.1	6.0
D	7.20	6.00	7.50	7.33	7.5	7.2
E	6.00	5.50	7.20	6.65	6.5	6.3
F	8.00	6.00	8.30	7.00	8.3	9.0
G	6.00	4.50	7.50	6.70	6.5	7.0
H	7.82	6.83	10.74	8.25	8.4	7.88
I	7.30	6.00	8.50	6.23	6.0	6.30
J	5.00	4.00	5.20	5.15	5.3	5.00

**SOURCE: Bungoma County Academic Day Booklet-2013**

The statistics in the above table clearly indicate that although all schools offering Art and Design sit for KCSE, some perform better than others. Could this be due to the absence of T/L resources or is it due to teachers not considering the different learning styles of the learners? Among other causative factors The current study purposed to establish this.

## **1.2 Statement of the problem.**

Considering different learning styles existing in a given classroom is critical in the selection and use of T/L resources. There are various definitions of the term ‘learning styles’ but for the purposes of this study, we shall adopt the one that states that ‘... a learning style refers to a student’s consistent way of responding and using stimuli in the context of learning...’ (Claxton, C.S. 2009) This is further reiterated by David Kolb (1976) who posits that, ‘...design learning for the people you are working with, if you cannot customize the design for specific people, use varied styles of delivery to help everyone learn...’

The learning styles model most commonly used in the field of Education is Neil Fleming (1992) Visual, Auditory, Kinesthetic (VAK) model, which describes three learning styles: visual, auditory and kinesthetic. Visual learners prefer using pictures, images and spatial understanding. The auditory learner prefers learning using sound and music; while the kinesthetic prefers ‘a hands on’- practical approach to learning. Neil Fleming (1992) later added R to this model hence the VARK model. R here represents the kind of learner that prefers to read and write as a way of learning, for example, carrying out research in the library.

Research shows that each learning style uses different parts of the brain. (<http://www.learning-styles-online.com>) by involving more of the brain during learning, we remember more of what we learn. Therefore, use of multiple learning styles makes the T / L process beneficial to the learner.

Ibrahim, (2009) posits that it is important for a teacher to establish the learners' learning styles so as to provide an enabling environment for the learners' academic success and self-confidence.

This would be done by creating a multi- sensory environment. According to McLeod, (2013), knowing the learners' learning styles enables the teacher to design and plan for a lesson that would reach out to all learners, their learning styles notwithstanding.

In the event that a teacher fails to consider the learning styles of his / her learners, he would end up selecting and using T / L resources that could inhibit rather than enhance effective learning. A previous study on the teaching of Art and Design by Katonoka, (2012) indicates that the attitude of major stakeholders greatly affected the way learners and the school perceives Art and Design as a subject. However, the study does not focus on the role of learning styles in the selection and use of T/L resources in Art and Design. This study, therefore, purposed to investigate the influence of learning styles on the utilization of T/L resources for Art and Design.

### **1.3 Purpose of the Study**

The purpose of this study was to investigate the influence of learning styles on the utilization of T/L resources in Art and Design in secondary schools in Bungoma County.

This aimed at highlighting the importance of establishing the learning styles of the learners in any given classroom; in this case an Art and Design classroom and the critical role of T/L resources play in ensuring an effective T / L process.

#### **1.4 Specific objectives**

This study aimed at fulfilling the following objectives;

- a) To establish the different learning styles among the learners of Art and Design in secondary schools in Bungoma County.
- b) To find out the resources used during the teaching and learning of Art and Design in secondary schools in Bungoma County.
- c) To investigate the influence of learning styles on utilization of T/L resources

#### **1.5 Research questions**

This study sought to answer the following questions;

- i. What learning styles are evident among the learners?
- ii. What resources are available for use by the teachers?
- iii. How do the learning styles influence the utilisation of T/L resources?

#### **1.6 Significance of the Study**

Art and Design as a subject is important as it creates a broad base for the learners' future careers such as architecture, engineering website designing among others.

The findings of this study are expected to

- a) Sensitise the teachers on the importance of identifying the different learning styles among the Art and Design learners before selection of T/L resources.
- b) To create awareness among head teachers on the importance of teaching and learning resources as practical approach to learning so that they can provide them readily.
- c) Based on the findings, assist education planners and policy makers to improve the teacher-training curriculum by reviewing the syllabus content, resources and teaching .
- d) Theoretically, this study contribute to advancement of knowledge and also form a base on which other researchers can develop their studies.

### **1.7 Delimitation and Limitations of the Study.**

This section presents the deliberate choices made by the researcher in order to set boundaries for the study (delimitations) plus the characteristics of the study that influenced the interpretation of the results of the study (limitations).

#### **1.7.1 Delimitation**

- i. The study confined itself to student and teachers in public secondary schools, DQASOs and the CQASO, in Bungoma County in order to elicit consistent results.

- ii. The sample comprised of form three Art and Design students, their teachers and heads of respective institutions at the time of the study. This ensured that authentic data collected.
- iii. There are many other criteria teachers use in the process of selecting and using resources, this study however focused on those that are related to learning styles of learners in secondary schools in the County under study.

### **1.7.2 Limitations**

- i. The findings of this study were applicable to Bungoma County and were not generalized to other counties.
- ii. The study limited itself to the extent to which learning styles influence the selection and use of T/L resources by analyzing the responses from teachers and students.
- iii. The study will not take into consideration the views of other stakeholders in Education such as parents and sponsors of schools so as to elicit a correct conclusion based on actual findings from the key players here (teachers, students and education officers).

### **1.8 Assumptions of the Study**

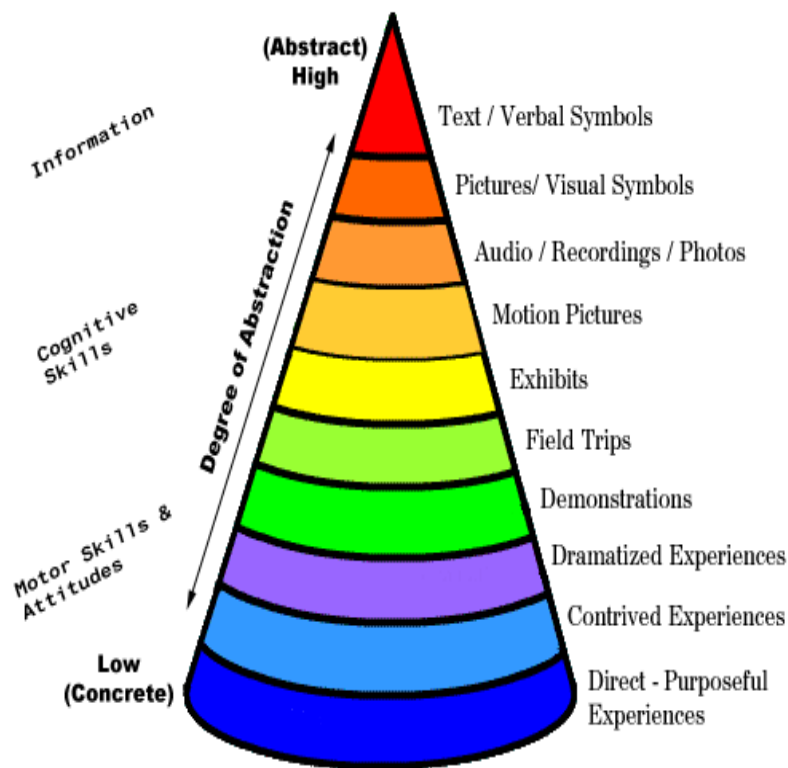
The study was carried out based on the following assumptions;

- i. That all teachers have gone through training and use appropriate resources that facilitate effective learning.

- ii. That all the respondents offered honest answers in the questionnaires and during the interview schedules.
- iii. That all teachers assess the learning styles of their learners before selecting and using the available resources.

### 1.9 Theoretical Framework

The theoretical framework of this study is based on Edgar Dales “Cone of Experience Theory which posits that for teaching and learning process to be effective a teacher needs to provide a multi-sensory environment. See figure 1.1 below.



Graphic courtesy of Edward L. Counts, Jr.

**Figure 1.1: Theoretical framework (source: internet)**

This should be characterized by stimulus richness and variety. Such can be achieved through using resources that run across the three levels of the cone of experience with symbolic (verbal symbols) at the top, iconic which involves observation in the middle and enactive, where effective learning takes place at the base. This would be aimed at ensuring that all learners benefit from the resources selected.

A teacher should always endeavor to enrich the curriculum with field trips and demonstrations based on Edgar Dale's "Cone of Experience" which postulates that learning is most efficient if the experiences provided for learning occur in a variety of milieus such as a multi-sensory learning environment – a variety of resources. The teacher's selection and use of resources can also be affected if there is a deficit of the same or if the teacher's attitude is not inclined towards creating a multi-sensory learning environment. The choice of resources made would be based on what the teacher deems appropriate for facilitating content delivery.

The teachers' attitudes, training and motivation may hinder communication of content. However, where language fails, the resources would bridge the gap. The learners characteristics may also impede a teacher's selection and use of resources, especially when they interfere with the learner's interaction with the available resources. A teacher's failure to appreciate the learners' individual differences, in terms of gender, attitudes and learning styles, may lead to his selection of inappropriate resources. The theoretical framework was relevant during the development of the items in the research instruments and discussion of findings.

## 1.10 Conceptual Framework

The conceptual framework highlights learner and teacher characteristics and resources as the independent variables, Outcomes such as learners' appropriate response to resources and teachers' appropriate selection of resources are the dependent variables while lack of resources, cultural bias and stereotypes in school are the intervening variables.

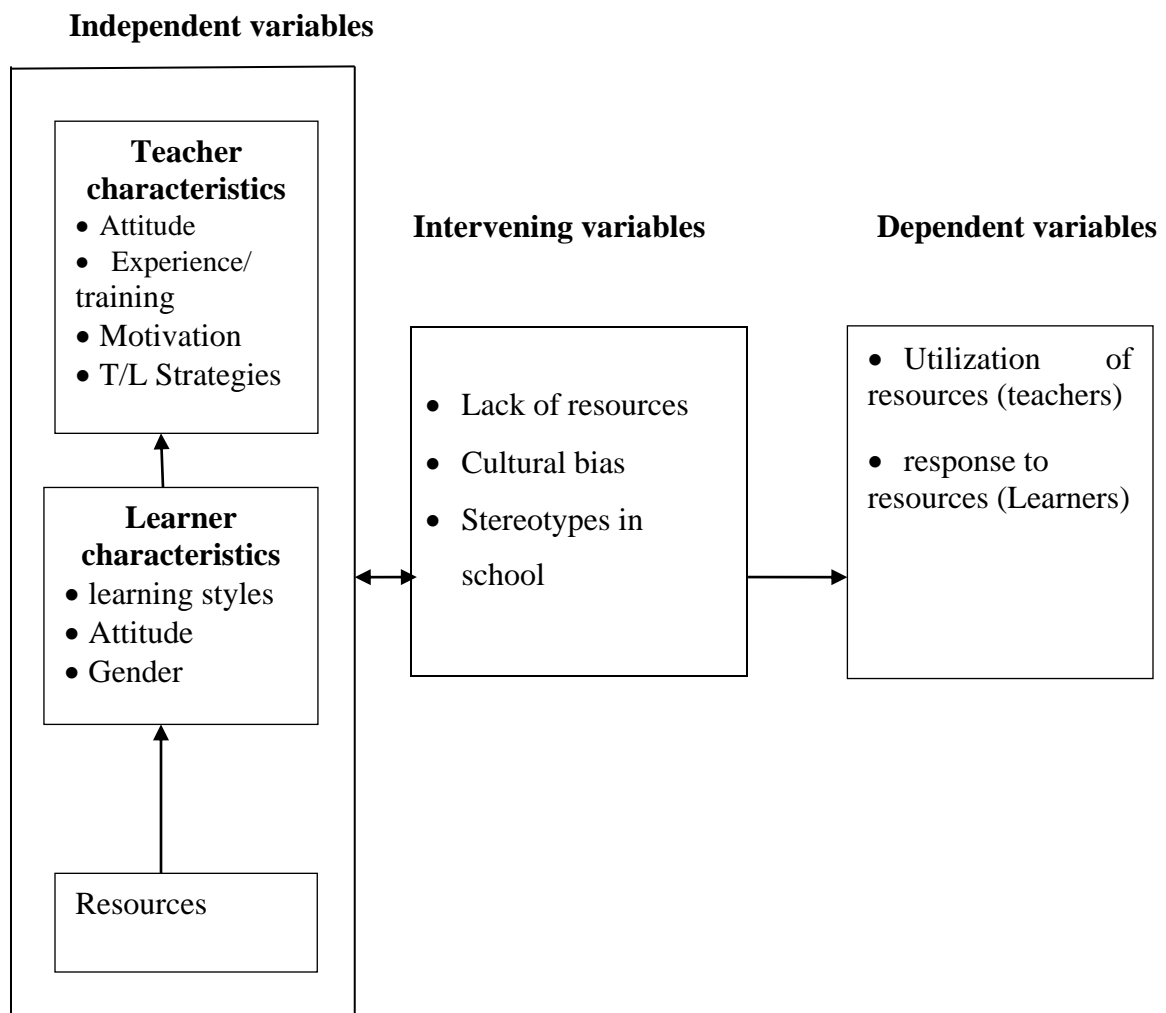


Figure 1.2: Conceptual Framework

If a teacher is well trained and is motivated, he would most likely be inclined towards selecting and using resources that enhance learning. The learners learning styles and teaching strategies have a bearing on the selection and use of resources.

The learners' gender, entry behavior and attitudes are likely to have a bearing on their response to the resources used during the learning process. Their learning styles however, are essential to their benefiting from the resources used.

### **1.11 Operational Definition of Terms**

The following terms are defined based on how they were used in this study;

- i. Art and Design is one of the subjects offered at secondary school level under the 8-4-4 curriculum, which involves conceiving and planning of unique ideas in order to produce aesthetic and functional art works
- ii. Cultural bias refers to cultural stereotypes related to gender which dictate whether a student should study a certain subject or not .
- iii. Design of classroom is the internal layout of classrooms in terms of the distance of desks and chairs from each other.
- iv. Formal learning is education normally delivered by trained teachers in a systematic intentional way within a school, higher education or university.
- v. Informal learning ,refers to when learning takes place naturally as part of some other activity,
- vi. Learning styles refers to individual learners' learning preferences

- vii. Mass media in this case refers to radio, television, newspaper among others.
- viii. Milieus are other learning experiences in the teaching/learning environment.
- ix. Ministry of Education officers/specialists refers to DQASOs and CQASO
- x. MOEST specialists refers to the DQASO and the CQASO.
- xi. Multi-sensory environment refers to a learning environment with learning resources that appeal to almost all the human senses.
- xii. Non-formal learning refers to learning that includes everything else, such as sports instruction provided by non-trained educators without a formal curriculum.
- xiii. Pedagogy is the method and practice of teaching.
- xiv. Research Design is the arrangement of conditions for collecting and analyzing of data in a manner that aims at combining relevance to the research purpose with economy in procedure.
- xv. Secondary Education refers to a four year course for students who complete the eight year primary school course and qualify to further their studies,
- xvi. Sources refers to firms and institutions that make/produce resources
- xvii. Stereotypes in school refers to, among others, the tendency of members of a school community regarding Art and Design as inferior due the enrolment in Art classes .

- xviii. Teaching and learning resources are materials such as texts, videos, models, real objects that teachers use to assist students in gaining better understanding of concepts taught .
- xix. Teacher motivation - teachers' intrinsic drive to facilitate effective T/L process
- xx. Technologically savvy – computer literate and biased learners.
- xxi. Performance here is in reference to KCSE results.
- xxii. Vision 2030 is Kenya's development programme covering the period 2008-2030

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter contains existing works that examined the importance of pedagogical practices in the T/L process, the role of T/L resources in the T/L process and the learners' learning styles Teacher / Learner motivation and the existing gaps in the reviewed literature. These would clearly highlight the key variable in this study; establishing the influence of learning styles on the utilization of T/L resources.

#### **2.2 Learning Styles**

According to Cano, Garton & Raven, (1992), learning styles can be defined as the process that the learners use to sort and process information. Learners learn in different ways such as hearing, seeing, taking notes, imagining and visualizing among many others. A sizable body of empirical research suggests that students learn best when they are taught in ways that match their way of learning (Kamarulzaman, 2012; Mahlios, 2001; Ogden, 2003; Stanberry & Azria, 2001). In line with the current study, there is need for teachers to consider the different learning styles in a classroom before selecting and using the teaching and learning resources. Gregorc, (1979) observes that, Individuals have the basic capability to learn, however, they are not able to learn effectively in the same exact way. Garger and Guild (1994) described learning styles as the characteristics of individuals which are stable and pervasive that is expressed through the interaction of one's behavior and personality when he/she approaches a learning task.

Towler and Dipboye (2003) posit that learning styles orientation is bridging the gap between personality and cognition. This study however, does not directly link the learning styles to selection and use of T/L resources; the current study purposes to do this. The idea of individualized “learning styles” originated in the 1970s and since then numerous models have been proposed by researchers, among them David Kolb (1984, 1981, 1976), Honey and Mumford (2001) and Fleming and Mills (1992). The model most commonly used in the field of Education is Neil Fleming (1992) VAK model, which describes three learning styles: visual, auditory and kinesthetic. Based on the above, the current study aims at establishing the need of a teacher keenly assessing the learner characteristics evident among his or her learners before selecting and using T/L resources.

For meaningful learning to take place, a teacher should ensure that all the learners are reached. This can be done by first taking stock of the different learning styles of the learners.

The current learners have been referred to as millennial or Net Generation by researchers; According to Prensky (2008), the majority of teachers continue to teach in ways that prepare them for success in the past not in the future. According Fleming (1992), the use of audio tapes, use of word association to remember facts and lines and reading aloud are among suggested learning activities, since kinesthetic learners (also known as tactile learners) learn best through touching, feeling, doing and experiencing what they are trying to learn.

They remember best by writing or physically manipulating the information. It is worth noting that Fleming (1992) added a fourth style to his VAK model: Read/write (R) hence the VARK model.

This sort of learners refers to text-based input and output – reading and writing in all their forms but especially manuals, reports, essays and assignments. Such learners prefer to use PowerPoint, internets, lists, diaries, dictionaries, thesauri, quotations and generally words and more words. Such a learner exhibits maturity that is typical of post high schools students: can carry out research oriented tasks and write reports on varied topic without strain. The teacher therefore needs to keep abreast with modern and up-to-date visual aids that can cater for such a learner; e-learning becomes a vital visual aid for such a learner.

The significance of considering different learning styles as maintained by the proponents of these models is that; Teachers can vary strategies they use in order to complement a greater variety of learning styles. This is in line Edgar Dale's 'Cone of Experience' theory that holds two assumptions that stimulus richness and variety would enhance learning and motivate learners; and that the degree of abstraction is a critical variable in learning. The solution to the above, Dale has it, is to merge the experiences that form the continuum of enactive or direct experiences, iconic or pictorial experiences and symbolic which are highly abstracted experiences. The merging of all the three experiences would cater for all learner characteristics. The other advantage of a teacher considering different learning styles is that learners can recognize their preferred style and further reflect better on their ways of learning (meta-cognition). They, then, become aware of their own strengths as well as the need to develop new ways to learn.

This produces visually literate learners, who in turn can generate their own visual aids. It is also true that, information on learning styles can serve as a guide to the design of learning experiences that either match the learner's preferred learning style or mismatch a learner's style depending on whether the goal of the lesson is to maximize learning efficiency or develop area where the student skills are weakest. This can facilitate collaborative learning activities. Learners with different learning styles can be put together and exposed to different visual aids with the intention of each of the learners bringing out their strength and weakness as far as interpretation of the visual is concerned. In so doing, they are able to enhance each other's ability to reap maximally from the learning session.

According Fleming (1992), the use of audio tapes, use of word association to remember facts and lines and reading aloud are among suggested learning activities, since kinesthetic learners (also known as tactile learners) learn best through touching, feeling, doing and experiencing what they are trying to learn. They remember best by writing or physically manipulating the information. According Gardner (1983) learners possess different kinds of minds and therefore learn, remember, perform and understand in different ways. With this mind, it would be worth noting that by recognizing the different intelligences among the learners, a teacher is able to use appropriate visual aids to enhance learnability in the different learners.

### **2.3 Teacher / Learner motivation**

Learner motivation has a bearing on how learners respond to their immediate learning environment, T / L resources included. Within academia, there is a sharp decline in the

enrolment of Art and Design students. This also translates to the lack of manpower to teach the various courses in fine and applied arts.

Ogunduyile, Kayode, Ojo (2008) In their study indicate that, in some Nigerian universities, where Art and Design are taught, enrolment of students in Art and Design related areas are generated by “co-opting” and “diverting” candidates who have applied to study biology, chemistry, estate management, agriculture courses, and so on, to study Art. The reason for increased dropout rates could be that this diversion may not have been strong enough to make committed professionals of those whose interests were not originally in the Art profession. Such teachers are most likely bound to affect learner motivation since they may not be motivated enough to establish the learners’ learning styles before selecting and using T / L resources.

The lack of political will on the part of government to implement the cultural policy put on paper, and the lack of commitment to art education by political leaders are serious factors in Nigeria. The marginalization of artists and art teachers in career progression and in payment of personal wages and emoluments in public services and private institutions, and the absence of consensus action to tackle problems affecting artists on the part of the art groups have not encouraged the practice of art in Nigeria.( Ogunduyile et al,2008)

Consequently, there is an increased dropout rate and lack of interest to choose art as a career subject and to practice art when trained. Saedah , Rana & Reihaneh, Zahra, N (2010) have it that ‘...If students are de-motivated, confused and look tired in class, one solution is to use new teaching styles in your class to overcome such problems. This is

because learners learn in different ways such as hearing, seeing, taking notes, imagining and visualizing, among many others.’ Other researchers also examine teacher motivation from the workload view point; Jin, P, Yeung, A. S., Tang, T, & Low, R. (2008),

The above suggestions are in line with what this study aims at establishing: the impact of learning styles on selection and use of T/L resources. A teacher can capitalize on these characteristics to use role play and dramatization to enhance their learning environment. According to Sengendo, (1997,9). Art and Design Education is one of the biggest assets that a country can be proud of. With art, illiteracy can hardly take on the African continent. He further reiterates this by saying;

Because of the education set up which my colleagues from the Institute of Teacher Education (ITEK) in Uganda would best discuss, art and design teaching has not been given the due attention. Art and design education is taught at all levels of school from pre-primary to post primary. Art and design continue to be a supplementary subject. This has been mainly due to the costs involved in the teaching of art, which goes beyond chalk and talk.

It is worth noting that like the Kenyan situation, in Uganda, most schools have abandoned teaching Art. There is also less interest by primary teachers who claim they don’t have enough training to administer the teaching of Arts and Crafts. All these notwithstanding, Art and Design has remained a subject of central importance to the school. As one would expect, for Art and Design (it has been said) is the transmission of civilization.

We can refer to Art and Design as the cement that binds together the building blocks of humanity. All the above discussion clearly brings out the fact that teacher/ learner motivation is at stake. Art teaching in schools is impeded by lack of both materials and trained-committed teacher; other impeding factors include; low marks and other school settings that discourage creativity (at both primary and secondary school levels), that art

as a thing for crazies and academic weaklings, that Art was for the art-room and visual only, not outside nor performing. The current study through establishing the role of learning styles in the selection and use of T/L resources heavily relies on teacher/ learner motivation as key variables.

According to Andrews, P. (2011) Student motivation is a universal challenge among teachers of every instructional level and content area. Motivation, particularly in the art classroom, is a challenge for many art educators. the importance of connecting student artwork to students own interests is in tandem with the current study, which seeks to establish the impact of learning styles on the selection and use of T /L resources. This is a way that art educators can create an intrinsic motivation, motivation that comes from within, by having their art students create something meaningful to them.

Motivation can often be categorized into two types: intrinsic and extrinsic. Birdsell , Ream, Seyller, Zobott (2009) agree that a lack of intrinsic motivation is often found in a student who is not motivated from within and cannot engage themselves in learning out of curiosity, interest, or enjoyment.

Garvis (2009) believes that the lack of intrinsic motivation means that these students often need an outside reward in order for them to maintain a desire to succeed. Kelly, (2009, pg 3) reiterates this through the following facts; Almost everything teachers do in the classroom has a motivational influence on students--either positive or negative.

This includes the way information is presented, the kinds of activities teachers' use, the ways teachers interact with students, the amount of choice and control given to students,

and opportunities for students to work alone or in groups. Students react to who teachers are, what they do, and how comfortable they feel in the classroom.

Prensky, M. (2001). posits that,

As 21st century educators, we can no longer decide *for* our students; we must decide *with* them, as strange as that may feel to many of us. We need to include our students in everything we do in the classroom, involving them in discussions about curriculum development, teaching methods, school organization, discipline, and assignments. Faculty or administration meetings can no longer be effective without student representation in equal numbers. Our brightest students, trusted with responsibility, will surprise us all with their contributions.

This offers a platform for the investigation encrusted in this study, how do learning styles influence utilization of T/L resources?

## **2.4 Pedagogical Practices**

The term pedagogy has been appropriated in education discourse as simply strategies of instruction. Pedagogy in educational vernacular has gained currency as a substitute for methods of instruction or techniques of teaching (Loughran, 2006; van Manen, 1999). The etymological roots of *pedagogue*, one finds that the term refers not to a teacher, but a slave who cared for and accompanied a student to and from school (van Manen, 1994).

From this perspective, pedagogy as the actions of pedagogues implies an inter-individual relationship, based on the concern of one for another. Moving this relational understanding of pedagogy into the realm of education, teachers stand in pedagogical relation to students. Placed in a position to lead students toward academic and personal growth, the very nature of teaching and pedagogic action is animated by continuous discernment and constant determination. In this sense, the “why” and “what” of pedagogy are fused together by the nature of the relationship between a teacher and student.

(Bakhtin, 1981; Dewey, 1932/2005; Freire, 2007), van Manen (1999) posit that: “Every little thing we do or do not do—in our interactions with [students] has significance. Why? Because as teachers, we stand in relations of influence to our students...and we cannot claim ignorance of this fact” (p. 19). Thus, in any pedagogical relationship, separating act from actor is untenable. Loughran (2008) defines pedagogy in teacher education as; “Knowledge of teaching about teaching and a knowledge of learning about teaching and how the two influence one another in the pedagogic episodes that teacher educators create to offer students of teaching experiences that might inform their developing views of practice” (p. 1180). This accounts for the intersection of knowledge about teaching and moments when something pedagogic is expected of the teacher educator, pedagogy is as much interactive as it is deliberative. In line with the current study, there is need for a teacher to embrace pedagogical practices that would consider the learning styles of their learners.

Matome, N, (2007) on the position Art in Botswana posits that,

Much as art is offered at secondary or high school level, it is not made accessible to all students who wish to study it. Being a practical subject, in Government schools, it is mainly offered to students who are regarded as being less academic. Those good at science subjects are not encouraged to pursue art. This yields the negative perception of art as a profession. In other words, visual art in Botswana is generally treated as a frivolous pursuit, rather than a necessity.

The above situation is bound to affect Teacher/ Learner motivation to an extent that the selection and use of T/L resources and the response to the selected resources may be adversely impeded. According to Bailey and Hortin (1983), the ability that humans are born with to interpret some cues does not necessarily reach into the subtle types of expression that visual images can afford. There is need for the teacher to instruct learners

on how visual images convey information so that they can develop critical thinking skills that are vital for survival in the modern world. This study aims at emphasizing the fact that the learning styles among the learners have a bearing on pedagogical practices in place.

In a similar study by Varughese, J (2011) concludes that when ICT is used, 21st century pedagogical practices are enhanced. This study not consider the fact that not all learners are “technologically savvy” hence such an approach to the T/L process would lock out learners with a bias towards other learning styles other than use of ICT. The current study aims at relating learning styles to the choice of T/L resources that would ensure maximum class participation. Cornett, C. E. (2003) states that, “when we teach for visual literacy, we involve children in thinking about and expressing in images what is often beyond linguistic capabilities” (pg 157).

It visually opens the learners to each other (collaborative learning) and the world, develops their critical thinking skills, and makes them gain new ways to make meaning; such should be the priority of every teacher with the aim of reaching all learners. Cornett, however, does not emphasize the role of learning styles. Kalantzi, (2002) observes that times are changing very fast. Our society is marked by effects of globalization and increasing diversity of culture and language with proliferating multimedia and information technologies. These phenomena are shaping the way in which meaning is created and exchanged. Kalantzi, however, does not consider how best the learners could be taught to so as to cope with the prevailing trend The teacher in this perspective needs employ pedagogical practices that would enable the learners to function effectively in a world of visual and technological communications.

The current study in this respect, purposes to establish the impact of learning styles on utilization of teaching resources for Art and Design. Such an approach would ensure that meaning is created and exchanged in a relatively uniform way among the learners. As observed by Breen (1997), teachers gradually integrate and adopt innovations based on their understanding of what works best for their learners. Since a very high percentage of all sensory learning is visual, Oring (2000:58) says, ‘A wise man once said that a picture is worth 100 words’. But when visual symbols are used in place of words to express a feeling or mood within us, it is necessary for the viewer to be able to understand the message. This study purposes to highlight the importance of teachers, guided by the learning styles of their learners need to cultivate a multi sensory environment for an effective T/L process.

Dr Rita Dunn and Dr Kenneth Dunn (1984) say that, teachers should make changes in their classroom that will be beneficial to every learning style; As Rita Dunn puts it,

‘If a child is not learning the way you are teaching, then, you must teach in the way child learns.’ Oblinger and Oblinger (2005, chapter. 2) observe that, our technology and culture are producing a crop of visual learners – ‘digital natives’- who are initiative visual communicators’ and more visually literate than previous generations. Gunther Kress (2003) contends that there is need to use multiple ‘modes of presentation”, beyond words and text. Gunther,(2003) however, does not state the reason behind using multiple modes of presentation. This study purposes to establish the role of learning styles in the selection and use of T/L resources; based on Edgar Dale’s Cone of Experience theory, the multiple modes of presentation would be necessary if all learners are to be reached.

Gee (2004), in his stimulation, argues that, “Meaning and knowledge are built up through various modalities (images, texts, symbols, interactions, abstract design, sound etc.) not just words” (p.210). This argument is in total agreement with Edgar Dales ‘Cone of Experience’ theory; with a multi-sensory stimulus learning environment, all types of learners are most likely able to benefit from the T/ L process. Based on Asmaa Abdel-Moneim Mostafa’s PhD thesis findings,(AJOTE, vol.1 Oct. 2010), most teachers do not instruct their students in visual literacy because of lack of training on the part of the teacher as opposed to the thought that they lack the resources and equipment. Hesham and Wing (2004) contend that web-based learning is more effective in reaching all types of students, and reducing differences in the academic performance among different student learning styles.

Their research confirms that it accommodates a wider range of learning styles, recommending supplementation of web-based learning with a variety of instructional strategies, such as presenting graphic organizers of content, concept maps, and salient navigation cues to help slower learners. The use of contemporary audio-visual aids that not only facilitate discovery learning, but also facilitate different learning styles, such as educational DVDs, educational excursions and computer-assisted learning, providing alternative or supplementary ways of focusing on practical work.

All the above are in tandem with the current study as the T/L resources above are at reaching all learners, their learning styles notwithstanding. Teacher personality and magnetism that allow for freedom of expression and fun, toning down the autocratic attitudes of intolerance, strictness, and inapproachability also ensure conducive environment for learning. That study, however, does not highlight the extent to which

learning styles influence the selection and use of resources: the current study purposes to investigate this critically. Much of the literature in the field of instructional technology purports to have found no significant difference in learning effectiveness between technology-based and conventional delivery media. In the wake of these findings, and as technology has improved, there is a growing demand for instruction delivered through electronic media, especially through asynchronous learning networks (ALNs) Joy, H. E. et al, (2000). This study aims at establishing another perspective, the effect of learning styles on pedagogical practices.

As cited by Andai (2011), the Master Plan of Education and Training 1997-2010 (MOE, 1998) places emphasis on inculcating practical skills in learners to translate teaching and learning process into learner-centered pedagogies; this is in agreement with UNESCO (2005). In line with this study, it is the responsibility of teachers to make sure that the T/L resources they use are ideal for communication and learning. This is in line with what Mitchell W. J (1995), a cultural theorist purports that, 'The problem of the 21<sup>st</sup> Century is the problem of the image', he highlights the fact that, images no longer exist to entertain and illustrate: Rather, they are becoming central to communication and meaning making'. These studies, however, do not emphasize the role of learning styles in the actualization of effective use of T / L resources.

In the Standard Newspaper dated 20<sup>th</sup> August 2012, the MOHEST permanent secretary urged Universities to embrace e-learning by sharing quality content so that distant education facilitates acquisition of higher education by high-school products that qualify

for higher education but lack the economic ability and even miss space for accommodation in the existing universities. It is not enough to just purpose to use resources, rather, a teacher should, by using his or her visual literacy skills, select and use resources that embrace differentiated instructional strategies; by structuring a learning environment that addresses a variety of learning styles, interests and abilities found in a classroom. Teaching pedagogies influence the level of learner participation in class.

With appropriate and adequate teaching and learning resources both learners and teachers are actively engaged intrinsically motivated and imparted with positive attitudes, which enhance quality of learning (Ndirangu 2004) as cited by Andai Peter (2011). This study, however, does not state to what extent the learning styles influence the above mentioned. The current study purposes to establish this critical perspective of learning styles.

## **2.5 The Role of T/L Resources**

Cable, R (1972) observes that, it is important to note that use of audio – visual aids should not be taken as a substitute for the teacher. The teacher needs to go for new ideas and new techniques of using visual aids with the aim of finding ways to make his teaching more effective.

Cable does not mention the role of learning styles in ensuring that there is effectiveness in teaching. Mombusho (1970) relates to Edgar Dale's 'Cone of Experience' while highlighting the significance of audio – visual teaching materials; learners gain experiences by squarely facing the environment by such means as making things or conducting experiments. Through indirect experiences gained through such symbolic

media as words and print and thirdly through semi-abstract experiences which are intermediate to the participatory and verbal symbols.

Mombusho (Ibid pg 3) highlights the role of audio-visuals media in Educational communication: they communicate in specific and sensitive terms abstract concepts. He also notes that whereas maps and charts need a teacher's explanation for them, to be used effectively visual aids such as movies and television: this is because they present complex information and phenomena in a realistic way and provide explanations and instructions by themselves. Mombusho in stating all the above, does not highlight the extent to which learning styles influence the selection and use of T/L resources.

On effective use of resources in the USOL classroom, Kreidler, C.J. (1986) observes that, visual aids are one tool available to teachers to add reality, clarity, and variety to the drill which is necessary for the students at the earlier stages of language learning. She also highlights the fact that the teacher must be aware of cultural differences in the eye movement. This use of pictures, drawing gestures and other realia assist a lot in creating a universal language to these learners from other cultures other than English speaking ones. Whereas there is an attempt at highlighting the creating of a multi-sensory learning environment, no deliberate move is made at stating the role of learning styles at this point.

Richard E. Clark (1983,1985,1994) argues media (resources) alone will never influence learning; that media themselves are merely the conveyors of instructional methods and content and that they do not directly influence learning in any way ; this is further reiterated by Gagne et al. (1992) that media (resources) per se do not influence learning.

Rather, “learning is caused by the instructional methods embedded in the media presentation”. These studies however do not highlight the role of learning styles on the selection and use of the resources. Schools are vested with the responsibility to identify, select, prioritize, and utilize T/L resources, adaptable to specific school needs (GoK, 2007 and MOE 2003). From these reports, it is not clear how this responsibility is to be actualized; the current study shall attempt to state how by investigating how the learning styles of learners influence the selection and use of T/L resources.

Claudia Maria Owoko of Marion Farm-House School has it that technology is very important to pupils and students, she wishes that all teachers stop using chalk and instead use laptops to teach. She even anticipates learning using digital books instead of hard copies. This would provide for learning as one relaxes for example by listening to audio books. (Sunday Nation-Young Nation, 13<sup>th</sup> July, 2014). This is an example of a learner that is inclined towards a particular learning style, a dimension this study proposes to examine.

Kang’ethe (2011) points out that, use of education technology in teaching and learning, help in delivery of immediate up to date education materials. Radio, print and television media play a fundamental role in provision of education materials to learners. Use of ICT facilitates communication and interaction in teaching and learning materials. Butcher Neil (1996) says that: ‘Proper resources mobilization, utilization and making ICT a priority, will shift use of resources from unproductive cultural practices and increase level of education .This will in the long run lead to social economic development.’

The gap in these studies is that; all the above may be true but, again, it would all be dependent on the learning styles of the learners, which is the hallmark of this study, How do learning styles influence the decision as to whether ICT should be used or not? findings by Ndirangu (2004), Ogunniyi (1999) and Tsuma (1998) are in agreement that T/L resources enhance learners' perception and retention of complex scientific concepts, since learners are actively engaged with practical activities teachers plan structured teaching with learners' cognitive and affective abilities in mind, to enhance their achievement.

Both Wittich and Schuler (1973) have shown that, teaching aids overcome verbalism, misconceptions, lessen mental fatigue and enhance accurate descriptions, findings that are in agreement with Wilkin (1987). Visual presentations also allow learners to process information simultaneously and emphasize effective knowledge, (UNESCO 2004). Ayot and Patel (1987) say that; "Quality Education will entail development of the school subjects through properly trained class teachers using appropriate audio – visual aids, textbooks and following communication techniques that impart maximum knowledge and skills to pupil" This implies that teaching and learning materials are necessary at all levels of Education. Andai's study does not highlight how then the learning styles of the learners would be critical for the very impartation of maximum knowledge and skills to the pupil ; this study, purposes to establish the fact that it is critical for the teacher to consider the learners' learning styles as they select and use T/L resources.

## **2.6 The Existing gaps in the reviewed literature.**

The studies reviewed on learning styles and pedagogical practices highlight the fact that people learn differently; for example the visual, auditory and kinesthetic or tactile learners; and that the teacher needs to be in charge of the classroom practices. These studies, however do not link the knowledge of existing learning styles to the selection and utilization of T/L resources.

On teacher and learner motivation and the role of T / L resources, the reviewed studies indicate that learner motivation has a bearing on how the learner responds to the immediate T / L environment. They further highlight the role the teacher in creating a conducive environment for an effective T / L process.

These studies, on the contrary, do not recognize the role of the learners' learning styles in the creation of conducive environment for an effective T / L process; neither do they state the importance of T / L resources in creating this conducive environment.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter consists of research design, locale of study, target population, sampling procedure and sample size, research instruments, pilot study to establish reliability and validity of the research instruments, methods used to collect data and analysis procedure and the ethical and logical considerations.

#### **3.2 Research Design**

Burns and Grove (2003:195) define a research design as 'a blue print for conducting a study with maximum control over the factors that may interfere with the validity of the findings' Parahoo (1997: 147) describes research design as 'a plan that describes how, when and where data are collected and analyzed'. To achieve the objectives of this study, the descriptive survey design was used. Orodho (2006) has it that, descriptive survey design is used to give an account of the current state of something; this is relevant to the current study as it helped establish the influence of learning styles on the utilization of T/L resources. Mixed research method was used whereby both qualitative and quantitative data was collected. According to Johnson and Christensen (2008), mixed research method is an added advantage since it helps one to combine both qualitative and quantitative approaches to both collect and analyze data. Marshall and Rossman (2006), have it that, qualitative research methods are interactive and humanistic hence they provided information on the respondents' experiences, attitudes and opinions in relation to the effect of different learning styles on the utilization of T/L resources.

Kothari, (1985) observes that, quantitative data can be easily collected by using descriptive survey design and that a lot of information can be collected from a wide area in a short time hence it cuts down on costs. He further observes that, a descriptive survey design is concerned with presenting relationships of variables and the process taking place in the study; from the information gathered, one is able to address the problem under study. All the above made collection of data related to the variables under study viable. The study obtained primary data from questionnaires interviews and observation schedules while secondary data was obtained from the internet, journals and books to enrich the findings on the study.

### **3.3 Locale of Study**

This study was carried out in Bungoma County which lies on latitude 0 degrees 34' 0" North Longitude 34 degrees 34' 0" East. It is approximately 2000 meters above sea level. The County is part of the previous Western Province; as a county it was formed on 4<sup>th</sup> March 2013. It occupies an area of 2,069 square kilometers with a population of approximately 1,375,063 people. It is made up of the following constituencies; Bumula Central, part of Mount Elgon, Kanduyi, Kimilili, Sirisia and Webuye; within nine administrative Divisions namely, Bumula Central, Chwele, Kanduyi, Kimilili, Malakisi, Ndivisi, Sirisia, Tongaren and Webuye. See figure 3.0 below:

It is the home for icons such as the late Masinde Muliro, founder of KADU, the late Elijah Masinde, founder of Dini Ya Musambwa among others. The following ethnic groups inhabit the County; Bukusu, Tachoni, Sabaot ( part of Mt. Elgon) and part of the Teso (Malakisi) whose economic activity is farming , with Maize and Sugar cane as the

predominant crops; this is because the area experiences rainfall throughout the year. it is also host the Nabuyole Falls formally Broderick Falls on River Nzoia and other smaller rivers; Chetambe Hills, a place known for the end of the British-Bukusu war in the 19<sup>th</sup> Century, as the latter resisted colonial rule. The area has fairly good roads which include the Kisumu – Kitale road and the Great North Road traversing the County.

The choice of the county was because it combines both the rural and the urban setting with a rich cultural background. In the urban areas there are people from different communities but their numbers are relatively small. Most of these are business people or those employed and working within the town. These include the Kikuyu, Kisii, Luo, Indians among others and even those who speak other Luhya dialects. All these speak their original languages.

Some have settled in town and their culture is expressed during their marriage, burial, or worship ceremonies. It is in this urban area that different styles of worshipping of God can be seen. There are Christians, Muslims and Hindus each having their special days and ways of worship. From this type of background, there is a possibility of the existence of different learning preferences (styles) which are a fundamental variable in this study. This county was deemed appropriate due to its proximity to the researcher's station. This would make it easy to develop immediate rapport with the respondents hence making the data collection procedure less cumbersome. In support, Singleton (1993) states that the ideal setting is one that is related to the researcher's interest, easily accessible and that which allows the development of immediate rapport. Similarly, Best and Kahn (1993) argue that, since research requires careful thought about a number of practical factors, accessibility and cost factors become legitimate considerations.

The table below presents the state of services and urbanization in Bungoma County;

Table 3.0 Services and urbanization in Bungoma County

SERVICES	PERCENTAGE
Urbanization	<b>21.7</b>
Literacy	<b>60.5</b>
Attending of school for 15-18 year olds	<b>87.6</b>
Paved roads	<b>6</b>
Good roads	<b>41.1</b>
Electricity access	<b>4.5</b>
Poverty	<b>59.9</b>

**Source: Bungoma County website**

The services and level of urbanization in Bungoma County was a critical component to the researcher as it informed the basis of planning in preparation for data collection.

### **3.4 Target Population**

According to Orodho (2005), target population refers to ‘...all the items or people under consideration in any field of inquiry...’ The target population was all the twelve (12) public secondary schools in Bungoma County that offer Art and Design, all form three students since art is an elective subject it is not possible to pick a particular number due to the varied enrolment from school to school. All the Art and Design teachers and all the Heads of the schools, all the DQASOs (4) and the CQASO (1) would also form part of the population. The schools were based on three homogeneous groups; all girls, all Boys and mixed public secondary schools in Bungoma County. This would inform this study on the variables under study.

### **3.5 Sampling Techniques and Sample Size**

Trochim (2000) defines sampling as the process of selecting units (for example people, organizations) from a population of interest so that by studying the sample, we may generalize our results to the population from which they are chosen. In relation to the current study a sample was obtained using the purposive, stratified random sampling and simple random sampling. The sample size was drawn from students, teachers, principals, DQASOs and the CQASO procedure below.

### **3.6 Sampling Procedure**

#### **3.6.1 Purposive sampling**

This study carried out purposive sampling based on the following criteria: the County has two hundred and eighty two (282) public secondary schools, out of these, twelve (12) offer Art and Design; all the Art and Design teachers and Principals in these schools also formed part of the sample. Form three Art and Design class were purposively selected because it is assumed that at form three the learners have interacted with the whole of the Art and Design syllabus. DQASOs and the CQASO were part of the sample to represent the MOEST officials.

#### **3.6.2 Stratified random sampling**

Kothari (2004) has it that ‘...if the items selected from each stratum is based on simple random sampling the entire procedure, first stratification and then simple random sampling, is known as stratified random sampling. Stratified random sampling was used to select the school type and category. The schools were categorized as boarding, day and

boarding/ day. The types are boys’ only, girls’ only and mixed schools. This technique ensured that desired representation from various subgroups in the population is achieved.

### 3.6.4 Simple Random Sampling

Kothari (2004) describes simple random sampling as ‘a type of sampling also known as chance sampling or probability sampling where each and every item in the population has equal chance of being included in the sample’. The technique was used to select one out of the two mixed schools so that the other one can be used for piloting. Where the enrolment is more than fifteen (15) the form three Students in the selected schools were selected using the simple random sampling technique.

### 3.7 Sample Size

A sample is a selection from the population. It is a smaller representative of the whole. Koul,L (1984) says a sample is expected to provide reliable and detailed information. It saves on time and finances. Below is a sampling grid for samples of the population under study. See table 3.1

Table 3.1 Sampling Grid

SAMPLE	CATEGORY	TYPE	NUMBER	SAMPLE SIZE
<b>School</b>	Boarding	Girls	2	30
		Boys	6	90
	Day	Mixed	2	30
	Day /Boarding	Boys	2	30
<b>Teachers</b>			12	12
<b>Principals</b>			12	12
<b>DQASOs</b>			4	4
<b>CQASO</b>			1	1
<b>TOTAL</b>				209

Source: Bungoma County Website.

Owing to the small number of schools that offer Art and Design, fifteen (15) form three students were sampled from each of the twelve (12) schools. This was done using the simple random sampling. All the twelve (12) Art and Design teachers and all the Principals of these schools (12), DQASOs (4) and the CQASO (1) were selected purposively. The total sample size was two hundred and nine (209) respondents as presented in the sampling grid.

### **3.8 Research Instruments**

This study used a variety of research instruments based on Kane, (1995) who observes that, the use of varied research instruments ensures that most parameters that are fundamental to accurate collection of data are met as opposed to the use of one method: questionnaires to students and teachers, interviews schedules to principals of sampled out secondary schools and MOEST officials observation checklists were used on lessons in session and to ascertain available resources.

#### **3.8.1 Questionnaires**

The questionnaires brought out attitudes otherwise missed out in the course of observation.

The Likert scale was applied on to the responses to establish altitudes and biases among respondents to establish to what extent learning styles influence the selection and use of resource or to discover any other variables that may have been overlooked.

The researcher carried out the data collection during third term of the three term schedule of schools in Kenya that follow the 8-4-4 education system .the questionnaire to students

was administered on spot; collection of the questionnaires was done by the researcher standing at the door and receiving from every student for 100% response. Pre-processing of the data was done by the researcher going through the questionnaires to ascertain the completeness of each questionnaire. Questionnaires were given about a week or two to be completed and then the researcher went for them while some were mailed back to the researcher.

### **3.8.1.1 Questionnaires for Art and Design teachers**

The researcher obtained personal ideas and opinions from the respondents through this instrument. The questionnaire was administered to the teachers to find out the T/L Resources available and whether the teacher considers the learning styles of the students before selecting and using the resources (Appendix A).

### **3.8.1.2 Questionnaires for students**

The purpose of this questionnaire was to find out whether T/L resources are used during Art and Design lessons and the students' response when such resources are used. The questionnaire was used with the aim of establishing the students' characteristics and learning preferences (Appendix C).

These instruments were selected with the research questions in mind. Kothari, (1985) posits that, a questionnaire is considered as the heart of a survey study operation; with this in mind, this study used the questionnaire especially for data collection from students and teachers. This is because these two sets of respondents form the core of possible responses that likely to greatly influence the findings of this study.

Tuckman (1978) says a questionnaire is a way of getting data about persons by asking rather than watching them. It is preferred because it has the ability to reach a large population. Kerlinger, (1983) reiterates this by stating that the questionnaire is cheap and does not take a lot of time to be filled. The questionnaire consisted of both structured and open-ended questions with Likert scale items aimed at eliciting attitudes from respondents. Control questions were used to indicate the reliability of the respondent.

### **3.8.2 Interviews**

The researcher booked an appointment with the respondents (Principal's of schools, DQASOs, the CQASO) so as to elicit more reliable responses. Booking an appointment in itself helped in creating rapport between the researcher and the said respondents.

#### **3.8.2.1 Interview Schedules for Heads of Schools**

An interview schedule is a set of questions particularly structured with the study objectives in mind to be posed to the sample under study. It is used to obtain data required to meet objectives of the study. According to Koul, (1984) , an interview schedule is flexible which makes it possible for the researcher to get information by use of probing questions. Kerlinger, (1986) observes that interviews help to elicit answers not originally anticipated and that interview schedules are adaptable and uniquely suited to explore data exhaustively Kerlinger, (1986). This method is preferred because the researcher can establish rapport with the respondents and also explain meaning of unclear terms. Interviews were conducted to Principals of schools establish their view on the T/L resources available in their schools and their opinion on the Art and Design T/L process. (Appendix B).

### **3.8.2.2 Interview Schedules MOEST officials**

The interview to MOEST officials would aim at establishing their view on the availability of Art and Design T/L resources, pedagogical practices prevalent in the teaching of Art and Design in the County / District and whether, in their opinion those practices consider the students' learning preferences (learning styles) . (Appendix E).

### **3.8.3 Observation Checklist**

The researcher booked an appointment with the teachers so as to observe a lesson in progress and then apply the tool. This yielded information on availability and utilization of resources and in the same breath the evident learning styles among the learners. The observation checklist was used especially to capture the realities of the classroom in action and so to establish the resources available; how teachers use them and the learner response during the T/ L process. This instrument is reliable for acquiring an overall view of a situation: Orodho, (2012) states that observation is not disruptive as the subjects are observed in their naturalistic setting. The observation of classroom lessons was done without interrupting the school routine. This instrument was used to observe the learning styles among the learners as well as establishing the available resources and how the teacher selected and used the resources. (Appendix D).

### **3.9 Pilot study**

According to Teijlingen and Hundley (2002), a pilot study is a preliminary small-scale study that researchers conduct in order to help them decide how best to conduct a large scale research project. A pilot study is important in shaping future research. A pilot was carried out on one mixed school other than those under study in Bungoma County.

Piloting helped to locate ambiguities and reveal flaws in the questions so that the data that would be collected could be relevant to the objectives of the study. The piloting

exercise helped the researcher improve the reliability and validity of the instruments to be used for the study. This enabled the researcher to fine tune the questionnaires before the main study. Analyzed data from the pilot study was not used in the main study because its aim was only to improve the data collection instruments.

### **3.10 Reliability**

Reliability refers the extent to which research instruments yield measures that are consistent each time they are administered to the same individuals: according to Fraenkel and Wallen, (2000), the degree to which scores obtained from an instrument are consistent measures to ascertain the reliability of the questionnaires, the split-half technique was used. According to Creswell (2008), Conbach's alpha formula is used to measure internal consistency and dependability of the items. Kothari and Pals, (1993) posit that, a reliability of 0.50 is acceptable; towards 1.0 the instrument is said to be reliable.

### **3.11 Validity**

Kombo and Tromp (2006) posit that validity is a measure of how well a test measures what it is supposed to measure. Kothari, (1993) describes these types of validity namely; content validity which is the extent to which a measuring instrument provides adequate coverage of topic under study. This was measured by rationally analyzing the instrument rates. It is primary initiative and judgmental. The criterion-related validity relates to our ability to predict some outcome or estimate the existence of some current condition. It is predictive and concurrent. The interviews and observation and questionnaires provided a

basis for this scrutiny with emphasis on relevance of responses, availability, and reliability.

The construct validity on the other hand was measured by analyzing the instruments by rates where validity would be said to be average if responses rate between three and five. According to Wiersma (1995) analysis of items, content, criterion and construction of related evidence through pre- testing of study instruments validates the tool.

### **3.12 Data Collection**

The primary source of data collection was carried out from the locale of study using the following instruments; observation schedules, interviews and questionnaires to learners, teachers, head teachers and Ministry of Education Officers. The secondary source of data was obtained from the internet, Ministry of Education documents, newspapers, and journals.

### **3.13 Data analysis.**

The collected data was organized by cleaning it by sorting out the complete and incomplete questionnaires and keeping a record of each category; assigning a code on each instrument and response; transcribing and then feeding the data into the computer. Quantitative data was pre-coded and the code entered into a computer for descriptive analysis. Based on the findings of the study were analyzed as follows;

- i Using the t-Test on objective one- to establish the learning styles evident among the learners with the data presented in percentages form.

- ii The ANOVA on objective two- to establish the T / L resources available for use by Art and Design teachers by comparing the percentages of responses by learners, teachers and those of Heads of schools.
- iii Regression on objective three – to investigate the influence of learning styles on utilization T / L resources by examining the relationship between the independent variables(learning styles) with independent variables(utilization of resources).

Qualitative data was analyzed by arranging responses into meaningful categories based on the research objectives and questions. Interviews to Heads of schools, MOEST officials, and classroom observation schedule provided information on resources available for during the T/L process in response to the second objective. In response the first objective,(the different learning styles among the learners), information was obtained from classroom observation ,SQs, QTs and interviews to Heads of schools, MOEST officials.

Information on the third objective which seeks to establish how learning styles influence the selection and use of T/L resources was obtained from QTs and interviews to Heads of schools, MOEST officials Data analysis was done by SPSS to summarize the data in the main items and was presented in frequencies through tables and charts. Descriptive statistics was computed for main items and accompanying measures of dispersion of the mean and standard deviation respectively. The data was analyzed using Pearson's Product Moment Correlation Coefficient.

### **3.14 Ethical and Logistical Considerations**

The permission for data collection was obtained from the Ministry of Education, Science, and Technology through the dean school of Education in conjunction with the department of Educational Communication Technology, Kenyatta University.

Consent was sought from the respondents who were assured that the information obtained was treated with great confidentiality and that the study was purely for academic purpose. Ethical considerations that go with use of human subjects in the research process; permission was sought from National Commission for Science Technology and innovation (NACOSTI) for relevant authorizations.

## **CHAPTER FOUR**

### **ANALYSIS , INTERPRETATION AND DISCUSSION OF THE FINDINGS**

#### **4.1 Introduction**

The purpose of the study was to investigate the influence of learning styles on the use of teaching and learning resources in Art and Design in secondary schools in Bungoma County. Based on documentary analysis, the reporting of the findings is in two parts; namely, (i) Demographic information of respondents and (ii) based on the three set objectives of the study.

#### **4.2 Demographic information of the Respondents**

This section presents the demographic information of respondents in order to establish the general background of the respondents. The findings discussed include: school type/category, gender of respondents (learners and teachers), teachers' level of education, length of stay in the current school (teachers and heads of schools) and teachers' workloads.

##### **4.2.1 School by Type and Category**

The respondents were asked to indicate the type and category of school under study as presented in the in table 4.1.

Table 4.1: Demographic information of the respondents

Type	Category	Enrollment (N=251)	Percentage	Total
National	Boys	23	9.2	61
	Girls	38	15.1	
County	Boys	108	43	172
	Girls	34	13.5	
	Mixed	30	12	
Sub-County	Boys	-	-	18
	Girls	-	-	
	Mixed	18	7.2	

From table 4.1 the results indicate that 24.3% of the students were from National schools, 68.5% from County schools while Sub-County schools accounted for 7.2%. The findings indicated that 92.8% of Art and Design students in Bungoma County are from National and County schools.

#### 4.2.2 Sex of the respondents (students and teachers)

An item on the QT and SQ sought information on the gender of Art and Design teachers and that of Art and Design students as presented in table 4.2

Table 4.2: Sex of the respondents

Type	Gender	Student enrollment (N=251)	Percentage	Total	Number of teachers (N=12)	Percentage
National	Male	23	9.2	61	-	-
	Female	38	15.1		2	16.7
County	Male	123	49	172	9	75
	Female	49	19.5		-	-
Sub-County	Male	9	3.6	18	1	8.3
	Female	9	3.6		-	-

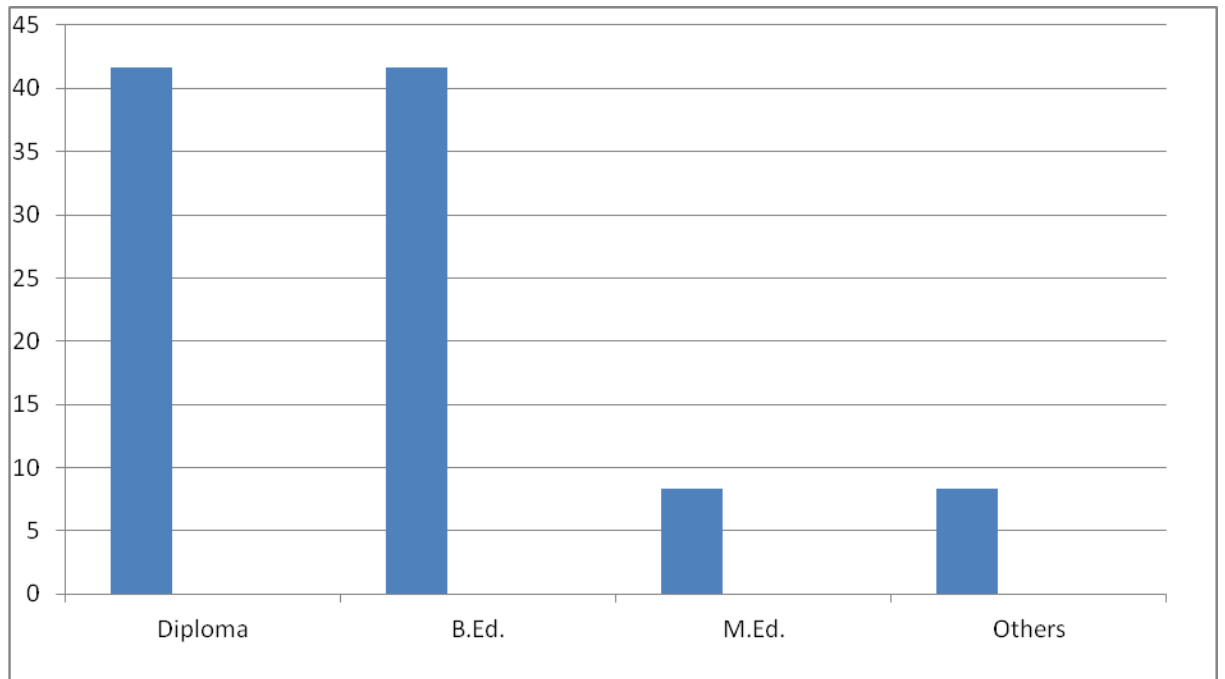
The findings above indicated that, out of the 12 Art and Design teachers, 83.3% are male while 16.7% are female. The results above showed that the number of male teachers of Art and Design is higher than female teachers of Art and Design in Bungoma County.

Findings on the sex of the students indicated that, 9.2% of the male students were from the national school, 49% were from the county schools, while 3.6% were from Sub-county schools.

From the results, 15.1% of the female students were from the national school, 19.5% were from the county school while 3.6% were from the sub-county school. The findings revealed that more than half of the Art and Design students were male (61.8%) while the female Art and Design were below half of the respondents (38.2%).

#### **4.2.3 Level of education of the teachers**

The researcher sought to establish the level of education of the Art and Design teachers in Bungoma County. The findings were as presented in figure 4.1.



**Figure 4.1: Level of education of the Art and Design teachers.**

Figure 4.1 presents findings on teachers' level of education (professional experience): The researcher obtained the following findings from the questionnaire to teachers (QT) The findings indicated that 5 Art and Design teachers had Diploma Education and a similar number had Bachelor's degree (41.7%). One teacher had a Masters degree (8.3%) and one enlisted under "others" as the level of education (8.3%). This showed that the teachers were mainly Diploma and Bachelor degree holders.

#### **4.2.4 Teaching experience**

The researcher sought to establish the teaching experience of the teacher from the 12 schools under study. The following findings were obtained from the QT and presented in the table 4.3;

Table 4.3: Teaching Experience of the Art and Design teachers

Teachers' demographic data	Frequency (N = 12)	Percent
Teaching experience (Years)		
Less than 5	0	0
5 – 10	5	41.7
11-15	0	0
16 – 19	3	25.0
20 years and above	4	33.3
Total	12	100

The researcher established that, 41.7% of the teachers had been teaching for 5 – 15 years 25% ranged between 16-19 years while 33.3% teachers had taught for more than 20 years.

#### 4.2.5. Heads of Schools' length of stay in the current station

The researcher sought to establish the length of stay of heads of schools' in the current station from an interview. This would inform their responses regarding the teaching of Art and Design in the schools they head. The findings are presented in the figure 4.2

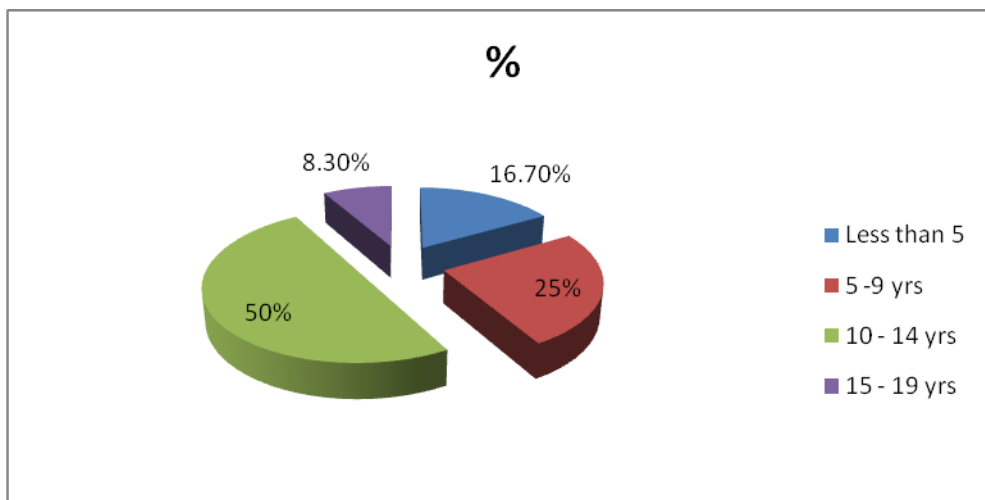
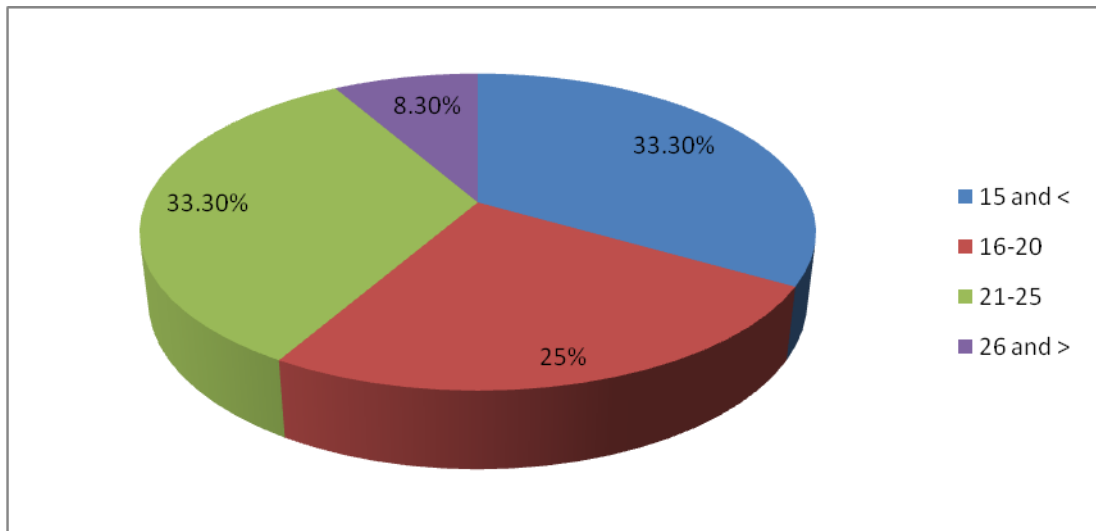


Figure 4.2 Heads of Schools' length of stay in the current station.

The findings indicated that 50% of the heads of schools had stayed in their current station for 10-14 years, 25 % had stayed for 5-9 years, and 16.7% had stayed for less than 5 years. 8.3% of the heads of schools had been in one station for 15-19 years. The findings can be interpreted to mean that slightly above half of the heads of schools had been in their current stations for 10-19 years (58.3%) while the rest (41.7%) had been in their current stations for less than 5-9 years. This means that the heads of schools should be familiar with the required T/L resources of Art and Design and subsequently the learning styles among Art and Design students.

#### 4.2.6. Teaching workloads of Art and Design Teachers.

From the QT section A item 6, the researcher sought to establish the teachers teaching workloads in terms of lessons taught per week as presented in the figure 4.3 :



**Figure 4.3 Teachers' teaching workloads**

The teachers' workloads have a bearing on a teacher's ability to establish the learners' learning styles. If a teacher is overwhelmed with many lessons, they may not cope with the task of establishing the learning preferences of the learners. The findings indicated that 4 teachers teach 15 lessons and below (33.3%), 3 teachers 16-20 lessons (25%), 4 teachers, 21-25 lessons with 1 teacher at 26 and above lessons. Studies from Hong Kong (Jin, Yeung, Tang, and Low, 2008) observed that heavy workload experienced by teachers can lead to health problems among teachers and no consideration learners learning styles during the T/L resources. Another study by Torres, 2016) indicated that an unsustainable workload is considered the primary cause of teacher turnover. From the above findings and professional experience, a teacher's workload has a great influence on whether the teacher could cope with consideration of learners' learning styles before utilizing T/L resources.

#### **4.3. Objective 1: To establish the different learning styles among the learners of Art and Design.**

The researcher sought to establish the learning styles evident among Art and Design students. The findings were obtained from SQ, section B, Items 1-4; QT section E items 1-5; from interviews to QASOs item 3.

##### **4.3.1 Learning styles**

The researcher sought to establish the views of learners, teachers and heads of schools on learning styles of the learners.

#### 4.3.1.1 Learners' views on learning styles.

From the SQ section B, the students were asked to respond to the statements as presented in table 4.4.

The findings on learners' views were as presented below:

Table 4.4: Learner styles (N = 251)

Item	SA	A	D	SD
<b>I prefer reading or researching about a concept taught</b>	107 (42.6%)	116 (46.2%)	18 (7.2%)	6 (2.4%)
<b>I prefer field trips to places related to what is to be learnt</b>	195 (77.7%)	46 (18.3%)	8 (3.2%)	2 (0.8%)
<b>I like to learn art concepts via the internet</b>	124 (49.4%)	91 (36.3%)	27 (10.8%)	7 (2.8%)

SA-Strongly agree, A-Agree, D-Disagree, SD-Strongly disagree

Findings on three ways of learning were as follows; learning through reading or researching, 42.6% strongly agreed, 46.2% agreed, 7.2% disagreed while 2.4% strongly disagreed: On field trips to places to what is to be learnt 77.7% strongly agreed, 18.3% agreed, 3.2% disagreed, 0.8% strongly disagreed.

Responses on learning Art concepts from the internet indicated that, 49.4% strongly agreed, 36.3% agreed, 10.8% disagreed while 2.8% strongly disagreed. The findings can be interpreted to mean that students learn differently and that the learners are not inclined towards only one T/L resource. The findings concur with a study by Fleming (1992) who in his VARK model of learning styles highlights that some learners prefer Visuals, others Auditory oriented; others are inclined towards Reading or writing, while others are kinesthetic. Based on this model, the findings indicated that 88.8% fall in the R cadre,

96% in the K cadre while 85.7% fall in the A & V cadres because as they use the internet, they may watch some audiovisuals on YouTube.

The researcher noted that from the percentages, there were learners who cut across all the three learning preferences highlighted in Table 4.4. Therefore, it would call for a teacher to create a multisensory T / L environment in order reach all learners based on their learning styles. As Art and Design students, not all the students were happy. 8.8% stated that they were not happy as Art and Design students. However, majority of the students (91.2%) were happy as Art and Design students.

#### **4.3.1.2 Teachers ‘views on learning styles.**

The teachers were asked if they knew the meaning of the term learning style in this study. All the teachers stated that they knew the meaning of the term learning style with 33.3% strongly agreeing and 66.7% agreeing. When teachers were asked whether learning styles of their learners influence their choices of T/L resources noted 25% strongly agreed and 75% agreed. The findings can be interpreted to mean that all teachers understood what learning styles were and that they planned their lessons with their learners’ learning styles in mind. This concurs other studies (Kamarulzaman, 2012; Mahlios, 2001; Ogden, 2003; Stanberry & Azria, 2001) who suggest that students learn best when they are taught in ways that match their way of learning. Gregorc (1979) reiterates this as he posits that individuals have basic capacity to learn, however, they are not able to learn effectively in the same exact way. The findings above indicated that the teachers basically knew what it took to reach all their students effectively, that is by teaching with the learners’ learning preferences in mind.

The teachers were asked to identify the learning styles among their learners. The teachers based their views on how their learners responded to T/L resources as presented in table 4.5 below:

Table 4.5: Teachers views on the students responses to T/L resources

<b>Media</b>	<b>Excited</b>	<b>Listen attentively</b>	<b>Bored</b>	<b>Watch keenly</b>
<b>Books</b>	2 (16.7%)	5 (41.7%)	3 (25.0%)	1 (8.3%)
<b>Pictures</b>	6 (50.0%)	2 (16.7%)	-	4 (33.3%)
<b>Realia(Real objects)</b>	10 (83.3%)	1 (8.3%)	-	1 (8.3%)
<b>Resource people</b>	4 (33.3%)	8 (66.7%)	-	-
<b>Writing board</b>	3 (25.0%)	2 (16.7%)	4 (33.3%)	3 (25.0%)
<b>Dramatization</b>	6 (50.0%)	2 (16.7%)	-	3 (25.0%)
<b>Field trips</b>	10 (83.3%)	-	-	-

From the findings the researcher established that, when writing board is used, 33.3% of the teachers noted that their learners were bored; this means that such learners preferred to learn in other ways other than listening (A) while when books are used 25.0% of the teachers stated that their learners get bored which implies that those learners prefer other ways of learning other than reading and writing(R). Learners were most excited during field trips (83.3%); when pictures are used (50%) and when dramatization are used in teaching (50%). When the teachers invited resource people, they learners listen attentively more than any other time (66.7%). The findings indicated that the utilization of T/L resources made it possible for the teachers to identify the learning styles among their learners furthermore that learners learn better when their preferred T/L resources are used. This concurs with a study undertaken by Khan & Iqbal (2012) which asserts that; ‘...adequate and quality school physical facilities are basic ingredients for quality education...’ In the same breath in the study by Lawrence (2003) empathized that the unavailability of school physical facilities negatively affects staff and students

motivation. The teachers' views on the learning styles evident among their learners can be summarized as follows:

- i. Visual( writing board,real objects,pictures oriented learners)
- ii. Auditory ( resource people oriented)

Read /write (books)

- iii. Kinesthetic ( dramatization and field trips.)

The findings above agree with learning styles described in the Fleming(1992) VARK model and are in line with Edgar Dale's "Cone of Experience" which posits that "... stimulus richness and variety would enhance learning and motivate learners..." the researcher noted that, in a typical classroom there are a variety of learning styles which a teacher has to keep in mind while selecting T /L resources and that teachers can vary strategies they use in order to reach majority of their learners by their learning styles as presented above.

#### **4.3.1.3 Heads of schools' views on learning preferences**

From the interview with heads of schools the researcher obtained the following responses on the Art and Design students' learning preferences as presented in table 4.6.

Table 4.6 Heads of schools' views on learning preferences

<b>Students' Preferences</b>	<b>Frequency (N = 12)</b>	<b>Percent</b>
<b>Teacher to give information and demonstration</b>	9	75.0
<b>Field trips</b>	7	58.3
<b>Video show</b>	1	8.3
<b>Research in the library</b>	2	16.7
<b>Group work/discussion</b>	2	16.7
<b>Simulations on computers</b>	1	8.3

From the findings the researcher established that: 75% of the heads of schools indicated that the students prefer that the teacher gives information and demonstrates, 58.3% of the heads of schools indicated that learners preferred field trips, 16.7% indicated that students prefer to research and group work/discussion recorded 16.7%, while simulations on computers and video shows were at 8.3% each. The findings indicated high inclination towards teacher-centered strategies. One head teacher observed that

*“... there is no clear understanding of learner preferences since the main focus during teaching is to complete the syllabus, therefore learners preferences are not a priority during T / L process; that students just prefer the teacher to give all information...”*

The findings can be interpreted to mean that students prefer teacher- centered T/L processes (75%) and that research and group work are shunned (16.7%) while field trips are another preference of the learners (58.3%). In line with the above findings, Felder (2010) suggests that

*‘...awareness of learning style differences can help instructors teach in a manner that effectively reaches most students rather than putting a large subject of them at a disadvantage...’*

This view concurs with the findings above which indicated that all learners have different learning styles, with majority being auditory (75%), followed by kinesthetic ones (58.3%) while the visual and read/write learner preferences are shunned (16.7% and 8.3% respectively). From professional experience unavailability of T/L resources makes students heavily rely on the teacher as a source of information (75%) the students’ learning preferences notwithstanding.

#### **4.3.2 Objective 2: To establish the resources used during the teaching and learning process.**

The second objective aimed at establishing the resources used during the teaching and learning process. The findings have been presented in four sections; that is ,i) availability ,ii) accessibility ,iii) utilization of T/L resources and iv) competency in use of computer and internet services and views on e-learning. The respondents were teachers, students, heads of schools’ and the Quality Assurance and Standards Officers (QASO).

##### **4.3.2.1 Teachers’ views on availability of teaching and learning resources for Art and Design.**

The researcher was interested in establishing teachers’ views on the availability of T/L resources; based on analysis of, Questionnaires to Teachers (QT) and the Classroom Observation Schedules. The findings were as presented in the table 4.7 below;

Table 4.7: Teaching and learning resources available in the schools

<b>T/L resources available in schools</b>	<b>Frequency (N = 12)</b>	<b>Percent</b>
<b>Books</b>	12	100
<b>Writing board</b>	11	91.7
<b>Pictures</b>	11	91.7
<b>Display boards</b>	5	41.7
<b>Art and design magazines</b>	3	25.0
<b>Maps</b>	3	25.0
<b>Models</b>	6	50.0
<b>Real object</b>	10	83.3
<b>Dioramas</b>	2	16.7
<b>Radio</b>	2	16.7
<b>Television</b>	4	33.3
<b>Films/slides</b>	3	25.0
<b>Resource people and places</b>	12	100
<b>Field trips</b>	9	75.0
<b>Dramatization</b>	6	50.0

The findings indicated that apart from books, resource people and places for Art and Design information which were available in all schools(100%), all the other resources were available but with varied percentages from school to school. This means that not all schools have each of the T/L resources in table 4.7 above. This concurs with studies by Ambuko, and Odera. (2013), Luvisa (2003), Abuli (2003) who noted unequal distribution of T/L resources in different secondary schools in Kenya ,in which regard they asserted that if all schools in Kenya had an even distribution of resources, the T/L process would be enhanced. Indoshi, Wagah and Agak (2010) in their study found out that lack of materials, equipment and facilities in Art and Design are caused by a stereotype that the subject is expensive. This makes the subject to be shunned by many schools.

Secondly, from interviews to Heads of schools on teaching and learning resources for Art and Design in the schools they head, the researcher established that, the following Art

and Design resources were in use; computers, charts, Textbooks, simulations, as presented in the table 4.8 .

Table 4.8: Heads of Schools' views on T/L resources for Art and Design.

<b>Heads of schools' views</b>	<b>Frequency (N = 12)</b>	<b>Percent</b>
<b>Few texts books with no extras for research</b>	1	8.3
<b>No Art room and no Art teacher</b>	1	8.3
<b>Very few resources and no self-drive among students</b>	2	16.7
<b>Students buy their own materials for Art</b>	1	8.3
<b>No permanent room for art classes</b>	1	8.3
<b>Satisfactory availability of resources</b>	6	50

The findings indicated that, one of the schools (8.3%), had very few text books and no extras for research. In one of the schools (8.3%), there is no Art room and no teacher and therefore no place to store any resources. In one of the schools (8.3%), the students buy their own working materials in Art. Two schools (16.7%) have very few resources and there is lack of self-drive among students. It was noted that in one of the schools (8.3%), there was no art room; hence the Art class keeps migrating from room to room where there is a space. 50 % of the schools had a more or less satisfactory environment in terms of availability of teaching and learning resources.

The Heads of Schools noted that there is pressure on the few existing resources, high turnover of teachers; pressure on existing T/L resources; lack of self-drive among students; large enrolment of students yet the teachers are few; pressure on the existing resources. The schools also face the challenges of inadequate human resource and where

available they are incompetent. There is discouragement from other teachers towards students during subject selection and specifically towards Art and Design. The findings indicate that heads of schools face challenges as they implement the curriculum due to the imbalance in the available T/L resources; these include, lack of room for classes, especially elective subjects like Art and negative attitude towards elective subjects. The findings are in agreement with studies by Odeh (2015), Saeed and Wain (2011) and Owoeye and Yara (2011) who highlight lack of T/L resources as a contributor to low academic achievement. A study by, Leithwood, K. A. and Riehl, C. (2003) posits that

*“...to learn well, students need access to high-quality instruction and a well-crafted curriculum...”*

Findings from teachers’ and heads of schools’ views presented a disparity in the availability of T/L resources, which implies that the schools offering Art and Design do not function on a level ground in terms of availability of T/L resources and so it’s not possible to reach all learners satisfactorily with their learning styles in mind. In the same breath, much as the teachers would wish to vary their selection and use of T/L resources, the actual situation on the ground does not enable that quest.

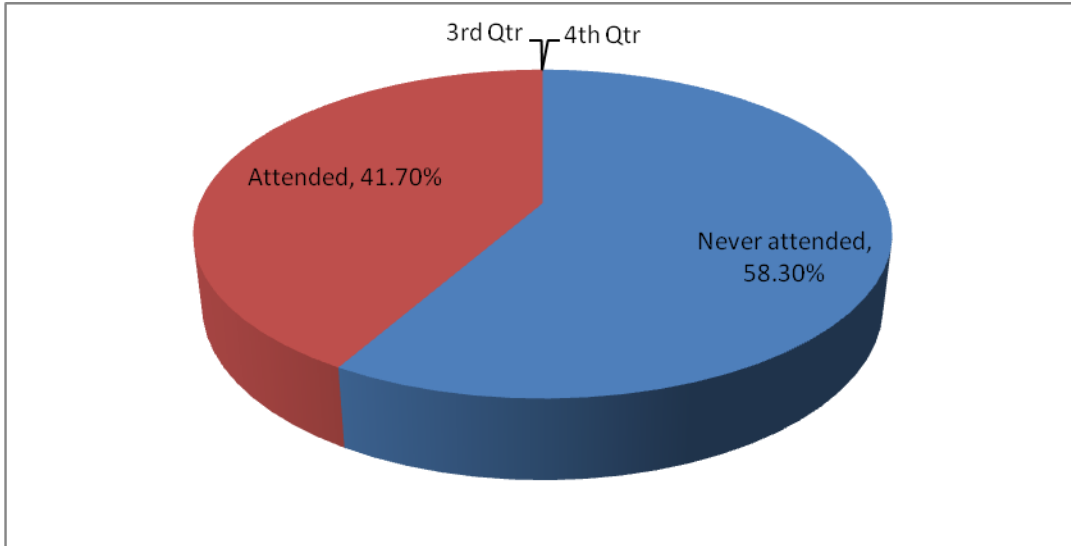
Thirdly, findings obtained from interviews to QASOs highlighted the following challenges in the schools that offer Art and Design,;

- i. There are no adequate resource materials for teaching the subject. In one sub-county, the teacher has had a rough time to expose students to compete favorably with those from schools that are well established. for example there are no art rooms in schools , and where they exist, they are not fully stocked.

- ii. Most heads of schools don't want to go an extra mile since they offer the subject reluctantly and would be more than willing to scrap it off the Curriculum Based Establishment (CBE).
- iii. textbooks are limited in terms of variety ,title and the ratio is wanting in most schools
- iv. Art teachers are rare to come by hence many heads of schools even shun the subject given that it is optional. Subsequently, many schools that previously offered the subject to scrap it off their CBE
- v. Most of the schools that offer Art and Design do not assign a special room for the subject due to the low enrollment.
- vi. Many schools do not have the required equipment for practicals in Art and Design
- vii. Many heads of schools claim that resources and equipment for art are too expensive
- viii. Very few schools manage to teach the subject as the practical subject it is; a majority teach the practicals theoretically and leave the rest to chance
- ix. Many Art teachers tend to improvise materials and equipment which gives the learners a raw deal on actual and correct use of material and equipment in Art and Design
- x. The pressure on mean scores and completion of the syllabus makes most Art and Design teachers to run through the content through lecture methods.

The findings above indicate that the DQASOs concur with the teachers' sentiments that availability of resources forms the basis of the current T/L resources in use.

In this section the researcher sought to establish teachers' views on accessibility of T/L resources and specifically if they attended workshops or seminars related to Art and Design or not and if so to indicate whether they benefited from them or not. The findings are presented in the figure 4.4



**Figure 4.4 Teachers' views on attending workshops and seminars.**

The research findings indicate that 58.3% of the Art & Design teachers had never attended any workshop or seminar related to the subject. However, 41.7% of the teachers indicated that they had attended a workshop related to Art and Design as a subject.

55% of the teachers who had attended a workshop found the workshop helpful because;

- i. It was quite applicable to present changes in the teaching profession
- ii. It gave the teacher an opportunity on how to mark project paper in art and design
- iii. it brought about the use of new teaching/learning resources like computers
- iv. it exposed teachers to what is required by examiners both paper1 and paper 2

while the 45% who found the workshop not useful noted that, the teachers just went through the syllabus and that as Art and Design teachers could not bring up discussions on issues facing the subject (Art and Design) because it was a workshop for all technical subjects. Other researchers such as Killen (2000) assert that it is fundamental for any professional, teachers included to further their education in the course of their working

life; workshops, short courses, and in-service inclusive in order to get new ideas and to gain more knowledge.

These findings presented an almost 50-50 situation on attendance and non-attendance of workshops and seminars. From the teachers' feedback above it is clear that the perception of the importance of workshops and seminars varies from teacher to teacher. That being the case, it might not add any value to the group that did not find the workshops useful. The findings indicated that the fresh knowledge and motivation that is associated with workshop and seminar attendance may not be equitably experienced by all Art and Design teachers; which leads to tendencies of teachers using redundant approaches to utilization of resources.

#### **4.3.2.3 Views on utilization of teaching and learning resources by the teachers.**

The researcher sought to obtain views on utilization of T/L resources by teachers. The respondents were students, teachers and QASOs. The findings in the table 4.9 below were obtained from the students' questionnaire (SQ) section C;

Table 4.9: Learners views on utilization of teaching and learning resources by the teachers (N = 251)

<b>Item</b>	<b>SA</b>	<b>A</b>	<b>D</b>	<b>SD</b>	<b>Mean (response)</b>
<b>My Art and Design teacher uses text books and no other resources to teach us</b>	17 (6.8%)	24 (9.6%)	161 (64.1%)	48 (19.1%)	2.96
<b>Students actively participate during the art lesson when the teacher uses T/L resources</b>	112 (44.6%)	132 (52.6%)	4 (1.6%)	2 (0.8%)	1.58
<b>Our teacher shows us how to make learning resources which makes learning interesting</b>	172 (68.5%)	61 (24.3%)	13 (5.2%)	1 (0.4%)	1.36
<b>My art and design teacher uses other teaching aids other than text books to teach us</b>	181 (72.1%)	58 (23.1%)	11 (4.4%)	1 (0.4%)	1.33
<b>I can access information related to Art and Design from the internet</b>	83 (33.1%)	105 (41.8%)	42 (16.7%)	19 (7.6%)	1.99
<b>I know what e-learning is all about</b>	38 (15.1%)	100 (39.8%)	64 (25.5%)	42 (16.7%)	2.45

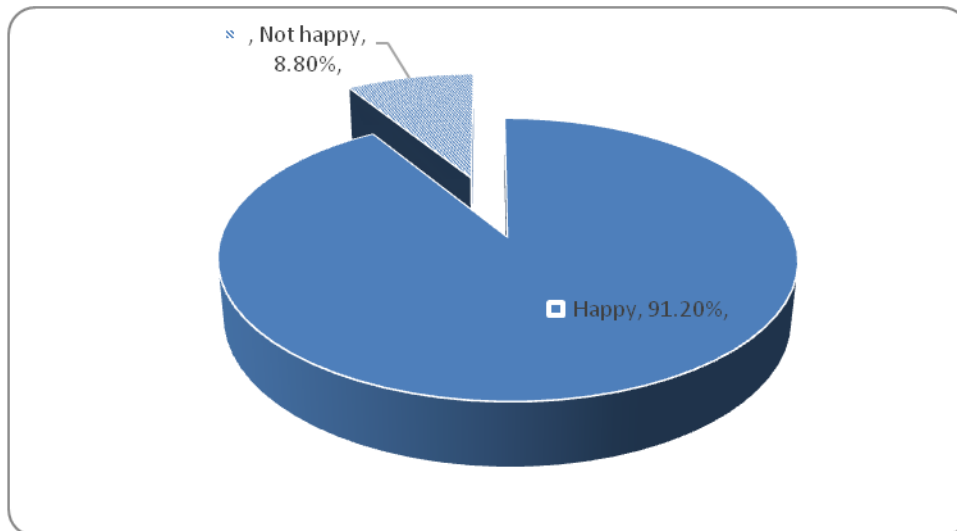
SA-Strongly agree, A-Agree, D-Disagree, SD-Strongly disagree

Findings from the students' questionnaire weighed on a likert scale revealed that 97.2% of the respondents felt that students actively participated in the T/L process when teachers used T/L resources, 95.2 % of the respondents indicated that the teachers use other T/L resources other than text books, 92.8% of the students felt motivated when their teachers showed them how to make T/L resources, 74.9% indicated that they could access information via the internet while 54.9 % indicated that they know what e-learning is all about. However, 83.2% of the respondents were of the view that their teachers utilize text books only during the T/L process,

The findings were interpreted to mean that, many students felt that their Art and Design teachers use other T/L resources apart from text books to teach them and that they show them how to make learning resources which make learning interesting. The findings above indicate that, teachers indeed attempt to use the available resources and that when the resources are used; there is satisfactory learner involvement during the teaching and learning process.

The above findings concur with studies by Dunn and Dunn,. (1984),Gagne, Briggs and Wager, (1992) including those by Ayot and Patel (1987), who reiterate the importance of teachers using a variety of teaching and learning resources so as to create a meaningful teaching and learning environment. When teachers use a variety of resources, they most likely reach out to a majority of their learners, hence impartation of knowledge and skills.

The researcher, from an open ended item on the SQ section C , sought to obtain more views from students on utilization of T / L resources based on the statement “ Are you happy as an Art and Design student in your school” Give reasons for your answer. Findings were as presented in figure 4.5



**Figure 4.5: Students happiness as Art and Design students**

The findings indicated that 91.2% of the students were happy as Art students in their schools. reasons for being happy as Art and Design students were that; It is an interesting subject; The students enjoy drawing; “ The school has the best teacher in the whole world” since he is reliable and available to teach the students ;The students have enough text books to guide them in their practical theories; The students have a field trip annually; Students were motivated to study Art and Design because they feel it equips the learners with problem solving skills and improves their creativity. The findings can be interpreted to mean that, when there is a variety of T/L resources, learners are motivated to learn because they are able to learn as per their learning styles. This concurs with a study by Kress(2009) who observes that there is need to use multiple “ *modes of presentation*”,beyond words and text.from experience, the researcher concurs with the fact that when a teacher creates a multisensory T / L environment, all learners are motivated to actively participate in the T / L process

The reasons for the Art and Design students being unhappy included; lack of an Art room, the school not providing the materials used for Art and Design; no Art and Design symposia; no exposure to other Art and Design students in the region; lack of standard text books; no participation in art contests and Art exhibitions. The findings reveal that the unhappy students are demotivated because of inadequate T/L resources, secondly, responses above echo those by teachers, heads of schools and the QASOs on the availability and utilization of T / L resources. A study by Prensky(2001) posits that there is need to involve students in decision making in as far as the T / L resources and T / L process is concerned,because they wish to express their views on what they need to learn best. This concurs with studies by Patel & Mukwa,(1993) that postulate that availability and utilization of T / L resources leads to faster and enjoyable learning. Newby et al (2000) reiterates this by observing that, use of T / L resources facilitates effective learning while lack of resources or inadequate availability impedes learners ability to learn and some end up learning slowly (Twoli et al, 2007).

The responses showed that the learners are both intrinsically and extrinsically motivated to study Art and Design when T / L resources are available and are utilized process because it would facilitate their learning as per their learning styles; however when the T / L resources are not available for utilization the learners are demotivated since their learning styles may not be a critical factor during the T/L process.The responses also indicated that there is great disparity among schools offering Art and Design with some schools enjoying multisensory learning environment hence satisfactorily reaching all students as per their learning styles while others are left with one option; to go by what the teacher can offer.

The researcher sought to establish teachers' views on utilization of the available T/L resources. The following data was collected from the QT section B, and from the classroom observation checklist and presented in the table 4.10 below;

Table 4.10: Teaching and learning resources used in the schools

<b>T/L resources used in the schools</b>	<b>Frequency (N = 12)</b>	<b>Percent</b>
<b>Books</b>	12	100
<b>Writing board</b>	11	91.7
<b>Pictures</b>	11	91.7
<b>Display boards</b>	5	41.7
<b>Art and design magazines</b>	3	25.0
<b>Maps</b>	4	33.3
<b>Models</b>	7	58.3
<b>Real object</b>	9	75.0
<b>Dioramas</b>	1	8.3
<b>Radio</b>	3	25.0
<b>Television</b>	3	25.0
<b>Films/slides</b>	4	33.3
<b>Resource people and places</b>	8	66.7
<b>Field trips</b>	9	75.0
<b>Dramatization</b>	4	33.3

From the findings it was noted that, 58.3% of the teachers obtained T/L resources mainly from school. After obtaining the resources, utilization of Art and Design books was recorded in all the schools (100%). 91.7% used writing board and used pictures respectively, 75.0% used real objects and field trips respectively, 66.7% used resource persons and places, 41.7% used display boards, 33.3% used maps, films/slides and dramatization respectively, 25% used Art and Design magazines, radio and television respectively while 8.3% used dioramas. This indicated that there is a variety of T/L resources being utilized.

According a study by Masinjila (1996), lack of variety of T/L resources impedes the effectiveness of teachers as facilitators to the learning process; Maranga (1993) who

concur with the above posits that learning is affected if T/L resources are not available. The result is that, teachers make their own resources so as to facilitate the T/L process. Other studies by Kress, (2003) and by Gee,(2004) emphasize the importance of teachers using multiple modes of content presentation for an effective T/L process. The findings indicated over-dependence on textbooks (100%) and writing boards in most schools (91.7%) while the rest of the T/L resources remain in very low percentages, this makes it hard for the teachers to consider the learners' learning styles.

The researcher further sought to establish the attitude of teachers towards i) the state of T/L resources in the school and ii) whether teachers were motivated to utilize the resources to enhance the teaching and learning process. The finding obtained from the QT indicated that, two of the teachers (16.7%) do not enjoy teaching Art and Design because, they have no art classroom; that the ones they occasionally used were often used as a maize store and boarding department store respectively. They also cited inadequate resources for example course books and materials as yet another demotivating factor.

The findings indicated that 83.3% of the teachers enjoy teaching Art and Design in their current schools because; they are professionally trained and like the application of Art and Design to daily life situation; the students are so motivated by the teachers' work that they motivate the teacher too; students are always eager to learn new concepts/techniques; the number of learners is manageable and the lesson allocated are manageable; it is the teachers' main subject and the students have a lot of interest and positive attitude; it is a subject that enables the teacher to teach, interact with learners and share experiences in school and outside.

The teacher and the students learn from each other as the talents in many learners developed. This resonates with a study by Shami and Hussain (2005) who observe that there is a great correlation between availability of T/L resources and learners' academic performance. The findings indicated that where T/L resources are satisfactorily available, the learner's learning styles are put into consideration during selection and utilization of the T/L resources.

Secondly findings revealed two sets of teachers: 83.3% who were extrinsically motivated due to the availability of T/L resources and therefore they go an extra mile to establish what best suits their learners. On the other hand, 16.7% who are demotivated due to having to improvise a maize store into an Art room and dealing with inadequate books and other T/L resources. This second set is bound to teach for the sake of covering the syllabus the learners' learning styles notwithstanding.

The researcher further sought to establish the QASOs' opinion on the utilization of T/L resources in Art and Design. The findings in this section were obtained from interview schedules with four QASOs. The respondents therefore drew their facts from a generalised view established during their regular visits to schools in their line of duty. The views of 75% of them on pedagogical practices evident among the teachers of Art and Design included;

- i. The fact that most teachers tend to embrace teacher-centered approach due to lack of resources that would encourage a learner-centered interactive session
- ii. Very few schools allow for field trips in the Art and Design subject due to the stereotype that the subject is too expensive.

- iii. Art and Design has a wide scope of teaching and learning methods depending on the topic tackled. Among them are Explanation, Demonstration, Discussion, Role, Play, learners work, exchange of ideas, research and practicals.
- iv. The QASOs also observed that, Art and Design being a practical oriented subject, it's supposed to be taught along with hands-on practices: However, lack of resources makes it predominantly theoretical.

A similar thought is highlighted in a study by Saeed and Wain (2011) that, physical conditions have direct positive and negative effects on teachers' morale, sense of personal safety, feeling of effectiveness in the classroom and on general learning environment. The findings presented a scenario of teachers merely coping with inadequate T/L resources by using the only possible strategy, teacher-centeredness which does not consider learner preferences hence does not reach all learners.

- v. In some cases the materials are not enough to carry out a practical lesson, hence teachers end up improvising materials; The student on the other hand cannot afford to cost-share on acquisition of materials which results in the predominantly teacher - centered lessons.
- vi. Due to pressure on mean score and syllabus coverage, the teacher devices all possible ways to meet the two. In a few cases the learner-centered methods are used during practical lessons.
- vii. From professional experience ,Art teachers are rare to come by and so heads of schools tend to pressurize the few existing ones to produce quality grades due to the low enrolment. This in turn puts a lot of pressure on the teachers; who end up rushing through the syllabus without considering their learners' different learning styles.

The findings indicated that main impeding factor is inadequate resources hence the teacher cannot cater for the learning style needs of all his/her learners in a given classroom. These findings concur with a study by Wanjala, Aurah and Koros (2015)

which postulate that teachers are not willing to embrace any pedagogical practice that has an implication on time due to the pressure on syllabus coverage hence reluctance towards changing their habits and techniques. another study from Tanzania by Lyimo, Too and Kipng'etich (2017) cited an District Education Officer who concurs that T/ L resources are not enough especially in Art subjects.

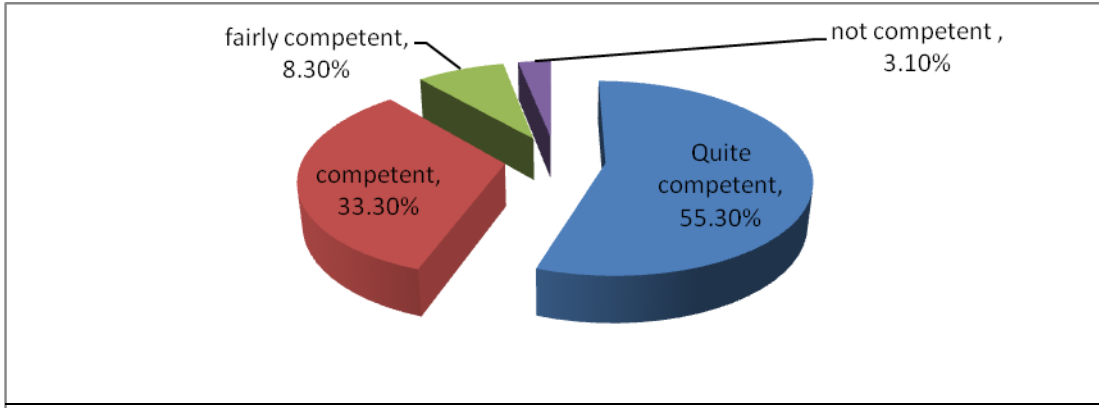
25% of the QASOs made the following observations:

- i. pedagogical practices cater for all the learners because they all come up with same responses as per the requirement of the task in Art and Design. and that, the approach per student is always different from one student to the other.
- ii. Since Art is a special subject, it's based on talent and all students learn all these different styles. At the end of task, students would give their response which even a layman can describe the composition in different styles but same answer as per the requirement of the question.
- iii. That Art as a subject is fun: Slow learners excel in free hand drawing while the sharp ones excel in Graphics Design

The QASO concluded by observing that Art caters for all types of students regardless of their learning styles. The QASO appealed to the MOEST to consider revamping T/L resources in the subject due to its importance in this 21<sup>st</sup> century. The findings notwithstanding, one glaring fact is that the county Quality Assurance and Standards office does not have a subject specialist in the area of Art and Design, which makes concerns that are unique to Art and Design being given generalised attention.

#### **4.3.2.4 Competency in using computer and internet services as T / L resources**

The researcher sought to establish the views of i) Teachers and ii.) Learners about competency in using computer and internet services. The findings were as presented in the figure 4.6

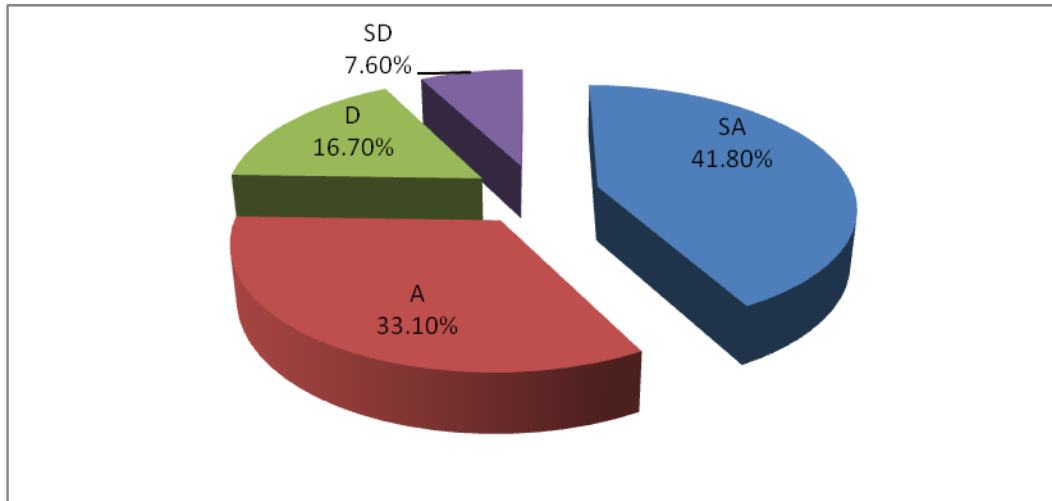


**Figure 4.6: Teachers Competency in use of computer and internet services**

Out of the twelve Art and Design teachers, 55.3% were quite competent in using computer , internet services, 33.3% were competent ,8.3% were fairly competent while 3.1% not competent. The findings mean that majority of the teachers were quite competent in using computer and internet services (88.3%). A Study by Varughese, (2011) observed that when ICT is used, 21<sup>st</sup> century pedagogical practices are enhanced, other studies reiterate this. For instance, (Masinjila, Foley, Khatete, Ndethiu, Maundu, and Twoli, 2018) posit that when technology is effectively integrated, it can support student learning and lead to deeper conceptual understanding and procedural fluency. The findings indicated an above average percentage of teachers being computer literate.

It is also apparent from the teachers' demographic information that the one with a teaching experience of more than 20 years did not embrace the use ICT in the day to day classroom practice while those between 5-19 years of teaching experience enlisted as quite competent, competent and fairly competent; with a current learner that is 'technologically savvy', the teacher needs to apply teaching strategies that would appeal to such learners' learning styles.

From the SQ section C the statement;” I can access information related to Art and Design from the internet” whose findings are presented in the figure 4.7 below:



**Figure 4.7 students' competency in use of computer and internet services**

From figure 4.7 above it is evident that, 33.1% of the students strongly agreed 41.8% agreed, 16.7% disagreed while 7.6% strongly disagreed with response mean of 1.99 in regard to competency in use of computer and internet services. This can be interpreted to mean that 74.9% of the students are competent at using computer and internet services. A study by Neil (1996) posits that ...use of ICT will increase the level of education. Kang'ethe (2011) reiterates this by highlighting ICT as an up to date T/L resource. The findings show that majority of the students are highly competent in the use of computers and internet services; which makes it one such resource that if utilized by the teachers, many learners would benefit from the T/L process.

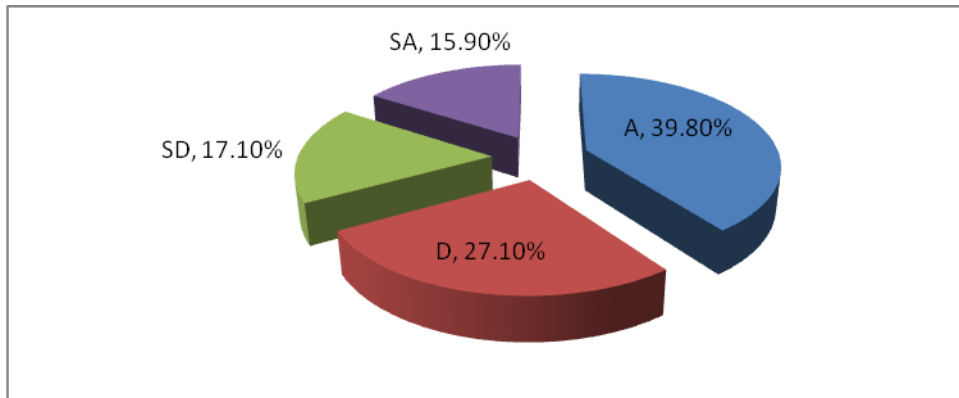
The researcher sought to establish teachers' towards e-learning as a new trend in the T/L process as presented in figure 4.8:



**Figure 4.8: Teachers views on e-Learning as a new trend in teaching**

The teachers agreed that e-learning as a new trend in teaching and learning is worth embracing. This was strongly agreed by 50% of the teachers, 25% agreed, 16.7% of the teachers disagreed (16.7%), while 8.3% strongly disagreed. The above findings indicate that a majority of teachers (75%) embraced e-learning as a new trend in the T/L process: This pattern of responses echoes that of teachers' competency in the use of computer and internet services; those who embrace the use of ICT would most likely appreciate e-learning as a new trend in the T/L process. This could mitigate the existing imbalance in the availability of T/L resources.

The researcher sought to establish students' views whether they understand what e-learning as a trend in the T/L process is all about. The findings obtained from the SQ section C item 6 are presented in the figure 4.8 below:



**Figure 4.9 Students' views on e-learning as a trend in the T/L process.**

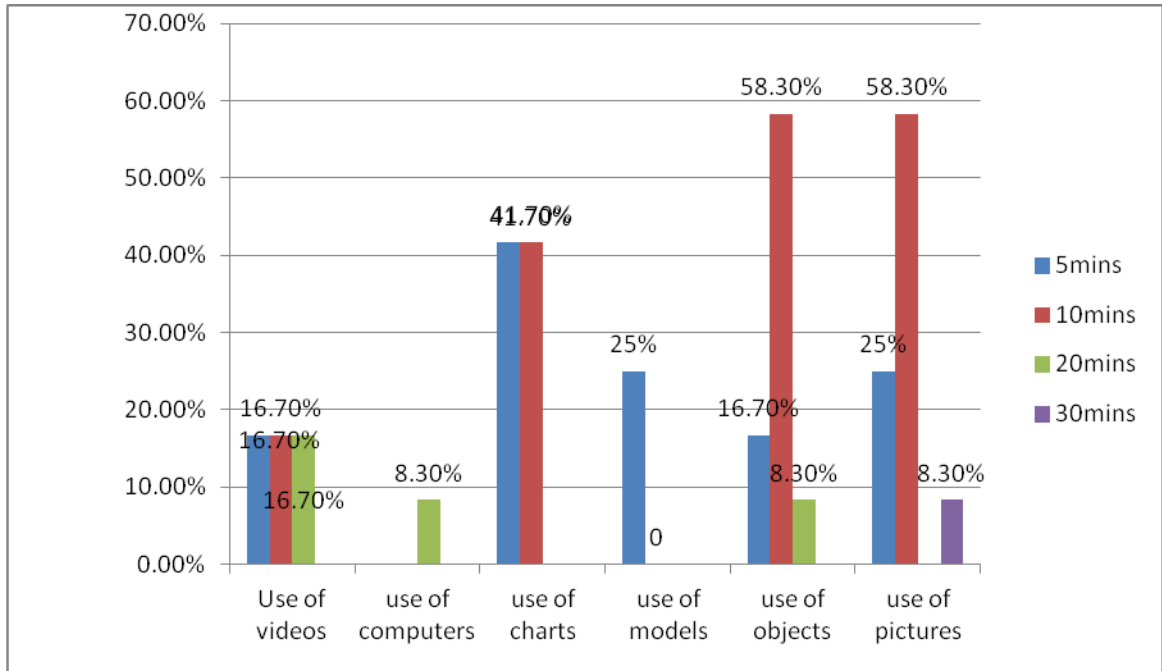
The findings indicate that: 15.9% of the students strongly agreed, 39.8% agreed, 27.1% disagreed while 17.1% strongly disagreed. The percentages revealed an almost equal response from those who agreed (54.9%) and the ones that disagreed (42.2%), which can be interpreted to mean that much as 88.6% of the teachers had indicated that they were competent in computer and internet services, 33.7% of them did not embrace e-learning as a new trend in the T/L process and yet other researchers (Khan,2005, Arkorful and Abaidoo,2015) hail e-learning because it provides a platform for equal access to information irrespective of the location of the user; they further reiterate that it enables learners to study anytime and anywhere. From professional experience, e-learning could quite aptly compensate for lack of or inadequate T/L resources. e-learning, if embraced could also create room for collaborative learning and the much desired multisensory T/L environment albeit in a virtual sense.

### 4.3.3 The Influence of Learning Styles on Utilization of Teaching and Learning Resources

In the third objective the researcher sought to investigate the influence of learning styles on utilization of T/L resources in Art and Design (Bungoma County). Data was gathered using i) classroom observation schedule, ii) from the QT section C question 3 and from the interview with QASOs.

#### 4.3.3.1 Classroom observation schedule for the schools

The researcher made an observation during the lesson proceedings and established the availability of instructional media, frequency of use and its function, and student's response to as presented in figure 4.9 below:



**Figure 4.10: Classroom observation schedule for the schools (N = 12)**

From figure 4.9, the following findings were obtained:

The findings obtained reveal that 58.3% of the teachers used objects for 10 minutes during the lessons; use of pictures also recorded 58.3% usage for 10 minutes to let the students see the end results. 41.7% of the teachers used charts for 5 minutes with the same percentage (41.7%) using charts for 10 minutes to inspire students. 16.7% of the teachers used projected videos, for 5minutes, 10 minutes and 20 minutes respectively to describe and illustrate processes. 25% used models for 5minutes while 16.7% used models for 10 minutes for students to have a hands on experience.

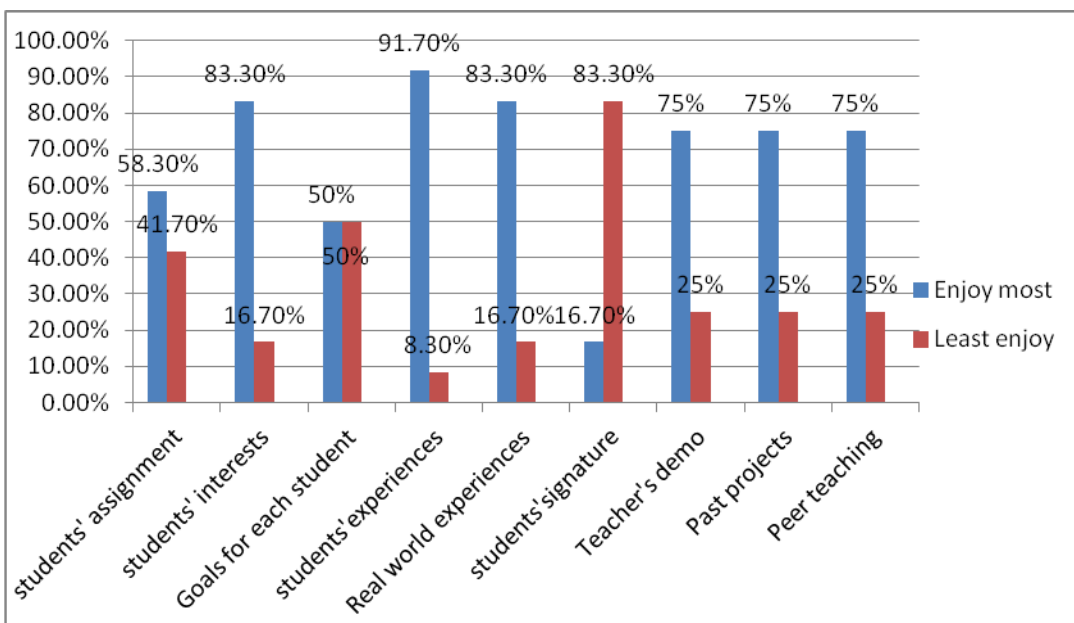
The findings can be interpreted to mean that teachers use different T/L resources at varied intervals during the T/L process. Secondly, much as the findings denote a multisensory T/L environment, the actual resources frequently used do not cut across all learning styles on the Fleming (1992) VARK learning styles model; The findings also indicated that a very low percentage of schools use audiovisuals. This is contrary to the study by Gee (2004) posits that

*“Meaning and knowledge are built up through various modalities (images, texts, symbols, interactions, abstract design, sound etc.) not just words”* (p.210).

Studies by Wittich and Schuler (1973), Wilkin (1987) and UNESCO (2004) concur with Gee (2004) and reiterate that teaching aids overcome verbalism; visual presentations allow learners to process information simultaneously. In addition to this, Andambi and Kariuki (2013) argue that audiovisuals are too expensive for schools to afford yet this resource is effective in facilitating memorable learning experiences.

The findings indicated consensus with the views of heads of schools and QASOs; that it is availability of resources that informs utilization and not the learning styles of the learners.

To establish whether the teacher considers the learners' learning styles as he/she attempts to motivate learners during the T /L process, the researcher analyzed the strategies used in the classroom. The findings are presented in figure 4.10



**Figure 4.11 Strategies used in the classroom to motivate students (N = 12)**

The findings obtained revealed that 91.7% of the teachers enjoy relating art project ideas to students' experiences, 83.3% enjoy considering students' interests and using real world experiences. 75% of the teachers indicated that they enjoy briefly demonstrating to students, using past projects and peer teaching respectively. 58.3% enjoy relating assignments to students. The findings of the study indicate that the students' learning styles were partially considered which means that the teachers were sensitive to their

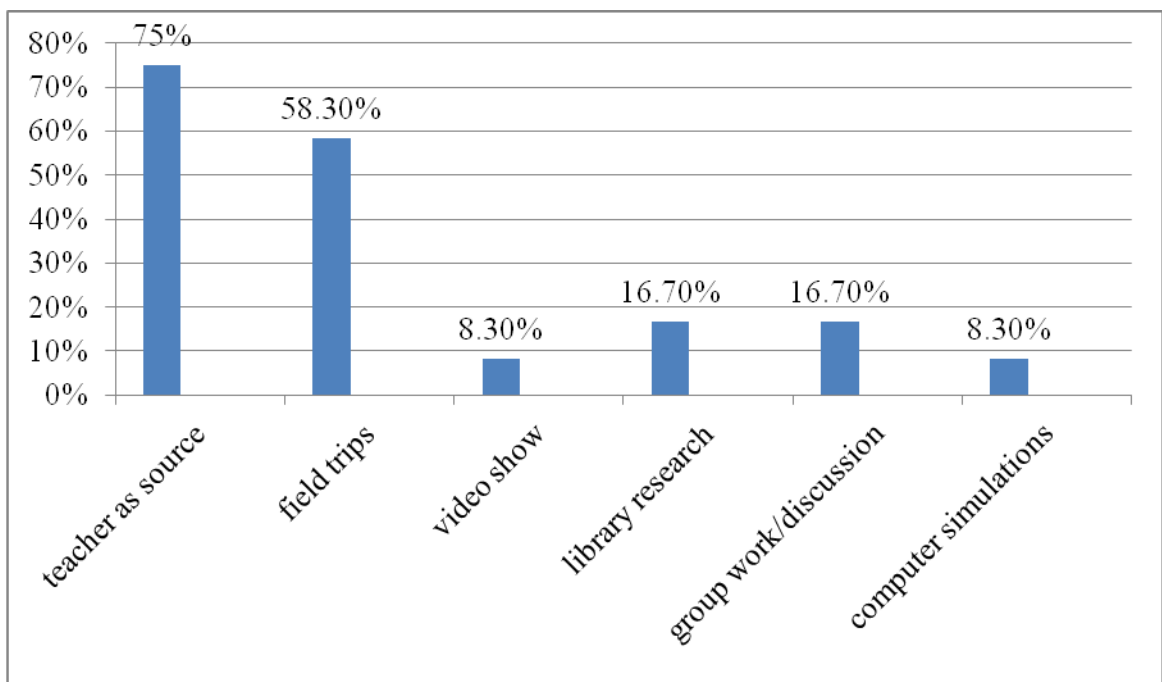
learners' learning preferences and that they provided for a multisensory T / L environment hence effective learning. This means that majority of the teachers consider their students learning preferences and they employ strategies that are convenient for both of them. However, 83.3% least enjoy considering the students' signature. This means that teachers do not enjoy giving the students freedom to find their level of optimum learning during the T /L process and that learners rely on what the teacher offers in terms of guidelines and the goals the teachers set for them Maranga (1993) opines that, resources and methods of instruction affect the amount of learning that took place.

This concurs with other studies (Kamarulzaman, 2012; Mahlios, 2001; Ogden, 2003; Stanberry & Azria, 2001) who observe that students learn best when they are taught in ways that match their way of learning. A study by Joyce, Gitomer & Iaconangelo,(2017) reiterate this by emphasizing the role of assignment in the T/L process, '*... it all depends on the teacher quality that is ,what a teacher does and what the student learns...*', Houck (2017) concurs with this by observing that, assignment is meant to reinforce what is taught in class and sometimes its purpose is to gather extra information beyond what is taught. ; Other researchers (Gagne, Briggs, and Wager, 1992) posit that T/L resources (media) alone do not influence learning; rather, "*...learning is caused by the instructional methods embedded in the media...*"

Based on the findings, the researcher noted that when a teacher relates assignment to students, the learners are bound to benefit from the T/L process; the teacher shall have considered the different learning styles in the process of giving the assignment. however the rest of the strategies that tend towards the teachers' convenience in the T / L process. Strategies that should be of the learners' comfort or preference do not appeal to the

teacher. According to the findings of this study, most teachers' strategies do not focus on the learners' learning styles; instead the focus is on what is beneficial to the teachers in their race towards syllabus coverage and subject mean scores in the KCSE examinations and only occasionally do these strategies crisscross with the learners' learning styles.

The researcher, through an interview with heads of schools, on whether learning styles influenced utilization of T /L resources, as presented in figure 4.11 below:



**Figure 4.12: views of heads of schools on Learners preferences in relation to available T/L resources**

The researcher established the following from the findings:

75% of the heads of schools indicated that,students prefer that the teacher provides all the information and demonstrations. This can be interpreted to mean that learners prefer a teacher-centered T/L process. Based on a study by Kelly(2009) everything a teachers do in the classroom has a motivational influence on students-either positive or negative.

In this study, it means that only auditory and visual learners would learn effectively. On field trips, 58.3% observed that students are inclined towards this T/L resource. Students respond to field trips in a variety of ways, for example an average student may suddenly reveal a never seen before level of excitement, focus and inquiry (Hefferan, Heywood & Ritte, 2002); Beneficial as field trips may be, the researcher observed that only visual and auditory learners would benefit from it. Video show and computer simulations are at 8.3%. This response indicated that students had not wholly embraced the two T/L learning resources; yet studies by Varughese (2011), Cornet (2003) and Breen (1997) emphasize the importance of integrating ICT, visual literacy and to adopt innovations in order to enhance pedagogical practices. The researcher noted that much as the students had indicated computer literacy and knowledge of e-learning, the views from heads of schools show a contrary scenario.

Findings on group work /discussions and research in the library indicated that 16.7% of the students preferred this T/L resource. The findings show that students are inclined towards information being brought to them rather than seeking for information on their own from the library. The heads of schools attributed the lack of interest in library research to lack of relevant resources in the library. A study by Nyamubi (2003) posits that T/L resources are very important to the T/L process hence the absence of which would compromise the quality of content delivery; while Felder (2010) opined that '... aware of learning style differences can help instructors teach in a manner that effectively reaches all students rather putting a large subset of them at a disadvantage.

From the findings the researcher established that, the utilization of T/L resources was subject to availability of the T/L resources and not learners' learning styles. Secondly, the concept of learning styles is not clearly understood by both the teachers and even some heads of schools; therefore teachers teach to cover the syllabus learners' learning preferences notwithstanding.

The QASOs' observed that the teacher's pedagogical practices should ideally cater for the learners. However, the reality is that teachers do not consider the learners learning styles in the process of teaching. Secondly, the QASOs noted that the entry behavior of learners is varied and in some cases wanting; levels in terms of ability vary and yet the teachers don't consider this. The QASOs were of the opinion that Art is a talent subject where the talented students perform better than the non-talented yet the teacher does not go an extra mile for the sake of the non-talented and those who pursue art out of interest or pressure.

Thirdly, QASOs noted lack of seriousness on the part of both the learners some teachers, and as a result Art is looked at as poorly performed subject yet with low enrolment. Fourthly, Students hardly get to experience the desired outcomes because the teachers over improvise; due to a negative attitude towards Art and Design by some the heads of schools, there is no deliberate effort to improve the status of T/L resources and all the focus is more on the syllabus completion than to reach all learners. Fifthly, the QASOs noted that majority of the heads of school feel art is too expensive.

From the findings above the researcher established that attitude of the teacher rather than learners' learning styles influenced the utilization of T/L resources. Secondly, availability of the T/L resources informed utilization of the same rather than the learning styles of the students. thirdly teachers make attempts to consider their students' learning styles but their efforts are in most cases impeded by unavailability of T/L resources. fourthly, students tend to resign to the T/L environment created by the teacher since they are a lesser stakeholder in the sense that they are not financially able to chip in whenever the require T/L resources are unavailable.

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### 5.1. Introduction

The purpose of this study was to investigate the influence of learning styles on utilization of teaching /learning resources in Art and Design in secondary schools in Bungoma County.

#### 5.2 Summary of the findings.

The summary of the findings are presented as per the objectives of the study that is;

##### 5.2.1. The different learning styles among the learners of Art and Design in secondary schools in Bungoma County.

The researcher sought to establish the learners' learning styles from the learners, teachers and heads of schools. From the learners' views on their learning styles, it was established that as per Fleming(1992) VARK model of learning styles, most students were inclined towards the K(kinesthetic) next are R (read /write) followed by the A(auditory) and the V(visual) There were learners who cut across all the four or possess two or more out of the four(VARK) in the learning style model.

The finding indicate that 33.3% of the teachers showed satisfactory comprehension of what the learning styles are. Basing on how the learners responded when different T/ L resources were used during lessons, teachers noted that their learners were Visual, Auditory, Kinesthetic or Read/write oriented. These findings concur with the learners' views on their learning styles. One of the heads of schools opined that, majority

did not quite understand the VARK learning style model(Fleming,1992); they instead regarded the students' learning styles to be their response to different teachers' teaching strategies.This approach notwithstanding,it is evident that learners possess different learning styles hence there was need to create a multisensory T/L learning environment if all the learners were to be reached.

### **5.2.2. To establish the resources used during the teaching and learning process.**

The study sought to establish the views of teachers,students, heads of schools and QASOs on T/L resources in terms of availability,accessibility ,utilization and competency in use of computer and internet services(teachers and students)

The teachers views on availability of T / L resources were that all schools had books albeit the differences in variety and adequacy. The rest of the T / L resources varied in availability from school to school.Heads of schools indicated that there was pressure on the existing T/ L resources due to their not being adequate some schools .The QASOs views indicated that the available resources are inadequate hence the schools do not operate from a level ground and text books available are limited in terms of variety,title and the ratio is wanting in most schools. QASOs' views concur with those of the teachers and heads of school on availability of T / L resources.

On accessibility of the T/L resources teachers' responses on whether they had attended workshops and seminars related to Art and Design,58.3% of the teachers had never attended any workshop or seminar related to Art and Design,while 41.7% had attended the workshops.other T/L resources were obtained from KICD by the schools.

On utilization of T/L resources by teachers, students indicated that teachers use other T/L resources other than text books however 8.8% of the students are not happy as Art and Design students because the school does not provide learning materials for the subject and that they lack standard text books. Teachers' views on utilization of T/L resources were that 100% of the schools used text books ; 91.7% of them utilized the writing boards while the rest of the T/L resources remain in low percentages while heads of schools cited pressure on the existing T /L resources because they were inadequate. the QASOs responses concurred with those of teachers and heads of schools and so appealed to the MOEST to consider T/L resources in this subject(Art) due to its importance in this 21st century.

The study sought to establish the competency of teachers and students in the use of computers and internet services. majority of the teachers were quite competent; the teachers who embraced ICT in their day to day classroom practice were found to be within 5-19 years of teaching experience. 75% of the teachers embraced e-learning as a new trend in the T/L process. Students' views on e- learning were found to be average with 55.7% of them being aware of what e-learning is about as opposed to 44.2%.

The study sought to investigate the influence of learning styles on utilization teaching and learning resources. Teachers pointed out that utilization of T / L resources is subject to availability of the resource not students' learning styles. From the teachers' views the researcher found out that, it's more about what is convenient for the teacher to complete the syllabus than what will make the learner learn best. Findings from heads of schools indicated that it was more of availability of T/L resources that utilization rather than learning styles of the learners.

According to the QASOs views teachers need to consider the varied entry behavior of the students, however students hardly get to experience desired outcomes since the teachers “over improvise” T/L resources; due to a negative attitude towards Art and Design by some of the heads of schools who deem it too expensive, hence make no deliberate effort to improve the status of T/L resources; all focus is on syllabus completion other than on reaching all learners by their learning styles.

### **5.3 Conclusion**

From the findings of the study, following conclusions were made, guided by the objectives:

- i. Based on students’ responses on their learning styles it was clear that they learn differently; however, the unavailability of adequate T/L resources in most schools makes it impossible for the T/L process to reach majority of the students in the way they learn best; this ends up demotivating those in schools without adequate T/L resources. Teachers on their part do not consistently consider the students’ learning styles before using T/L resources because in the first place the existing resources are insufficient so they plan with what is available not with the students’ learning styles in mind; not all learners are reached. Heads of schools in their quest of curriculum supervision noted that students heavily relied on teacher-centered strategies during the T/L process; they noted students as pressurizing teachers to take them out of school on field trips, a view that indicated that most Heads of schools do not appreciate the fact that students learn

differently and hence the need to create a multisensory T/L learning environment; such an environment facilitates an effective T/L learning process.

- ii. On availability, accessibility and utilization of the T / L resources, findings indicated that all schools offering Art and Design do not function on level ground in terms of availability of T/L resources. This situation compromises the effectiveness of teachers as facilitators in the T / L process and their ability suit their choice of pedagogical practices to their learners' learning styles. Consequently, the students end up not being well equipped with Art and Design . this leads to the decried lack quality performance in Art and Design examinations. Over improvisation inadequate text books and materials for practicals, lack of Artrooms were among the highlighted anomalies in as far as availability, accessibility and utilization of T/L resources is concerned. Where there are resources, they were said to be inadequate; teachers also decry inaccessibility to resources such as workshops and seminars that would equip them for the challenges of teaching Art and Design in the 21st century with curriculum reforms at the threshold.
- iii. Findings on the influence of learning styles on utilization of T/L resources in Art and Design indicated that emphasis is on the availability rather than suitability of the resources to the existing learning styles. It was also noted that utilization of T/L resources was based on how convenient it was to the teachers as they endeavoured to cover the syllabus on time. Heads of schools echo this view, by indicating that teachers used T/ L resources that were available, the students' learning styles notwithstanding. The researcher also noted that some heads of

schools and even teachers did not quite understand the concept of learning styles hence they end up teaching at their convenience. The findings also revealed in some cases it is more of attitude of the teachers and that of the Head of schools that dictates what T /L resources are to be utilized rather than the students' learning styles. For example in the use of computers and internet services, yet e-learning could aptly compensate for the inadequate resources and also create an opportunity for collaborative learning in a virtual sense; which would cater for the symposia and exhibitions the students indicated as some of their learning preferences.

#### **5.4 Recommendations**

Based on the findings of this study, the researcher made the following recommendations:

##### **5.4.1. Recommendations for Policymakers.**

- i. The government through MoEST should ensure that all the educational resources such as textbooks,computers,audiovisual aids and Artrooms are adequately available in all categories of secondary schools.
- ii. The MoEST should ensure that there is a subject specialist in Art and Design in all counties where schools that offer Art and Design are situated.
- iii. The teacher trainers emphasize the importance of visual literacy and the role of learning styles during selection and utilization of T/L resources.
- iv. Heads of schools to be sensitized on the requirements of allsubjects offered within their Curriculum Based Establishment(CBE) to ensure that they supervise the curriculum implementation from an informed point of view.
- v. In view of the new curriculum reforms,Art and Design as a subject should be greatly supported by the government because as a subject ,its scope cuts across all the other subjects and it provides the learners with skills that are in tandem with 21st century needs.

#### **5.4.2. Recommendations for practice.**

- i. Teachers should choose teaching and learning resources for Art and Design that create a multisensory learning environment; in order to facilitate reaching all students based on their learning preferences. consequently, this would spar the students' interest and motivation required for optimal acquisition of skills and knowledge. In this way, the teacher ends up attaining the objectives of teaching Art and Design.
- ii. Teachers across the board should be encouraged to analyze the student demographic data in their classrooms with learning preferences in mind, and then tailor their choice of pedagogical approaches and use of available T /L resources on those preferences. this would ensure an effective T/L process.
- iii. Teachers need to enroll themselves in continuing in-service programs to enable them stay up to date with research and educational technology changes in the teaching of Art and Design.

#### **5.5 Suggestions for further research.**

The reseacher recommended the following for further research:

- i. Another study be carried out in a different locale for the sake of comparison purposes.
- ii. This study was limited to secondary schools ; similar quantitative research should be carried out in teacher training institutes and tertiary institutions offering Art and Design courses with an aim of establishing the availability of T/L resources and attention paid to learning styles inthe choosing of pedagogical approaches and T/L resources.
- iii. A study should be done on the role importance of Art and Design as a subject and a practice in the realization of Kenya's Vision 2030.
- iv. A study should be conducted on the socio-economic factors that influence the choice of pedagogical practices adopted in secondary schools.

## REFERENCES

- Abuli, W.O (2003). *An Evaluation of the extent to which audio, visual and audio-visual media are used for instruction. A case study of Lusengeli Secondary school in Vihiga County, Western Region, Kenya*. Unpublished PGDE Project. Kisumu: Maseno University.
- Ambuko,B. and Odera, F.(2013) *Selection and use of Media in Teaching Kiswahili Language in Secondary Schools in Kenya* Published by International Journal of Information and Communication Technology Research
- Andai, P. (2011). *Evaluation of Procuring Biology Resources for Teaching and Learning in Public Secondary schools in Nakuru District, Kenya*: Kenyatta University, Nairobi. Unpublished Masters Thesis.
- Andambi,R. and Kariuki, B.(2013) *The Effect of Use of Learning Resources in Teaching Social Education and Ethics in Bungoma District, Kenya*. Published by Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS) 4(1): 157-163
- Andrews, P. (2011) *Building Motivation in the K-12 Art Classroom: Learning in the Digital Age*: December 2005/ January 2006 | Volume 63 | Number 4 Pages 8-13.
- Arkorful,V., Abaidoo, N.(2015)*The Role of e-learning, Advantages and Disadvantages of its adoption in Higher Education*. International Journal of Instructional Technology and Distance Learning,12(1),29-42
- Asmaa A. M., (PhD thesis) *An Exploration of Teachers' Integration of Visual Literacy in the Egyptian Secondary Language Schools* AJOTE (2010 Vol.1 no1 pgs1-33)
- Ayot,H.O. and Patel,M.M. (1987) *Instructional Methods*, Nairobi, Kenya. Kenyatta University.
- Bailey, G. D. and Hortin, J. A., (1983.) *Visualization: Theory and Applications for Teaching*. : In Reading Improvement. 20:1 (1983): 70-74.

- Bamford, (2006); Ewing, (2010) ;Vaughan, Harris & Caldwell, (2011), *Developing Pre-service Primary Teachers' Confidence and Competence in Arts Education using Principles of Authentic Learning*: Australian Journal of Teacher Education Vol. 37, 1, January 2012 60.
- Best, J.W. and Kahn, J.V. (1993) *Research in Education*: Allyn and Bacon, Gould Street, Needham Heights.
- Birdsell, B., Ream S., Seyller, A., and Zobott, P., (2009). *Motivating students by Increasing student choice*, 1-88.: Saint Xavier University Chicago, Illinois, May 2009; Masters Thesis,
- Breen (1997) *First Steps: Linking Assessment, Teaching, and Learning*. Rigby: Port Melbourne, Vic.
- Burns, S.N., and Grove, S.K. (2003) *Understanding Nursing Research*.3<sup>rd</sup> edition: Philadelphia.
- Cable, R (1972) *Audio – visual handbook*,: University of London Press Ltd
- Cano, J. Bryan, L.G., and Raven, M.R. (1992). *Learning styles, teaching styles and personality styles of pre-service teachers of Agricultural Education*.: Journal of Agricultural Education, 46- 52
- Chao-ju, H. (2009) *.A study of the Relationship between Teacher Educators' Educational Technology Role Modeling and the development of Technological pedagogical Content Knowledge of Pre-School Teachers in Taiwan.* : Unpublished Masters Thesis.
- Clark, R. E. (1985), *Evidence for Confounding in Computer Based Instruction Studies: Analyzing the Meta-Analyses, Educational Technology Research and Development*, Vol. 33, No. 4, pp. 235-262,
- Clark, R. E. (1994),*Media Will Never Influence Learning, Educational Technology Research and Development*, Vol.42, No. 2, pp. 21-29,

- Clark, R. E.(1983), *Reconsidering Research on Learning from Media, Review of Education Research*, Vol. 53, No. 4, pp. 445-459,
- Cornett, C.E. (2003) *Creating Meaning through Literature and the Arts. An integration resource for classroom teachers* (2<sup>nd</sup> ed ) Upper saddle River, NJ: Person Education. Inc
- Creswell, J.W. (2008) *Qualitative, Quantitative Research, and Mixed Methods*: Pearson/ Merrill Prentice Hall.
- Cuenca, A. (2010) *Self-Study Research: Surfacing the Art of Pedagogy in Teacher Education*. : University of Georgia. *Journal of inquiry & Action in Education*, 3 (2)
- Dale, E (1969.) *Audiovisual Methods in teaching* (3<sup>rd</sup> edition): The Dryden Press Inc
- Dale, E. (1954). *Audio-Visual Method of Teaching*. New York: The Dryden Press.
- Dunn, R.,Dunn, K.,& Price, G.E. (1984). *Learning Style Inventory*. : Lawrence, KS, USA: Price Systems.
- Education and Training Bandung, Indonesia, 10-11 November 2010
- Felder, R.M (2010) *Are Learning Styles Invalid? (Hint:No!)* on course newsletter Sept 27<sup>th</sup> 2010 North Carolina University
- Felder,R. M., and Henriques, E.R. (1995) *Learning and Teaching styles in foreign and second language Education*. *Foreign Language Annals*, 28(1)21-31
- Fleming, D. and Mills, C. (1992). *Helping Students Understand How They Learn. The Teaching Professor, Vol. 7 No. 4*: Magma Publications, Madison, Wisconsin, USA.
- Gagne, R. M., Briggs, L. J., and Wager, W. W. (1992), *Principles of Instructional Design*, 4th ed., Orlando, Harcourt Brace Jovanovich,

- Gardner, Howard (1983). *Frames of Mind: The Theory of Multiple Intelligences*. New York: Basic Books
- Garvis, S. (2009). *Improving the teaching of the arts: Pre-service teacher self-efficacy towards arts education*. *US-China Education Review*, 6(12), 23-28.
- Gee, J.P (2004) *What Video Games Have to Teach about Learning and Literacy*: New York: Palgrave Macmillan page 210
- Grasha,A,F,and Yangarber-Hicks,N.(2000)*Integrating Teaching Styles and Learning styles with Instructional Technology*. *College Teaching* 48(1)2-10
- Gregorc, A.F. (1979). *Learning/teaching styles: potent forces behind them*. *Educational Leadership*, 36, 234-237.
- Hefferan,K.P., Heywood,N.C.& Ritte,M.E.(2002)*Integreting Field trips and classroom learning into a capstone undergraduate research experience*.*Journal of geography*,101(5)183-190.
- Honey, P and Mumford, A. (2001). *The Learning Styles Questionnaire*.: London: Peter Honey Publications
- Houck,E.A.(2017) *Students' Assignment Policy*.<http://oxfordbibliographies.com>.retrieved on 21<sup>st</sup> November, 2018.
- [Http://www.learning styles –online.com](http://www.learningstyles-online.com) Retrieved on 26<sup>th</sup> May, 2016
- Ibrahim, Y.K. (2009). *The effect of Learning Styles on Education and Teaching Process*.:*Journal of Social Sciences* 5(2): 84-94.ISSN 1549-3652 (Science publications)
- Indoshi, F. C., Wagah, M. O., &Agak, J. O. (2010). *Factors that determine students' and teachers' attitudes towards art and design curriculum*.Published by International journal of vocational and technical education. 2 (1): 9-17.

- Jin, P, Yeung, A. S.,Tang,T,&Low,R.(2008), *Identifying teachers at risk in Hong Kong: Psychomatic symptoms and sources of stress*. Journal of Psychomatic Resrach, 65 (4), 357-362
- Jones, J.E. (1995). *Using Make Believe to Motivate Student Art Talk*. : Art Education. 48, (5), 12-16.
- Joy,H.E & Garcia, F. E. (2000) *Measuring Learning Effectiveness*. : JALN, Volume 4 issue 1 June
- Joyce,J.,Gitomer,D.H.,& Iaconangelo,C.J(2017) *Classroom Assignment as Measures of Teacher Quality*.<http://www.elsevier.com/locate/learninstrur>. Retrieved on 21<sup>st</sup> November,2018
- Kalantzis M., Cope,B. & Fehring H. (2002).*Multi-literacies: Teaching and Learning in the New Communications Environment in PEN 133*. Primary English Teaching Association: Marrickville.
- Kamarulzaman, W.(2012). *Critical Review on E ffect of Personality on Learning Styles: Proceeding of the 2nd International Conference on Arts, Social Science & Technology Penang, Malaysia, 3rd-5th March 2012 Paper No: I2087 I2087-1*
- Kang'ethe, D.M, (2011) *Challenges of Teaching and Learning Materials in Public Secondary Schools in Tana-River District, Kenya*.: Kenyatta University, Nairobi: Unpublished Masters Thesis.
- Katonoka, C. N.(2012) *Factors Affecting the teaching of Fine Art in selected schools in Nairobi*: Kenyatta University Repository, Nairobi: unpublished Thesis.
- Kelly, M. (2009) *The Art and Craft of Motivating Students: Competency and Connection* :Retrieved from <http://712educators.about.com/cs/motivation/a/motivation.htm>
- Kerlinger F.N (1973). *Foundations of Behavioral Research*, New York: Hott Reinhart and Winston Inc.

- Kerlinger F.N (1986). *Foundations of Behavioral Research*, New York: Hott Reinhart and Winston Inc.
- Khan P, Iqbal M (2012). Interdisciplinary journal of contemporary research in business.
- Killen, R (2000) *Outcomes-based Education: Principles and Possibilities*. Unpublished manuscript. University of Newcastle, Faculty of Education
- Kolb, D.A. (1976). *The Learning Style Inventory: Technical Manual*: Boston, Ma. McBer.
- Kolb, D.A. (1981). *Learning Styles and disciplinary differences.* : In A. W. Chickering (ed.) *The Modern American College*, San Francisco: Jossey-Bass.
- Kolb, D.A. (1984). *Experiential learning: experience as the source of learning and development*. Englewood Cliffs, New Jersey: Prentice-Hall.
- Kombo, D. K. & Tromp, D.L., (2006) *Proposal and Thesis Writing: An Introduction*. Pauline's Publications Africa.
- Kothari, N.S. & Pals, A.D (1993) *Introduction to Education Research*, Egerton: Egerton University education BK series.
- Koul, L (1984). *Methodology of Educational Research*, New Delhi: Vikas Publishing House,
- Kreidler, C. J. (1986) *ESL Teacher Certification.* : ERIC Digests
- Kress, G, (2003) *Literature in the new Media Age*: New York: Rout ledge.
- Lawrence, B (2003). *Save a Penny Lose a School: the real cost of deferred maintenance*: Washington DC.
- Leonard, M. (2005) *Motivating Students for Success in Art Education*: Electronic theses and dissertations paper 1048 <http://de.et al.edu/etd/1048>

- Luvisa, J. C. (2003). *Availability and use of Instructional Resources in Teaching Kiswahili Grammar in Secondary Schools in Bungoma District*. Unpublished Med thesis: Moi University
- Lyimo,S.N., Too, J. K., & Kipng'etich, K. J. (2017). *Perception of teachers on availability of instructional materials and physical facilities in secondary schools of Arusha District*. Published by International Journal of Educational Policy Research and Review Vol.4 (5), pp. 103-112 May, 2017
- Mahlis, M. C. (2001) *Critical Review on Effect of Personality on Learning Styles: Proceeding of the 2nd International Conference on Arts, Social Science & Technology Penang, Malaysia, 3rd-5th March 2012 Paper No: I2087 I2087-1*
- Maingi, D.K. (2012).*The Role of Art Education in Secondary Schools in Central Province, Kenya: Kenyatta University, Unpublished Masters Thesis*.
- Makewa, L., Meremo, J., Role, E. and Role, J (2013).*ICT in School Administration in Rural Southern Kenya: An Educator's eye on its importance and use*. University of Eastern Africa, Baraton, Kenya. Unpublished.
- Maranga, J. S. (1993). *Improving Teaching Administration and Supervision of Education. In Basic Education Forum*. Basic Education Resource Centre for Eastern Africa, Kenyatta
- Masinjila, T. (1996). *A survey of Resources Available and those Used for Teaching Social Education and Ethics in Secondary Schools in Kakamega District*. Unpublished M.Phil Thesis, Moi University, Eldoret.
- Masinjila,J.O.,Foley,A.R.,Khatete, D.W., Ndethiu, S.M., Maundu, J.N., and Twoli, N.W. (2018) *From Implementation to Efficacy: Factors Affecting Kenyan Secondary Teachers'Technology Integration*.African Education Review,1-30.

- Matome, N. (2007) University of Botswana (Conference paper, Nov 2007) *Art in Botswana: The Role of Training Institutions in the Development of the Visual Arts*  
Australian Journal of Teacher Education Vol 37, 1, January 2012
- McCloud,S. (1993) *Understanding Comics: The Invisible Art.*: Northampton, MA:  
Kitchen Sink Press, Inc., 162-84.
- McLeod,S.A (2013) *Kolb-Learningstyles*.  
Retrievedfrom[www.simplypsychology.org/Learning-](http://www.simplypsychology.org/Learning-Kolb.html) Kolb (html)
- Mitchell, W.J (1995) *Picture Theory: Essay on Verbal and Visual representation*.  
Chicago: University of Chicago Press.
- Mohd F., Salleh, A. M., & Mustapha, R., (2010). *The Influence of Personal and Contextual Aspects on Career Decision Making of Malaysian Technical Students:*  
Proceedings of the 1st UPI International Conference on Technical and Vocational
- Mombusho, J (1970). *The use of Audio Visual Teaching Material in schools in Japan*.
- Mukwa, C. W. (1993). *An Investigation of the Efficiency of Instructional Development and Educational Media*. Moi University, Eldoret.
- Mukwa, C.W. and Patel, M.M. (1993)*Design and Use of Media in Education.*: Lectern:  
Nairobi.
- Mumford, A. (1997). *How to Manage your Learning Environment*. London: Peter Honey.
- Musungu, W.T. (1990, April 15).*Insufficient learning resources in Schools*. The  
Standard, p7.
- Ndirangu. M. (2004).*Implications of Using Teaching aids in Science Education in Kenyan Secondary Schools*, Egerton Journal Humanities, Social Sciences, 5(2)  
July, 2004250-259.

- Newby, T.J. et. al, (2000). *Instructional technology for teaching and learning: Designing instruction, integrating computer and using media*. 2nd ed. Upper Saddle River, NJ.
- Nyamubi, J (2003). Attitudinal and motivational factors influencing performance in English language among Tanzanian school students. Unpublished master's thesis, University of Dar es Salaam.
- Oblinger, D. and Oblinger, J. (2005) *Educating the Net Generation*. Boulder, CO: Educause.
- Odeh R C, Oguche O, Angelina,Ivagher, Dondo E (2015) Influence of School Environment on Academic Achievement of Students in Secondary Schools In Zone "A" Senatorial District Of Benue State,Nigeria. *Int. J.Recent Scient. Res.* 6(7) : 4914-4922
- Ogden, J. (2003). *Critical Review on Affect of Personality on Learning Styles*: Proceeding of the 2nd International Conference on Arts, Social Science & Technology Penang, Malaysia, 3rd-5th March 2012 Paper No: I2087 I2087
- Ogunduyile, S. R., Kayode, F. and Ojo, B. (2008). *Art and design Practices in Nigeria: The problem of dropping out.*: *International Journal of Education & the Arts*, 9(3). Retrieved [26-1-2016] from <http://www.ijea.org/v9n4/>.
- Okeke, A. N. (2000). *The impact of school subjects on the choice of careers and profession*. Published by West African Journal of Education, 17 (1): 5 – 11.
- Oludhe, D. (2012) *Art Education*; Kenyatta university repository, Nairobi: unpublished
- Oring, S. (2000). *A Call for Visual Literacy*: *School Arts*, April, 58-59
- Orodho, J. R., (2012) *Techniques of Writing Research Proposals and Reports in Education and Social Sciences*: Nairobi: Masola Publishers.

- Otati, M.N.(2013).*Factors affecting Students' KCSE Performance in Art and Design in Secondary Schools in Nairobi County, Kenya*. Kenyatta University, Nairobi: unpublished Masters Thesis.
- Owoeye, S.J, and Yara, O.P (2011). *School facilities and academic achievement of secondary school agricultural sciences in Ekiti state, Nigeria*. J. Asian Soc. Sci. 7(7):
- Owoko, C.M.(2014).*Technology in Education: Sunday Nation- 13<sup>th</sup> July, 2014-Young Nation page 2*
- Ozioma, C. A., (2011). “*Influential factors affecting the attitude of students towards vocational subjects in secondary schools in southeastern Nigeria*”. Journal of educational and social research.1(2): 49-56.
- Parahoo, K (1997) *Nursing Research: Principles, Process and Issues*: Amazon Co. UK.
- Pavlou, V. (2006). *Pre-adolescents' perceptions of competence, motivation and engagement in art activities*: International Journal of Art and Design, 25.2, 194-204.
- Prensky, M. (2001). *Digital Natives, Digital Immigrants: On the Horizon*, 9(5), 1–2.
- Rana A.A, Reihaneh ,S., Saedah, S. and Zahra, N.(2010) *Hypothesized Learners' Technology Preferences Based on Learning Style Dimensions*: University of Malaya, Malaysia .The Turkish Online Journal of Educational Technology (TOJET): – October 2010, volume 9 Issue 4.Copyright □ The Turkish Online Journal of Educational Technology 83.
- Saeed, M and Wain, K. (2011) *Status of missing physical facilities in government schools of Punjab*. J. Res. and Reflec. In Educ. 5 (2):105-127.
- Shami, P.A, Hussain, K.S (2005). *Quality of Education*. Islamabad: Ministry of Education, Academy of Education Planning and Management

- Singleton, R. A. Jr, Straits, B.C. and Straits, M.M. (1993) *Approaches to Social Research*: Oxford University Press.
- Stanberry, A.M. and Azria, E.M.(2001) *Critical Review on Effect of Personality on Learning Styles*; Proceeding of the 2nd International Conference on Arts, Social Science & Technology Penang, Malaysia, 3rd-5th March 2012 Paper No: I2087 I2087-1
- Teijlingen, V. E. and Hundley, V.(2002) *The Importance of Pilot Studies*: Social Research Update- Department of Sociology. University of Surrey, England.
- The Standard Newspaper dated 20/8//2012
- Towler, A.J., & Dipboye, R.L.(2003). *Development of a Learning Style Orientation Measurement.*: Organizational Research Methods, 6, 216-224.
- Trochim, W.N. (2000) *The Research Methods Knowledge Base*, 2<sup>nd</sup> Edition: Atomic Dog Publishing, Cincinnati, OH.
- Tuckman, B. W. (1978), *Conducting Educational Research*, New York: Harcourt Brace & Jovanovich.
- Twoli, et. al (2007). *Instructional Methods in Education*. Nairobi: KIE.
- Wanjala,M.M.S, Aurah,C.M. and Koros C. S. (2015)*Pedagogical Factors Affecting Integration of Computers in Mathematics Instruction in Secondary Schools in Kenya* Published by Journal of Education and Practice ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.6, No.26, 2015
- Wiersman, W. (1995), *Research Methods in Education: An Introduction*: Allyn and Bacon.

## APPENDICES

### APPENDIX A: QUESTIONNAIRE TO TEACHERS (QT)

The purpose of this questionnaire is to obtain information on

- i. Teaching and learning resources in your school and how and when you use them and
- ii. To establish the learning styles among your learner.

Your co-operation and honest responses shall help the researcher accomplish the objective of this study.

Kindly complete the questionnaire and be assured of confidentiality of your responses.

Thank you for accepting to facilitate this research.

#### SECTION A: GENERAL INFORMATION

*Please tick where it is applicable.*

1. Sex: Male( ) Female ( )
2. Category of school

		National	County	Sub-county
Boys	Boarding			
	Day			
Girls	Boarding			
	Day			
Mixed	Boarding			
	Day			

3. Professional Qualifications  
Dip Ed ( ) Bed ( ) P.G.D.E ( ) M.Ed ( ) Others ( )
4. What is your teaching experience?  
Less than 5 years ( ) 5-10 ( ) 11-15 ( ) 16-19 ( ) 20 yrs& above ( )
5. For how long have you taught in this school?  
Less than 5 yrs ( ) 5-9 yrs ( ) 10 – 14 yrs ( ) 15-19 yrs ( ) 20 yrs &above ( )
6. What is your teaching work load?  
15 and below ( ) 16-20 ( ) 21 – 25 ( ) 26 and above ( )
7. How competent are you at using a computer and internet services?  
Quite competent ( ) fairly competent ( ) Not competent ( )
8. Have you attended any workshop or seminar related to your subject?  
Yes ( ) No ( )

If yes was it helpful?

Give reason for your answer.

- 
9. E-learning as a new trend in teaching and learning worth embracing?  
 I strongly agree ( ) I agree ( ) Not decided ( ) I disagree ( ) I strongly disagree

10. SECTION B: AVAILABILITY OF TEACHING AND LEARNING RESOURCES

*Please tick where applicable*

T/L RESOURCES	AVAILABLE		USED	
	YES	NO	YES	NO
Books				
Writing board				
Pictures				
display boards				
Art and Design magazines				
Maps				
Models				
Real object				
Dioramas				
Radio				
Television				
Films/ slides				
Resource people and places				
Field trips				
Dramatization				

How do you obtain your T/L resources?

From School ( ) From KICD ( ) I make my own ( ) any other choice ( )

11. SECTION C: TEACHER -LEARNER INTERACTION

*Please tick where applicable.*

Question 1. If I were to walk into your classroom during your busiest teaching time, what would I see?

Activity	Response
1. "Hands-on"	
2. "Moving around a lot"	
3. "Actively and productively working"	
4. "Lots of activity"	
5. "Students in their seats with focus on the teacher.	
6. "Students interacting with one another"	
7. "Students working individually"	
8. "Peer teaching"	
9. "Helping students individually"	
10. A lot of interactions between teacher and students	

Question 2. Which Art projects do your students enjoy most/ least enjoy?

Project	Enjoy most	Least enjoy
1. Ceramics/ pottery		
2. Perspective drawing		
3. Still life drawing		
4. Quick sketches		
5. Papier -mâché		
6. Sculpture		
7. Tie and Dye		
8. Ornaments		
9. Painting		
10. Art paper 1- theory discussion		

Question 3. What strategies do you use in the classroom to motivate your students?

STRATEGY	RESPONSE
1. Relating assignment to student	
2. Criteria or goals for each student	
3. Asking students what interests them	
4. Project ideas that relate to the students' experiences.	
5. Real world applications	
6. Students is their signature	
7. Brief demonstrations by the teacher	
8. Examples of past projects	
9. Role play by students	
10. Peer teaching	

12. SECTION D: UTILIZATION OF T/ L RESOURCES

ITEM	S A	A	Not decided	D	SD
1. You always plan to use T/L resources in your lessons.					
2. Your students actively participate in the lesson when you use T/L resources.					
3. You encourage your learners to make their own learning resources.					
4. Use of T/L resources enhances learning.					

4 Do you enjoy teaching Art and Design in your school?

Yes ( ) No ( )

Give reason(s) for your answer

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13. SECTION E : LEARNING STYLES

1. I know what the term “learning styles” means.

I strongly agree ( ) I agree ( ) Not decided ( ) I disagree ( ) I strongly disagree

2. The learning styles of my learners influence my choice of T/ L resources.

I strongly agree ( ) I agree ( ) Not decided ( ) I disagree ( ) I strongly disagree

3. My students' participation when i use T/L resources during the Art and Design lesson can be rated as;?

Very active ( ) active( ) indifferent ( ) not active( )

4. I understand my students' learning styles

I strongly agree ( ) I agree ( ) Not decided ( ) I disagree ( ) I strongly disagree

5. List the learning styles among your learners.

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6. How do your students respond to the following T/L resources?

<b>MEDIA</b>	<b>EXCITED</b>	<b>LISTEN ATTENTIVELY</b>	<b>BORED</b>	<b>WATCH KEENLY</b>
Books				
Pictures				
Realia(real objects)				
Resource people				
Writing board				
Dramatization				
Field trips				

7. Please make any recommendations necessary for improvement in teaching Art and Design in our schools.

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8. Give reasons for your recommendations

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## **APPENDIX B: INTERVIEW GUIDE FOR HEADS OF SCHOOLS**

1. For how long have you been a principal in this school?
2. What is your view of the T/L resources for teaching Art and Design in your school?
3. What challenges do you face as you supervise curriculum implementation in the school?
4. What is your opinion on learners' learning preferences in relation to available T/L resources?

## APPENDIX C: QUESTIONNAIRE FOR STUDENTS (SQ)

The purpose of this questionnaire is to find out the your perception of use of T/L resources during Art and Design lessons and to establish your learning preferences (styles)

Your co-operation and honest responses shall help the researcher accomplish the objective of this study.

Kindly complete the questionnaire and be assured of confidentiality of your responses.

Thank you for accepting to facilitate this research.

### 1. SECTION A: GENERAL INFORMATION

*Please tick where it is applicable.*

a) Sex: Male( ) Female ( )

b) Category of school

		National	County	Sub-county
Boys	Boarding			
	Day			
Girls	Boarding			
	Day			
Mixed	Boarding			
	Day			

## 2. SECTION B: LEARNER CHARACTERISTICS

ITEM	STRONG LY AGREE	AGRE E	DISAGRE E	DISAGR EE
1. I learnt Art from my primary school.				
2. My parents/ guardians accepted my choice of Art and Design as a subject.				
3. Non-Art students appreciate my artistic abilities.				
4. Other teachers commend me for selecting Art and Design as an examinable subject.				
5. I prefer reading or researching about a concept taught.				
6. I prefer field trips to places related to what is to be learnt.				
7. I like to learn art concepts via the internet				

**SECTION C: UTILIZATION OF T/ L RESOURCES**

*Tick where applicable.*

ITEM	STRONG LY AGREE	AGRE E	DISAGRE E	DISAGR EE
1. My Art and Design teacher uses text books and no other resources to teach us.				
2. Students actively participate during the art lesson when the teacher uses T/L resources				
3. Our teacher shows us how to make learning resources which makes learning interesting				
4. My Art and Design teacher uses other teaching aids other than text books to teach us.				
5. I can access information related to Art and Design from the internet.				
6. I know what e-learning is all about.				

Are you happy as an Art and Design student in your school?

Yes ( )      No ( )

Give reasons for your answer.

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END

## APPENDIX D: CLASSROOM OBSERVATION SCHEDULE CHECKLIST

(To be filled by the researcher while observing the lesson proceedings) The purpose of this instrument is to find out the availability of instructional media, the frequency of use, and whether their use arouses the interest of the students.

**Table 3.2 Observation Checklist**

RESOURCE	AVAILABLE	UTILIZED
Video		
computers		
LCD projector		
Radio		
Charts		
Models		
Real objects		
Pictures		

## **APPENDIX E: INTERVIEW GUIDE FOR DQASOs AND CQASO**

1. In your opinion, are the Art and Design teaching and learning resources adequate?
2. What pedagogical practices are prevalent in the teaching of Art and Design in this District / County?
3. In your opinion, do these practices cater for all learners in terms of their learning styles?

## APPENDIX F: MAP OF BUNGOMA COUNTY



Figure 3.1 Bungoma county map

(Source: Bungoma County website.)

**APPENDIX G: RESPONDENTS CONSENT FORM**

KENYATTA UNIVERSITY

P.O. BOX 43844-00100

NAIROBI

**CONSENT TO PARTICIPATE IN A RESEARCH STUDY.**

**(To be used for oral and written responses)**

**STUDY TITLE: IMPACT OF LEARNING STYLES ON UTILIZATION OF TEACHING RESOURCES FOR ART AND DESIGN IN SECONDARY SCHOOLS IN BUNGOMA COUNTY, KENYA**

**RESEARCHER: CONSOLATA KHALAYI ISALAMBO**

I confirm that the researcher has explained the purpose of an informed consent to the participant.

I am aware that my participation is voluntary and that my responses shall be handled under great confidentiality.

Participant's Name \_\_\_\_\_

Participant's Signature \_\_\_\_\_

**APPENDIX H: LETTER FROM MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY**



REPUBLIC OF KENYA

MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY  
State Department of Education – Bungoma County

When Replying please quote  
e-mail: [bungomacde@gmail.com](mailto:bungomacde@gmail.com)

County Director of Education  
P.O. Box 1620-50200  
BUNGOMA

RefNo: BCE/DE/19/VOL.1/140

Date: 13<sup>th</sup> August, 2018

**TO WHOM IT MAY CONCERN**

**RE: AUTHORITY TO CARRY OUT RESEARCH – CONSOLATA KHALAYI ISALAMBO REF: NACOSTI/P/17/35211/19939**

The bearer of this letter consolata Khalayi Isalambo of Kenyatta University has been authorized to carry out research on *“Influence of learning styles on utilization of teaching resources for art and design in secondary schools in Bungoma County, Kenya”* for a period ending **14<sup>th</sup> November, 2018**.

Kindly accord her necessary assistance.

A handwritten signature in black ink, appearing to read 'Jacob Onyiego', written over a faint circular stamp.

JACOB ONYIEGO  
COUNTY DIRECTOR OF EDUCATION  
BUNGOMA COUNTY



**APPENDIX I: RESEARCH AUTHORIZATION LETTER FROM MINISTRY OF  
INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT**

**REPUBLIC OF KENYA**



**THE PRESIDENCY  
MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT**

Telephone: 055- 30326  
FAX: 055-30326  
E-mail: ccbungoma@yahoo.com  
When replying please Quote

Office of the County Commissioner  
P.O. Box 550 - 50200  
**BUNGOMA**

13<sup>th</sup> August, 2018

REF:ADM.15/13/VOL.11/108

**TO WHOM IT MAY CONCERN**

**RE: RESEARCH AUTHORIZATION.**

Reference is here made on a letter Ref; NACOSTI/P/17/35211/19939 dated 15<sup>th</sup> November, 2017 from the National Commission for Science, Technology and Innovation on the above subject refers.

The bearer of this letter Miss. Consolata Khalayi Isalambo is a student at Kenyatta University and has sought authority to carry out research on, "**Influence of learning styles on utilization of teaching resources for art and design in secondary schools in Bungoma County, Kenya**" for a period ending 14<sup>th</sup> November, 2017

Authority is hereby granted for the specific period and any assistance accorded to her in this pursuit would be highly appreciated by this office.

A handwritten signature in black ink, appearing to be 'G.W. Khaemba'.

G.W. Khaemba  
For: County Commissioner  
**BUNGOMA COUNTY**



## APPENDIX J: RESEARCH AUTHORIZATION LETTER FROM NACOSTI



### NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,  
2241349,3310571,2219420  
Fax: +254-20-318245,318249  
Email: dg@nacosti.go.ke  
Website: www.nacosti.go.ke  
When replying please quote

9<sup>th</sup> Floor, Utalii House  
Uhuru Highway  
P.O. Box 30623-00100  
NAIROBI-KENYA

Ref. No. **NACOSTI/P/17/35211/19939**

Date: **15<sup>th</sup> November, 2017**

Consolata Khalayi Isalambo  
Kenyatta University  
P.O Box 43844-00100  
**NAIROBI.**

#### **RE: RESEARCH AUTHORIZATION**

Following your application for authority to carry out research on *“Influence of learning styles on utilization of teaching resources for art and design in secondary schools in Bungoma County, Kenya”* I am pleased to inform you that you have been authorized to undertake research in **Bungoma County** for the period ending **14<sup>th</sup> November, 2018**.

You are advised to report to **the County Commissioner & the County Director of Education, Bungoma County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

*G.P. Kalerwa*

**GODFREY P. KALERWA MSc., MBA, MKIM  
FOR: DIRECTOR-GENERAL/CEO**

Copy to:

The County Commissioner  
Bungoma County.

The County Director of Education  
Bungoma County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified


**APPENDIX K: RESEARCH PERMIT FROM NACOSTI**

**THIS IS TO CERTIFY THAT:**  
**MS. CONSOLATA KHALAYI ISALAMBO**  
**of KENYATTA UNIVERSITY , 0-50205**  
**WEBUYE,has been permitted to conduct**  
**research in Bungoma County**

**Permit No : NACOSTI/P/17/35211/19939**  
**Date Of Issue : 15th November,2017**  
**Fee Recieved :Ksh 1000**

**on the topic: INFLUENCE OF LEARNING**  
**STYLES ON UTILIZATION OF TEACHING**  
**RESOURCES FOR ART AND DESIGN IN**  
**SECONDARY SCHOOLS IN BUNGOMA**  
**COUNTY,KENYA.**

**for the period ending:**  
**14th November,2018**




*[Handwritten Signature]*  
**Applicant's Signature**


*[Handwritten Signature]*  
**Director General**  
**National Commission for Science,**  
**Technology & Innovation**

**CONDITIONS**

1. The License is valid for the proposed research, research site specified period.
2. Both the Licence and any rights thereunder are non-transferable.
3. Upon request of the Commission, the Licensee shall submit a progress report.
4. The Licensee shall report to the County Director of Education and County Governor in the area of research before commencement of the research.
5. Excavation, filming and collection of specimens are subject to further permissions from relevant Government agencies.
6. This Licence does not give authority to transfer research materials.
7. The Licensee shall submit two (2) hard copies and upload a soft copy of their final report.
8. The Commission reserves the right to modify the conditions of this Licence including its cancellation without prior notice.



**REPUBLIC OF KENYA**



**National Commission for Science,**  
**Technology and Innovation**  
**RESEARCH CLEARANCE**  
**PERMIT**  
**Serial No.A 16494**  
**CONDITIONS: see back page**