



## KIBABII UNIVERSITY USE OF TELEVISION IN PROMOTING TEACHING AND LEARNING IN SCHOOLS

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**Abstract:** Television is an audio-visual tool which can be harnessed by educators to be used in education. Invention of television from 1843 was quite a milestone improvement on both the hardware and software to the current gadget we have in both household and educational institutions. The recent innovations in television have given rise to the interactive smart board technology which can be manipulated by the classroom teacher to create and share the content with the learners. This paper focuses on the forms of television used in teaching and learning and how it has promoted education in the Kenyan education. The theory underpinning use of television as an audio-visual tool in education is sensory stimulation theory which has its basic premise that effective learning occurs when the senses are stimulated. Television plays a very significant role in training students for citizenship, fostering the sense of understanding, environmental awareness and inculcation of socio-political and cultural values. The future of use of television in teaching and learning in Kenya depends on the ability of the teacher to create the programs that the learners can undertake to bring about the process of acquiring knowledge, skills and attitudes. In the same vein, television programs like education channel, cartoons, puppets and other graphics will be connected to internet and distributed widely for utilization in teaching and learning. Many schools have embraced the technology. The future of television in schools will depend on whether there is sufficient security to safeguard the gadgets, storage of these gadgets, sources of electric power, supply of internet facilities, roads to supply these gadgets in different schools and preparation of teachers as a resource person. Despite this there are challenges such as resistance from parents who only view television as an entertainment for watching football, news, cinemas and other programs of interests to them. Another significant challenge is lack of confidence and if any, very little in using television in their work as teachers, they therefore try to avoid them, the gadgets are constantly evolving from simple ones like great walls to complex ones like the big screens with large hunch backs, to plasma screens. Some teachers and other stake holders find the current television very expensive and they are owned by a few affluent householders. The paper concludes that, the children should be encouraged to view television as an audio-visual devise that can boost their learning experience.

**Keywords:** Smart television, Digital television, Terrestrial television, Liquid Crystal Display Television (LCD TV), 3- Dimensional television,

### INTRODUCTION

Television has been a very useful audio- tool in not only educational sector in Kenya, but also in almost all households in the world today, Kenya inclusive. Whereas it is mostly used for entertainment purposes like movies, games and news, it can be a powerful tool when harnessed properly by educators to be used in education. In the social aspect, several studies have found out that educational television has many advantages most

importantly; it can be a very powerful, effective, and efficient tool for children if used wisely (Aggarwal.J.C, 2014, Benjamin, 1986, and Stevens, 2013). In this paper, historical development of television, forms of television, comparative analysis of types of television, practice in Kenyan Education, production of programs and prospects of television in Kenya are discussed.



## **BACKGROUND OF USE OF TELEVISION IN TEACHING AND LEARNING**

The invention of television as an audio visual tool was the work of many individuals from other countries. It dates back in the late 19<sup>th</sup> Century and early 20<sup>th</sup> century. The cruxes of invention were to make profit through programs broadcasted and change the world through visual and audio communication technology (Stevens, Mitchel, 2015). Among the inventors of television, the following is the chronological order of invention of television. Alexander Baird who introduced the facsimile machine between 1843 and 1846. This was a precursor to the television which could both show pictures and produce sound. Fredrick Bakewell demonstrated a laboratory working version in 1851, this was the first practical facsimile system that could work on telegraph lines that were developed and put into service by Giovanni Caseli in 1856 onwards. Willoughby Smith discovered photoconductivity of the element selenium in 1873. Selenium is a semi conductor used in photocells applied in electronics as direct current power surge protector and type of fluorescent quantum dot. George Rignoux and A. Fournier in 1909 demonstrated instantaneous transmission of images using a matrix of 64 selenium cells individually wired to a mechanical commutator that served as an electronic retina. Boris Rosing and his student Vladimir Zworykin in 1911 created a system that used a mechanical mirror drum scanner to transmit very crude images over wires until cathode ray tube was invented. Logie John in 1920 used Nipkow disk in his prototype video system that enhanced transmission of televised silhouette images. In 1928, John Logies Company managed a successful broadcast of television signal across the Atlantic Ocean between London and Newyork. This was the first one ever to transmit images across two continents. Anton Codelli in 1954 and 1965 developed the television that could transmit both sharp motion pictures and colored images. 2010 and 2015 has seen television evolving from analogue television to digital television, smart television and three dimension televisions. In Kenya, television has been in use since independence in 1963. Televisions have been confined in the households only for entertainment even though in some cases like the video shows, television together with accessories such as DVD player can be used to play and show the movies for entertainment. The advent of digital migration in 2010 has seen many users of television migrating from analogue to digital

television that has resulted to increase in the number of channels telecasted to the masses. The content aired is regulated by the communications authorities that provide policies that direct both production of programs and the actual broad cast of the content. The digital television allows for the networks like the cartoons network that target the small children providing the entertainment and educative functions. Cartoons are produced to simulate the actual characters in the real life and this successfully creates the conditions for learning the same way oral narrative and storytelling do. Cartoons are meant to teach the children different aspects such as linguistics, numeracy and literacy.

## **FORMS OF TELEVISION**

Development of television display technology has gone through various stages to produce different forms of television used in education today. The first form of television was either flow standing console model or table top version which was very bulky and heavy therefore it remained firmly anchored in one place. The television has morphed into small portable set which can be moved with little effort from one place to another. There are different forms of television namely;

Digital television which transmits motion pictures and sound by digitally processed and multiplexed signals. Digital television can support more than one program in the same bandwidth; it therefore can be used to display more than one content in different classroom teaching and learning processes.

Smart television provides online interactive media over the top content as well as on demand streaming media and home networking access. Smart televisions can be connected to the internet to download and upload programs for viewing and retrieving information. Smart televisions are based for use in education because they can retrieve and transmit instructional content.

3- Dimensional television uses an active shatter or a polarized 3-D system. It is a hybrid of digital television which is an improved version of 3- dimensional television.

Other than the above forms of television, there are also other forms of television by virtue of audio visual development process, because television itself has gone through a number of stages to the modern varieties that are in use. To understand this concept, it is also important to be aware that there is the hardware part of television which is the structure of the gadget



and accessories to the television and the software part which the programs are prepared by different stations commonly called channels.

Terrestrial television is meant to broadcast the programs over licensed geographical area within limited bandwidth. Some television stations transmit pictures from other stations with acknowledgement and license.

Liquid Crystal Display Television (LCD TV) uses LCD display technology to produce images. This has evolved into Organic Light Emitting Diode (OLED) also called Light Emitting Diode (LED) that use emissive electro-luminescent layer to display motion pictures. It is a film of organic compounds which emit light in response to an electric current. The layer of organic semi conductor is situated between two electrodes used for compound monitors, portable systems such as mobile phones, hand held games consoles and PDAs.

#### **THE THEORETICAL FRAMEWORK ON USE OF TELEVISION IN SCHOOLS**

The theory underpinning use of television as an audio-visual tool in education is the sensory stimulation theory which has its basic premise that effective learning occurs when the senses are stimulated. Stimulation of senses is the key component in education because it provides the sensory data in the system that begins the process of acquisition of knowledge, skills and attitudes by the viewers. The television program that appeals to more than one sense is very effective tool for learning.

#### **COMPARATIVE ANALYSIS OF TYPES OF TELEVISION**

This paper is geared to make analysis of types of television in terms of screen size, display technologies, software technology and identifying the best television that can be used for instruction purposes.

The first television was very bulky, therefore not portable. It could not therefore be used for instruction purposes unless students could be moved to where it was. The purpose of the first television was not educational but entertainment and only the rich in the society could afford. The room size could not allow students to interact with television effectively and efficiently. The screen size is measured in inches, in this case we have big screen TVs which were heavy square boxes with 29-inch screen size. The biggest post modern screen size is 146 – inch unveiled by Samsung Company. The biggest screen size is

assumed to be very suitable for large class size if it has to be used for instruction. The screen can be display pictures to a large audience while sound could be enhanced to reach all in the classroom. Obviously, small screen televisions cannot be used for instruction due to limitations of display capacity. The 100% transition policy in Kenya has all pupils who sat for KCPE proceeding to secondary schools causing over enrollment. Therefore schools require the biggest screen size than what Samsung has produced. Simple modification techniques currently used is to project the motion pictures to a wall for us in classroom instruction. The LED, LCD and OLED televisions produce pictures using little power just like fluorescent tubes do. The light produced shines through the screen producing pictures. Among these light emitting diode television screen, Organic Light Emitting Diode television is completely a different technology. OLED screens are made of literally millions of tiny LEDs. One for each pixel (or a dot) on the screen and all emit their own light. An OLED screen is only type capable of displaying black as total black, and as a result, this television have stunning and cinema-like pictures quality that is cut above anything else. Even though OLEDs screens are exclusive but the quality, burn in effect where the image stays longer on the screen before it is removed and the ability to retrieve content in HDR (high dynamic range) such as YouTube, Netflix and blue-ray discs. These advanced technologies are, superb when harnessed to be utilized in classrooms instruction. Today almost every scientific process, movies, games, animations and simulations can be downloaded from and uploaded to YouTube, Netflix and 4K Blue-ray discs. Smart televisions can allow one to access internet. They are basically big screen televisions with small computers powering them, complete with an operating system and the ability to install and update apps. This approach is very suitable for interaction of users with the content to be delivered to the classrooms. Smart televisions are teacher centered if viewed in the dimension of the teacher as the subject matter expert (SME).

The Android Television is a special version of Google Android Phones or tablet operating system that is designed especially for big- screen television. It is versatile and well supported with apps but it is not users – friendly system. It is tightly integrated with Google's ecosystem but has huge library of apps for all the major streaming services. It is also clean, modern interface and



can take a few too many buttons pressed to find the apps that is wanted. Android televisions are very suitable for classrooms that share the same content once schools that have the curriculum that has to run at the same time throughout can use android television to download and broadcast the content to students at any particular level. There are other types of televisions that are modifications of android televisions such as Apple TV, Amazon fir TV Stick, Telstra TV and Fetch TV Mighty. These televisions have streaming devices that are enhanced on televisions. They allow learners to interact with content and engage in manful teaching and learning processes. Innovations on televisions and ongoing and more advanced versions are underway.

#### **FUNCTIONS OF TELEVISION IN EDUCATION IN KENYA**

Television is an audio-visual and sophisticated scientific devices, it telecasts programs from far and wider areas of the country and abroad. It has an important role to play for entertainment and education of people all over the world. Some educational functions of television are discussed below;

a) Training for citizenship

Citizenship training is the highest task of a democratic country like Kenya. Television plays a pivotal role to achieve this objective through documentaries, debate and discussion serials these programs telecasted to develop patriotic feeling and ensures obligation of people to country, love and sympathy for fellow men and create awareness, about rights of the citizen. One of the major reasons about rights of the citizen. One of the major reasons why the competency based curriculum was stopped was poor communication between stake owners of the curriculum. Television could have been used to pass on this information to the targeted public.

b) Fostering the sense of National integration and international understanding.

The need of National integration and international understanding is felt essential in all quarters in modern times. The countries are coming close to each other now a day through rapid communication revolution. The sense of unity, co-operation and mutual relation are to be fostered among the people to ensure a peaceful living in the globe, TV programs on the role of UNESCO, United Nations (UN) and World Bank for international understanding as

well as common cultural programs like celebration of National days such as Jamhuri Day in Kenya. Birth centenary of great men like former president Kenyatta and Moi in Kenya to strengthen National integration are widely welcomed.

c) Environmental Awareness.

Environment pollution and ecological imbalances have challenged the life on the earth in modern times. Rapid growth, urbanization problem of drain, huge stock of garbage, deforestation like the one that has been taking place at Mau forest, demolition of structures that were built on riparian lands, destruction of ivory tusks confiscated by Kenya wild life service authority, impounding of mercury laced sugar by Kenya Revenue Authority and many more examples of environmental issues communicated to the public necessity to clean the environment for health and hygiene, need of sanitation, information about birth control devices are to be targeted to masses through different programs. General awareness about the environment and its problems are raised through television programs.

d) Inculcation of socio-political and cultural values.

Socio-political and cultural achievements of the country described through different program to foster the sense of brotherhood among the people of different creed, sex, ideologies and political views. Changing social systems, cultural and political issues are also brought for discussion and debate and exhibition on cultural exchange and political reviews are necessary for presentation of cultural values. Corruption and fight against corruption has taken center stage in Kenya and the public are made aware about which sector of government is the most corrupt and which one is less corrupt. Another function of television is to provide entertainment to people through the programs like cinema, serial and sports etc. its role as an important communication medium noteworthy for promoting national unity, developing economy and reforming socio-cultural life of people. It is a great contribution to humanity in education through different programs.

#### **FUTURE OF TELEVISION IN KENYAN SCHOOLS**

The importance of television as audio-visual device in education should not be under estimated. There are two reasons for this,



one, learning via audio visual creates a stimulating and interactive environment which is more conducive to learning. Preparation in this case is key and it all starts and ends with the teacher. The teacher according to (Mukwa, 2002; Hewit, 2006; Ornstein & Hunkins, 2009, Su, 2012; Toombs & Tierney, 1993) develops a strategy for learning by target performance of the objective. The knowledge about objective helps the teacher to learn how to select and use strategies for learning purposes. If the television is chosen as one of the resources in learning, then it demands that the teacher should be knowledgeable about which television program fits the content. The other importance of television as audio-visual device in education is that we live in an audio-visual age which means that having the skills to use audio visual is key. Audio visual aids are important tools for teaching learning process. It helps the teacher to present the lesson effectively and students learn and retain the concepts better and for large duration. It helps to remove abstracts concepts through visual presentation. In Kenya, we have various programs developed which suit the student population. However, the audio visual technology used by television programs is mainly the interactive white board. Children are exposed from young age to a range of other audio visual technology, which previous generation was not. A television and video player are used to show short educational system films. Now it is the computer that shows there educational films and homework is also being done increasingly on personal computers. Television programs like education, channel, and cartoons, Puppets and other graphics are connected to internet and distributed widely for utilization in education. The teacher is therefore encouraged to retrieve and use in classroom teaching and learning process. Children learn differently and audio visual equipment give teachers the chance to stimulate each child's learning process with a combination of pictures, sound and attention grabbing media.

In Kenya, we are surrounded by audio visual equipment, at least each household has a television and other gadgetries as accessories like DVD players, flash disks, memory cards just to name a few and children are keen to understand technology and keep up to data with applied science. More schools are taking advantage of audio visual technology to teach the students. In 1998, with the inception of SMASSE, the targeted schools have large television screen which contain programs run by

sciences teachers globally. Other schools which are not SMASSE centers have equally one or more television sets which are utilized for entertainment mostly, but teachers quite often like them for teaching purposes like watching literature books, animations that show some biological processes like digestion, etc. These are popular nowadays. The equipment can be used to present information to students but also the fact that they are interacting with audio visual technology on a daily basis also makes them proficient in using technology. Quick survey in schools will show that a large percentage of students can access mobile phones, IPADS, Tablets and laptops. Most of these devices have software which include television program of choice. Not exposing children to different forms of technology is depriving them of vital learning opportunities that could benefit them in the later life for example through increased career opportunities. Audio visual lesson should not just consist of children working in pairs on a power point presentation or re-writing a piece of work using word, ICT should be challenging, exciting and fun.

#### **THE STAND POINT**

So much has been said and written about television, it is a world that can influence teaching and learning process because it reaches the masses at once. The content to be telecasted, if checked properly by the teacher before it reaches the targeted group can be very useful. But, from the arbitrary findings, very few schools if any have embraced this technology. Many televisions sets are purely used for entertainment purposes leaving only a handful that air education matters. As a teacher, I totally support integration of television in education as well as installation of CCTV to create a safe school, stimulating classroom teaching and learning using television and exciting teaching and learning using interactive white board technology. Television is a very expensive gadget, it requires proper funding for educational programs to be broadcasted to schools, there is need for effective enforcement to ensure that all learners both in town schools and schools in the interior have equal chances of exposure to television. Security should also be enforced to assure the safety of these gadgets in schools, meaning that special rooms be constructed in all schools to safely store these gadgets. Proper infrastructure should also be in place such as internet facilities to fast track information searching, electric power should be available in all schools enable television



operate. All these in place and the proper road network are the conditions that will increase use of television in schools.

#### **CONCLUSION**

Television is a very powerful tool that can either make or break. It can make by harnessing television programs to be used in teaching and learning process. While it can break if the programs broadcasted are skewed towards entertainment only. Children should be encouraged to view television as an audio-vision device that can boost learning experience. This requires a paradigm shift in teacher preparation and consequent collaboration between corporations which produce television programs.

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