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# Educational Television and Aspects of Child Development

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### ABSTRACT

Traditionally, educators have perceived television as not particularly beneficial to literacy development. Concerns were fueled by findings suggesting that with the introduction of television people spend less time reading books and reading scores decline. However, as the society is striving to make adjustments to the decline in literacy skills and new ways of learning and teaching are being explored, educators are becoming interested in exploring the educational potential of television and video for teaching basic literacy skills such as reading, writing, and math. The interest in television as an educational medium has increased for several reasons. The research literature suggests that the content of television can have four broad types of effects on children. They include behavior, attitudes, beliefs and values, knowledge, and cognitive skills. Many children's television series are educational, ranging from dedicated learning programs to those that indirectly teach the viewers. Some series are written to have a specific moral behind every episode, often explained at the end by the character that learned the lesson. Some television programs are designed with primarily educational purposes in mind, although they might rely heavily on entertainment to communicate their educational messages. In children's programming, edutainment becomes fun and interesting for the child but can still be educational.

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### Introduction

The continued interest in adoption of television programmes in enhancing learning in English language has raised concerns among stakeholders that children's English language abilities on entry to school has declined over the years (NLT and NAHT, 2001) Gotmaker, *et al.* (1999) argued that there could be a relationship between children viewing television and cognitive outcomes which are yet to be established. Greenfield, (2014) in his study indicated that educational television can instill positive attitudes in children towards the learning process. However, a research conducted by Gentzkow and Shapiro, (2008) on the childhood of baby boom generation and their television viewing, found no such causal relationship. Avosa, (2014) indicated that much as television plays a fundamental role in promotion of education and entertainment among children, children with full exposure to television have been found to perform dismally in class and even fail to speak English language fluently.

In USA, a study conducted by Brodie, *et al* (1999) revealed that children had televisions in their bedrooms, which they view quite often AAP, (2001) CSM, (2011) showed that American children spent more time in front of television than any other media like computer and iPod. This habit of television viewing is influenced by the fact that children's programmes are packaged in an appealing way with a lot of drama, humor, games, and children's plays which motivates children to get glued on television. However, a study conducted in Korea by (Haewon, 2015) on television and children's English language achievement revealed that there was an unclear result that television had harmful effects or was beneficial to learning of reading skills, attention, and cognitive development in children.

In fact, in recent times, the American Academy of Pediatrics provided recommendations that suggested limiting children television viewing to less than two hours per day for children above two years old and children under two years old should not view television at all (Gentile *et al.*, 2004). However, this recommendation is going largely unheeded by most families; instead, many parents believe that there are educational benefits to viewing television at an early age (Hersey and Jordan, 2007). Even more often parents describe television as an electronic babysitter for children (Zimmerman *et al.*, 2007). Like parents, pre-school workers have negative attitude towards children viewing television because it's associated with low academic achievement in school (Avosa, *et al* (2014). A study done by ICAN (2004) showed that a higher percentage of pre-school workers said that they were worried about speech, language, and communication issues among pre-school children as a result of exposure to television.

In a survey to explore motivational factors that trigger preschool children to view educational programmes, Certain and Kahn (2002) found out that the number of hours children view television is motivated by several variables, which include maternal level of education and early television viewing. Certain *et al.*, (2002) in his longitudinal study also revealed that preschool television viewing habits is associated with continuing environmental influence, child preferences, habits, or the interaction of both, and that less educated mothers tend to view more television at all ages besides children's television programmes being packaged in an interesting manner.

In South Africa, for a long time, television use was not allowed because stakeholders feared that the horror of

apartheid would be shown to children yet the government was struggling to bring about national cohesion by providing education for citizenship Prinsloo, (1999). However, the dreadful scourge of HIV/Aids precipitated the introduction of television viewing to teach children to embrace values. This made it possible for contemporary educational programmes like takalani sesame and yizo yizo to be introduced and viewed to assist children in learning, Ndelebe, (1999) and Chamley, (1966) Wiecha *et al.*, (2001) indicated that, parents tend to use television to essentially babysit their children for many hours per day; while others eliminate television viewing entirely because of their belief that it negatively impacted on child development. It has also been found that parents of three to five-year-old children in South Africa very often trusted television programmes to be educative for their children and so encouraged viewing (Peters *et al.*, 1991). While, viewing too much television has been shown to lower cognitive test scores in children, Timmer *et al.*, (1985).

According to Szabo, (2009) television can impair children's language development because when parents are viewing television, they cease to talk to each other much as they are in the same room with their children. Contrary to these findings on the adverse influence of television viewing, some research facts illustrate advantages in areas of English such as school readiness and literacy for preschoolers who view educational programmes. Viewing educational television programmes may enhance school readiness and academic achievement (Bickham *et al.*, 2001).

In Kenya, television technology development has been dynamic in many aspects (Nganda, 2007). There was one television channel in the 1980s; Voice of Kenya (VoK) that was state owned which changed to Kenya Broadcasting Corporation, KBC in 1989 and marked a paradigm shift in the way the station was to operate. However, in the 1990s, several television stations were licensed to operate in the country. These stations came with attractive programmes that targeted many audiences, among them children. Some of these are contemporary educational television programmes such as Know Zone produced by Citizen Television, Club Kiboko by KTN; Big minds on Kenya Broadcasting Corporation television among others on Saturday morning. (Nganda, 2007).

Viewing contemporary educational television programmes may enhance school readiness and academic achievement, however, a survey done by Uwezo (2012) in Baringo indicated that children are not acquiring foundational skills of literacy in English language, as recommended by the official curricular requirement of the County. The low learning levels in English language and consequent low achievement in Kenya certificate of primary education suggests a weak foundation at pre-school, and a continued crisis that demands attention (KNEC results 2014-2015 Unpub. This study, therefore, seeks to investigate the influence of contemporary educational pre-recorded television programmes on achievement in English language, although, pre-school teacher's perceptions, ECDE stakeholders views and children's attitudes towards these contemporary educational pre-recorded television programmes is yet to be established..

#### **Overview of Television viewing and language**

In examining the relationship between television viewing and phonological awareness, a study was done by Uchikoshi, (2006) revealed that children's phonological skills, involving initial sound fluency, blending and segmenting can

reasonably be influenced by viewing television programs (Prince *et al.*, 2002). Television assists children to follow medium codes and conventions in a storyline (Signorielli, 1991). However, the television is blamed for several social and developmental problems, including poor school achievement, these statements ignore the fact that television is a gadget that contains a lot of content and its effects on preschool children's achievement depends on the programme, however, evidence to support these facts are somewhat scattered (Huston and Wright, 1997). In a research study to investigate school readiness and vocabulary in children as a result of viewing television. Wright (1997) stated that their results were both positive and negative on children from small cadre families that extensively use television than those from well to do households.

In a correlation study by Comstock, (1995) there was small yet consistent negative relation between television viewing and school achievement that is on cognitive skills and vocabulary. Much as scholars indicate that television enhances acquisition of several skills in the English language, a study by Salter *et al.* (1990) revealed that television contributes to lowering reading skills over time among older children. Richie *et al.* (1985) and Corteen *et al.* (1986) in their studies reveals that socioeconomic status of the household also plays a role in addition to television in shaping the language skills of the children. Moreover, the aspect of television viewing and school achievement is influenced by the environment of a child, cultural context. Linebarger *et al.* (2004) studies show that appropriate television programs can positively influence pre-schooler's emergent literacy development across a range of major early skills. Given the importance of developing strong pronunciation, vocabulary growth, and storytelling abilities, in the early years, many contemporary television programs focus on influencing children's literacy by targeting phonological awareness skills. An overall evaluation on television viewing has concluded that relevant programs can foster children's vocabulary pronunciation and awareness of sentence construction (Linebarger *et al.*, 2000; 2008).

In a study conducted by Nganda (2007) entitled "Impact of television on the performance of pre-school children in Langata Division, Nairobi, Kenya, found that television viewing by preschool children could be beneficial to them as long as the program contents are appropriate. However, a survey done by Uwezo (2012) in Baringo indicated that children are not acquiring foundational skills of literacy in the English language, as is recommended by the official curricular requirement. The low learning levels in English language and low achievement in Kenya certificate of primary education suggests a weak foundation at pre-school, and a continued crisis that demands attention (KNEC results in 2014-2015 Unpub)

Television is the media that is most accessible to many children, and it is their favorite form of media (Burton, 2004). Television viewing by children has raised debates and worries to many researchers (e.g., Pempek *et al.* (2005) due to the boundless access to various types of information which could affect their cognitive development, behavior, health, and learning. For the last several years, the American Academy of Pediatrics (AAP) has raised concerns about a number of time children to spend viewing television, and the content children consume (AAP, 2001).

Referring to AAP guidelines, children older than two years should not view more than one to two hours of quality

programming, and children under two years old should not view television at all for the first two years of life is their sensitive period of brain development. Developers of children's educational programs are working in conjunction with software companies to produce educational software for children (Revelle *et al.*, 2001).

Prince *et al.* (2002) also studied children's pronunciations over the course of their study; there was no main effect for condition, control or experiment for Delta participants as measured by the Dynamic Indicators of Basic Early Literacy Skills (DIBELS). However, children viewers' learning growth was reasonably greater, and consequently post-test scores exceeded non-viewers on both the initial sound fluency and non-sense word fluency tasks, a task designed to measure children's emerging decoding and encoding abilities. Data for the Choctaw participants revealed no marked effects for the condition on any of the DIBELS tasks. Similarly, Uchikoshi (2006) made use of BTL and used individual growth rates of storytelling of Spanish-English kindergartners attending 10 public schools in the United States, as a result of viewing either *Between the Lions* or *Arthur*, a popular children's programmes prepared to foster children's social and narrative skills, three times per week over an entire school year. Individual growth modeling analysis demonstrated that children who viewed *Between the Lions* had performed better than those who viewed *Arthur* for each of the measures used including blending, segmenting, and matching of initial and ending sounds of words.

In early language, language specialists have recommended limited exposure to television, for children under two years of age (Hemphill *et al.*, 1991) and (American Academy of Pediatrics, 2001). However, acceptance of television as a learning tool has been aided by the growing body of research surrounding educational programming, emanating from Sesame *Street* program. (Revelle *et al.*, 2001) supports educational television and argued that many language-enhancing activities thought to be associated with parent-child interaction can be taught in part by educational television.

#### Television viewing and verbal interaction

According to Griffith *et al.*, (2008) parent-child shared book reading, for instance, was identified as a beneficial activity that promotes verbal interaction, vocabulary learning and knowledge of print in infants and toddlers by the Committee on the Prevention of Reading Difficulties in Young Children in the US (Griffith *et al.*, 2008). Lemish *et al.*, (2006) and (Rice *et al.*, 2000) identified many similar characteristics of book reading in Sesame Street. They found out that Sesame Streets educational success that it closely resembles that of a mother talking to her child, with simple sentences, much talk about the here and now, repeated emphasis on key terms, and an avoidance of abstract terminology (Rice *et al.*, 2000).

Woodsmall (2008) found that repetitions are critical in children's ability to learn words from television. When children see something they already understand, they approach the repeated exposure to it with less discomfort. In her research on closed-captioning, Linebarger (2001) found the exact repetition of words on screen lead to increased word recognition. Anderson *et al.* (2000) found that repeated exposure to a programme allowed for children viewers increased comprehension and. Repetitions of words are key elements in enabling a child to transfer learning from one situation to another. In the study done by Fisch (2001), it was

suggested that presenting the same educational material in several different forms and different contexts throughout the length of a television program might help children disseminate what they have learned to new but similar situations (Salomon and Perkins, 2009).

Anderson *et al.* (2001) found that multiple viewing of the same episode of Blue's Clues significantly increased transfer. Children in their study who viewed an episode five times were more likely to use the approaches they observed during the Blues Clues episode when they were presented with new problems than children who had not observed the episode multiple times. Repetition is perhaps the most elementary of all learning strategies and is essential for the permanent long-term memory of learning the material (Cornford, 2002). Each of this method can be successful in supporting learning.

#### Television viewing and children's attitudes

Television is one of the strongest media in society and due to its popularity; it has the power to influence children's attitudes (William, 1980). Components of attitudes include cognitive, affective and behavior (Miller and Busch, 1979). Affective components exhibit feelings of likes or dislikes that makes children get glued on television or not for a better part of the day. (Lindstrom, 2004). Children's positive attitude towards television enables them to learn spoken language, grammar and it also teaches skills on oral language which evolves through hearing spoken language the children enjoy learning (Besbes, 2012). Identifying letters and expressive language are also taught (Rice, 2000) (subject, verb, and object). Attitudes can be viewed as learned predisposing to behave in a particular manner favorably or unfavorably concerning a given object (Fishbein *et al.*, 1975).

Children have attitudes towards everything and television attracts their attention which makes it their favorite media (Young *et al.*, 1996; Lindstrom, 2004). In as much as children prefer viewing television to other media use, Ninam and Newman (1985) in their research showed that a child's grade in a preschool does not relate to the amount of television viewed. Similarly, Naigles *et al.* (2001) review found that television has less input in children's grammar development than vocabulary. The adverse effects on morphology may be related to the lack of opportunity for participation and interactivity of television, or learning of grammar cannot take place in a short time or television might be similar to maternal influences on language development (Mayeux, 2001). The authors concluded that natural language influences are rather more important than television particularly for children aged two to three. This suggests that the absence of evidence that grammatical knowledge is acquired from television is related to the fact that there are few studies on the subject.

Gerbner *et al.* (1980) argued that research that has been carried out has looked at inappropriate aspects of grammar for the age groups studied. Much of the research has focused on children aged three to five. This age group is typically mastering passive voice, complex multiclass sentences, negation, and anaphora (use of words like pronouns that refer). The measures investigated by most researchers on word order, general sentence complexity, modals, and imperatives, are typically acquired by children between the ages of two and three (Mayeux, 2001).

The researchers pointed out that a lot of studies should concentrate on measuring age-appropriate skills in connection with grammatical development.

Linebarger *et al.* (2004), for instance, measured direct learning of program content through five different research-developed tests including a *speech to print matching* test that was designed to measure various phonemic awareness indicators, including children's ability to discriminate initial consonants, final consonants, vowels, and blends. Linebarger *et al.* (2004) elucidated that children were shown cards with three words printed on them and asked to point to the word that the examiner said. The stimulus words were terms discussed in the *Between the Lions* Episodes that children in the experimental viewing group viewed over an intervention period. A major limitation of these researcher-developed tests is that information concerning their validity and reliability is unknown (Linebarger *et al.*, 2004).

#### **Television viewing and achievement in the English language.**

Literacy is customarily defined as the ability to read and write, and therefore teachers positively believe that television is an essential tool to satisfy the cognitive needs of children (Birse, 2005). Television concretizes ideas, phenomena, and incidences and promotes permanent learning. Teachers also believe that television viewing enriches the learning process, Werner (1971) and ensures an active engagement of children by providing effective communication. Tafani (2009) suggests that children who fall behind academically, regarding literacy skills, writing, reading, speaking and listening may become unsuccessful adults and possibly a financial drain on society (Barnett, 2005; Ramey *et al.*, 2002). The fact that researchers working in a variety of fields took to heart the concerns that television is watching might be exacerbating the chance of this downward slide is not a surprise. Today, there is research that proposes that those who believe in all forms of programming are malicious, numbing our minds and wasting our time (Mander, 2008).

A television programme that encourages the social and cognitive development of children requires an understanding of how children learn and how the non-interactive content of broadcast television can facilitate this learning. For successful learning in children must first attend to the lesson, understand these programs and then dissemination of knowledge gained during that lesson to the same or unique situations when facing them in real life (Fisch, 2004). Media that support this learning experience will assist children to learn with understanding, construct new knowledge from existing knowledge, take control of their learning, and, develop competence in a particular domain (Cocking, 2000).

According to Bickham *et al.* (2001) programmes which are developed with the intention of instructing viewers, in comparison with the standard commercial fare, has been found to successfully impart academic information and support a child's school readiness and early literacy skills with long-term advantages reaching well into adolescence (Anderson *et al.*, 2001; Bickham *et al.*, 2001). Opinion among stakeholders is growing that there is an increase in the number of children who have issues with the English language (National Literacy Trust, 2001). A survey done by basic skills agency (2002) indicated that children's language and communication skills have declined in recent years (Basic skills agency, 2012).

#### **Television viewing and motivational aspects of children.**

Aukerman (1981) indicates that television is action packed and motivates children to learn because of the intrinsic attributes such as color, movement, cartoons, music, celebrities, humor, the aspect of changing scenes

entertainment and stream of sound children hear which assist them to form words and word order. Lemish (2001) explains that television exhibits a lot of singing, dancing, pointing, imitating behavior and speaking all which excites children who react with a lot of joy. Naiggles and Mayeux, (2001) indicates that if appropriate programs are shown to children who can catch their attention, they can participate by asking questions, and laughing. However, some of the scenes on television can motivate fear and worry in children.

On the other hand, Gitahi, (2011) explained that television could be beneficial to children if supervision and guidance during viewing are done by adults. Children are motivated to view television because of parental viewing habits which seem to influence how much children view television (Woodward, 2000) and that children's frequency of viewing television was related to the frequency with which their parents viewed (Roberts *et al.*, 1999). Children who view television programs gain most in literacy and number skills, and their teachers judge them to be proficient in school readiness skills and have positive attitudes towards school (Mieke, 2001). Much as television can motivate children to view (Razel, 2001) contents that too much viewing can lead to poor performance in school. According to Shore, several essential questions about the impact of interactive digital media on children's development have yet to be answered (Shore, 2007).

#### **The type of educational television programme viewed and children's achievement**

Davis (1989), states that television is good for children and the notion that television turns children into lay robots and morons is not true. McCullough (2016) indicated that many children around the world spent a lot of time in the classroom memorizing and repeating phrases without true expiation or passion. This reliance on rote learning is a major contributor to global learning crisis. Innovators around the world are working hard to inject creativity and innovations in education by using locally generated television programmes. These efforts are aimed at getting manifested in the school and subsequently in the classroom, then through the curriculum design.

The locally generated television programmes in Kenya include the know zone on Citizen Television, Club Kiboko on Kenya Television Network (KTN), among others. These programmes are broadcasted on Saturday morning weekly. They enrich English language skills through a combination of drama, storytelling, animation, and studio-based programmes backed up interactive support materials. Citizen (2009) know zone is a contemporary television programme locally produced by citizen television and it is aimed at raising the educational standards of children in Kenya by improving their understanding of literacy, numeracy and life skills that range from concepts like environmental issues, peace building and national cohesion in a contextual relevant delivery in line with Kenyan primary school syllabus. According to Citizen, these programmes are supposed to assist children to achieve in English language. However, there is no research done in this area to support this assertion. Whether Club Kiboko on KTN or any other contemporary television programmes like big minds, on KBC can raise the cognitive capacities of children and consequent achievement in English is yet to be established. Citizen center for Educational Innovation (2009).

### The role of television within the curriculum

Television can serve a variety of functions within a curriculum. On one extreme, a television program could represent a self-contained curriculum that does not require any additional materials or structured learning experiences. On the other extreme, a television program can serve as one of many learning materials that relate to only certain aspects of a given curriculum.

### Conclusion

Available research suggests that television has considerable potential for learning in general and for literacy education in particular. Television has been shown to influence viewers' behaviour, attitude, knowledge and skills. Research conducted in conjunction with existing literacy programs has demonstrated that television can induce viewers to engage in literacy practice, to change their attitudes about literacy, and to learn words, numbers, and reading and math skills. Perhaps the most important message, though, that can be derived from available research is that whether or not learning occurs, is dependent on a variety of factors, including who is doing the watching, how the watching is being done, what is being watched, and in what kinds of activities the viewing is embedded.

Based on existing research, several recommendations can be derived for the design of educational television programs for children. Overall, design efforts should be aimed at making the program accessible to a variety of learners besides encouraging them to elaborate on the content. Research has shown that the presentation of information through different symbol systems or multiple channels simultaneously can enhance comprehension and learning. However, the combination of multiple channels must be done with care in order not to tax viewers' attentional capacities. Research suggests that only if there is a high degree of correspondence between the information presented through different channels will learning be enhanced. An effective strategy for achieving such correspondence is to have one channel carry the primary message, and present redundant information in the other channels. Since adult viewers tend to expect that the primary message is being carried by the auditory channel, it may be useful to make the auditory channel primary. Alternatively, if a different channel is chosen to carry the primary message, viewers may need to be alerted to this fact so that they may direct their attention accordingly.

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