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Mothers' Perception of the Influence of Interactive Media on Children Cognitive and Social Development in Lagos, Nigeria.

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INTRODUCTION

Numerous studies have reported the implication of interactive media on children's social and cognitive development. It may be surprising, but recent video game research has demonstrated positive, social, and educational related benefits from interactive media (Rideout, Vandewater and Wartella 2003). However, many parents and teachers fear the negative effect of interactive media mostly video games, worrying that video games will turn their children, into mindless, violent, isolated, unhealthy individuals. While some of these concerns are not completely unfounded, video game research has uncovered a wide array of effects of video game play, including many positive influences of video games in the lives of children.

So, do violent video games make or mar children behavior? The issue is not a simple one, but, yes, we do know that there is a relationship between media violence and aggression, to a large extent aggressive tendency may also be as a result of aggressive parent. Exposure to violent media has been linked to aggressive thoughts and behaviors, mostly in short term. The most vulnerable individuals are young individuals who are high on the trait of aggression. Thus, children who are naturally aggressive are the most at risk for increases of aggression following violent game play. Parents of children who tend to be aggressive should be especially cautious about making sure that their children are not being exposed to violent video content.

Recent studies on interactive media on children reveals that there is almost entirely no correlational effect of the use of video games and internet to activating the aggressive trait or tendencies in children, allowing no conclusive cause-effect associations as regard the use of interactive media. Kirkorian et al (2008) cited Harris and Williams (2006) they are of the opinion that interactive media can be seen as bad educators for children when there is a decline

in academic achievement , and a good educator when there is a high academic performance as a result of the use of interactive media at home.

Meanwhile, few studies may suggest that video games are negatively linked with achievement whereas computers and Internet are positively linked with achievement; additional research is needed to systematically investigate this potential difference in outcome

Kirkorian, Wartella, and Anderson (2008) submitted that there is a link between the use of interactive media for cognitive skill development and academic achievement, with the content as the most prevailing factor to both social and cognitive development.

In terms of access to media, children, particularly adolescents, often times have unlimited access to the use of interactive media most especially in times where mother's supervision is absent. As a result, they tend to spend more time using media than they do engaging in any single activity. Be that as it may, the role that interactive media play in the life of young children is enormous. (Roberts, Foehr and Rideout 2005; Wartella, O'Keefe and Scantlin 2000).

The proliferation of new media has led several researchers to argue that new media have a greater impact on childhood than do traditional media because of the immediate feedback mechanism associated with interactive media. (Tapscott 1998; Drotner 2001). Researchers have found there is a correlation between the hours spend on interactive media and its gruesome effect on children is terrifying. They are of the opinion that heavy usage of interactive media has a negative impact in relation to academic achievement, self-esteem and sociability (Heim et al. 2007).

However, mothers for example, usually want their children to use the computer for more than playing computer games but for educational purposes.

More so, new and emerging media offer mothers the opportunities to actively engage their children in a wide variety of potentially positive and pro-social media enhanced activities. Mothers need to ensure that they harness the best interactive media for their children's cognitive and development growth. It is imperative to say that interactive media technologies offers new opportunities for communication, information, entertainment and problem-solving (Anderson and Hanson 2009). Heim et al. (2007) noted that user habits may change because changes in media offers user enormous opportunities in term of access to different media technologies which is in relation to social and cognitive developmental changes in children.

STATEMENT OF THE PROBLEM

In Africa, Nigeria in Particular it is commonly perceived that children who turn out to be responsible in life are to be identified with the father, while those that become deviants are presumably seen to belong to the mother. Mothers, therefore, work tirelessly to ensure that their children are adequately nurtured and raised to avoid family and societal embarrassment.

Mothers are worried about the proliferation of these new media technologies, as it does not only engage their children at their leisure time, but perceived as bad educators because it exposes children and teenagers to violent and aggressive behavior.

Conversely, mothers feel that the only other viable approach to dealing with the proliferation of media in their children's lives is to set blanket restrictions on media - no video games, no computer, and no use of the internet.

Considering the fact that interactive media provide us with a vast array of potential educational and informative content that can link us to anywhere in the world at anytime, its overwhelming effects on children cannot be over emphasized, as it enhance the cognitive development and eventually the decline of behavior of children.

This study sets out to investigate the effect of the proliferation of these media technologies on children's social, emotional and cognitive development.

PURPOSE OF THE STUDY

The main purpose of this study is to investigate Mothers' perception of the influence of interactive media on children cognitive and social development.

The objectives of this study are as follows:

1. To examine whether interactive media act as a tool for cognitive learning and development in children.
2. To determine roles of interactive media in character building of children.
3. To ascertain the implications of interactive media on children.

RESEARCH QUESTIONS

1. In what ways can interactive media act as a tool for cognitive learning and development in children?
2. What are roles of interactive media in character building of children?
3. What are the implications of the use of interactive media on children?

DELIMITATION

This study focuses mainly on mothers who are resident in Surulere, Lagos Island and Ikeja Local Government Area of Lagos state, Nigeria. These Local governments Area were purposefully selected at random because of the high influx of information and communication technology penetration in these Local Government Areas of the state. The age bracket of the children in question is 4-12.

LIMITATION OF THE STUDY

This research is subjected to a number of known limitations. One of the limitations of this study is the fact that this study will deal with some interactive media, but not all interactive media because of money and time constraints. Also, fathers were denied the right to participate in the study as this study is meant solely for mothers.

THEORETICAL FRAMEWORK

SOCIAL LEARNING THEORY: Albert Bandura's social learning theory of 1986 posits that behavior is learned in a social content. It is the direct reproduction of observed behavior, encompassing both imitation identification to explain how people learn through observation of others in their environment. In other words, the Social Learning Theory posits that individuals learn behaviors from one another through observation, imitation, and modeling. Children learn more in the formative years through imitation and modeling irrespective of content showcased in the media, for example television or interactive media. To a large extent, in the formative years of children, learning of any sort is solely through imitation or modeling of any character or behavior of any kind, at this formative stage they don't have control over what is learned. This theory bridges behavioral and cognitive learning theories by taking into account how imitable behaviors are affected by cognitive constructs, such as attention, retention, and motivation. Social learning theory otherwise known as observational learning refers to the cognitive process of attending to and remembering behavior performed by others.

Uniquely, the social learning theory explains how behaviors are learned in the context of reciprocal determinism, or the interaction between observed behaviors, cognitive factors, and external environments are key factors that affect the cognitive learning of children whenever they engage with interactive media. The environment has a greater influence on what constitute

a key factor on observational learning posited by Albert Bandura . Be that as it may, children engage in the use of interactive media in other to play but unknowing to them they learn in course of playing. One might want to say that what do children learn as they engage in the use of interactive media? Does mere engaging in the use of interactive media spurn the children of deviant behaviour? The content of what children are expose to during the engagement of interactive media could be seen as a key attributes to what constitute the learning process. Whether shown on Television or played on a video game, violent media provide ample opportunities for observation learning.

USES AND GRATIFICATION THEORY: Uses and gratification theory was first developed in the early 1940s by theorist such as Herzog (1942) and Lazars (1944) as they study radio listeners which serve an early response to the Magic Bullet Theory. Uses and gratification theory posits that the audience is an active participant as he engages with the media in order to satisfy a pressing need. Can we now say that individuals who use media for gratification are fantasy-seekers or actually using the media as a tool for learning? Uses and gratification theory looks at the ways individuals use the media to gratify their needs. The theory presumes that people consciously choose the medium most suitable to gratify their needs. Be that as it may, it is also believed that the audience are able to recognize reason for choosing a particular media for educational or entertainment gratification. Uses and Gratification theory posits that the information receiver, or "user," is selective in what he or she is exposed to, what is perceived, and what is retained. The present theoretical treatment of the effects of interactive media, as they develop into mass media formats, considers both of these aspects. The study of mass media effects has been characterized over time on the basis of systemic assumptions. Severin & Tankard (1979) in Jaffe (1995) depict the time between 1915 and 1939 as the era of the "Bullet

Theory" (, also known as the "hypodermic needle" era) of strong media effects. Influential theories of this period, presumed that exposure alone to mass mediated messages resulted in cognitive, affective, and behavioral change.

The years 1941 through 1959, the era of "Limited Effects Theory," were characterized by little or no strong effects on audiences, though they might contribute to changes through a nexus of mediating factors and influences. While interactive media were seen as potentially serving an informative function in children, audiences (mothers) were supposed to be selective in kind of interactive media their children was exposed to. The present era, which is perceived having begun in the mid-1960s, is characterized as one of "Moderate Effects" or "Indirect Effects," in which strong effects are viewed as possible in certain situations (Jaffe,1995). The study of interactive media as mass media falls neatly into this most recent category, especially in lieu of the capability for new interactive media formats to respond dynamically to contextual factors, including user input.

The uses and gratifications approach (Blumler & Katz, 1974; McQuail, 1987) postulates that people actively select their media use habits on the basis of social or psychological disposition, assessments of the value of media use, and beliefs and expectations about possible benefits of such use. These expectations can result in attitudes regarding which media formats will be accessed and how they will be used to satisfy the information and communication needs of the user.

LITERATURE REVIEW

Numerous claims or suspicious have been made about interactive media technologies, the increasingly young age at which children begin to interact with these media and the amount of violence in videogames, fully as great if not greater than that in Television are just too important that need more attention. Little systematic research has been conducted to either legitimize or dispute claims about the impact of interactive media content on children's cognitive, emotional and social development (Cords and Miller, 2000).

According to Cordes and Miller (2000) interactive media such as interactive books and toys, video games, and the internet should be integrated to the list of learning tools because technology has the capacity to positively influence even young children's cognitive and socio-emotional development in significant ways.

Children don't experience media in a vacuum. Past research on the impact of television tell us that immediate family, such as parents and siblings, heavily influence what children take away from the viewing experience. Family environment also provides a key context for how young people experience computers. Recent studies have found that children's perception of their parents' desire to learn about and use computers was a significant predictor of heavy computer use. Specifically, the degree to which parents are available to their children and involved in their children's learning activities; are attracted to and use the computer themselves, and are knowledgeable about the value and quality of academic software to children cognitive learning influenced whether children embraced the computer and the internet for creative, educational purposes, rather than primarily game play.

One the ways interactive media can be beneficial in helping children with different learning styles find new ways to explore and understand material and to demonstrate their learning. Software can be created that has special features for visual, verbal, auditory and tactile learners (Addessi & Pachet, 2005). Haugland, (1992) noted that Children who used developmentally appropriate computer software had significant greater gains in intelligence scores, non-verbal skills, dexterity and long-term memory than children who used non-developmentally appropriate computer software.

Essentially, content, rather than the technology itself, has more of an effect on children's creativity, Haugland (1992) found that creativity was reduced among the children who use non-developmentally appropriate software, but not among those who used age-appropriate programmes..

In this vein, a programme that introduced computers as a tool for instructional learning in the classroom found that children gained a better understanding of how to use, access, control and gather information once they had access to computers. (Agun, 2000)

Even the leading academic and researchers of children's educational interactive media have not reached consensus regarding the effects of interactive media on children's cognitive development. Much like the Alliance for childrenhood, some researchers, based on the fact that children learn through their bodies in their early years, feel computers distract children from their need for hands-on, imaginative and creative play that is vital to cognitive development (Haugland, 2000). To this end, interactive media as a tool for learning simply are effective at supporting young children's understanding and skills.

According to Dr. Sandra Celvert, director of the Children's Digital Media Centre based in Georgetown University, and one of the foremost researchers on children and interactive media found that using participatory and interactive technologies can pull kids into a learning experience. Interactivity allows children to have amazing focus. She further explained that the most effective technology teaches children and they have fun doing it without realizing they are learning anything. Nevertheless, Warren Buckleitner, editor of the children's Technology Review, agrees interactive digital media, including games, have potential as a tool in teaching preschool-age children because they can provide instant feedback, are flexible, empower children and foster active learning.

Research on Interactive media context must move beyond studying violence, among other things to educational context, the activities performed, and content of online message exchange. According Calvert (2002), most parents think playing video games hurt rather than enhance learning. In the same vein, she observed that there is no relationship between parents' attitudes about the educational value of the computer to children's cognitive learning and development. Nevertheless, parents who think computer hurts learning are more likely to restrict their children from using the computer.

Researchers have found that playing games is the most common way young people of all age 2-18 use computers. They found that boys reported significantly more time commitment than girls in playing computer and video games.

Just as arguments about the effects of interactive media on children are highly polarized, interactive media has become a significant part of the environmental context and has the potential to influence development from an early age.

Several researchers have examined the short-term impact of violent video game play of children from 4-10years old. Their results suggest that playing violent video games encourage relatively immediate increase in aggressive behaviour, attitudes and thoughts but only in short-term.

It is believed that during the formative years engagement with video game violence can create distorted views of society and the acceptability of certain behaviours. Children who spend much time with the computer game may be inclined to attempt to imitate the dangerous stunts they see. Consequently, the content of interactive media including violent, sexual or commercial content may influence children's own attitudes and behaviors.

Numerous studies affirm that entertainment programmes, as well as specifically designed educational programmes and softwares influence children's social learning (Comstock, 1994).

Furthermore, media effects researchers argue that entertainment media offer children an "informal curriculum" regarding social behaviour that is taught through the social content of entertainment in media, and that children are likely to learn this content as they are to learn the formal curricula in the schools. (Comstock, 1994).

There is no direct relationship between game violence and aggression. Children do not have the capability to act aggressively when they are born. Instead, aggressive behaviour develops over the course of early childhood.

Although there are individual differences in the onset of aggression, most children follow a developmental pathway that starts at infancy with anger and progresses into physical aggression

during the toddler years. Subsequently to that, new forms of aggression develop, gender differences become prevalent and enactment of violent behavior is seen.

Ultimately, the effect of computer games is extremely limited. While the work on negative effects concentrate almost exclusively on violence, the work on positive effects is largely concerned with educational benefits.

Ultimately, claims about the positive effects of the internet tend to focus on the value of instant access to information, and its role in creating new forms of communication and community.

The accessibility, global reach, simplicity and flexibility of the medium and indeed the vast extent of material that it brings together does offer significant opportunities for supporting learning, for pursuing entertainment and leisure interests, and for creating new democratic forms of communication and cultural expression (Livingstone, 2002).

The external framework for children's use of interactive products naturally includes their parents, whose attitudes and opinions influence the way in which children and young people gain access to and use the products.

Although this applies to the actual acquisition of the products parent seem to have influence when it comes to the use of the product per se.

However, parents, most especially mothers do exercise considerable influence on time consumption, particularly in the case of younger children.

Similarly, most adults view the internet as an opportunity for children and young people to search for information that can teach them something (Wartella, O' Keefe & Scantling 2000).

This is one of the reasons why children and young people either have access to the family computer and internet connection or have a computer of their own in their rooms.

According to Living Stone (2002), "children and young people do not, however, share their parents' opinions of what constitutes relevant and interesting information... children consider 'information' the most valuable use of the internet (p.2).

Living Stone noted that young people's conception of information may not be that of adults concern with their educational progress. Mothers hope and expect their children to use the internet to search for information with a learning content to supplement the teaching at schools.

Many mothers see the internet and the computer as "appropriate" products, and most mothers consider them defensible as they can be used for learning.

There can be no doubt that the actual use of the products is largely defined by the children themselves, as their play culture and everyday lives with other children take central stage on interactive media products, because it is said to be useful to the children's social and cognitive development.

Generally speaking, older children and teenagers also use interactive media products to a greater extent than their parents, children and young people more often help their parents with problems to do with the computer. This seems to indicate that many parents do not have the technological insight that would allow them to evaluate and control their children's use.

METHODOLOGY

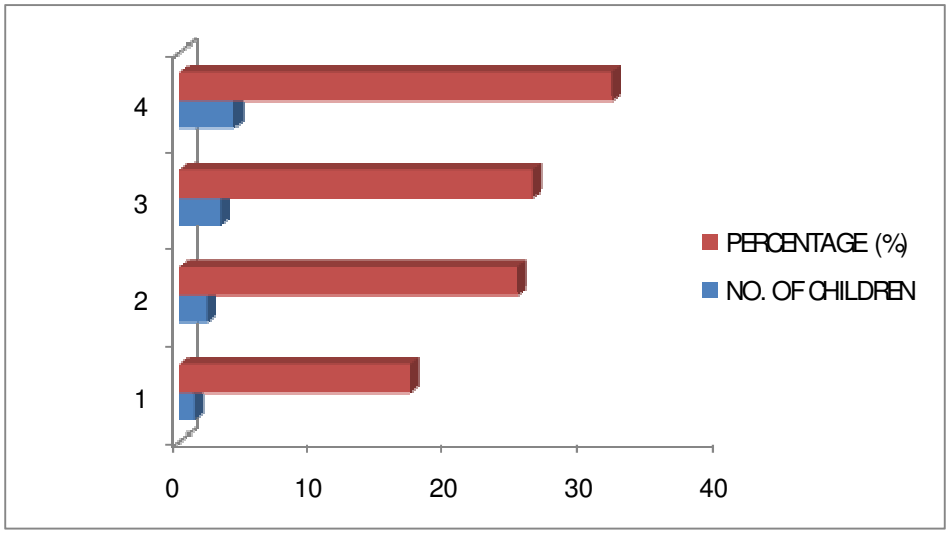
This study employs the descriptive survey approach. The survey method according to Osuala in Tejumaye (2003) focuses on people, the vital facts of people, their beliefs, opinions attitudes, motivation and behaviour. Wimmer and Dominick in Tejumaye (2003) see the descriptive survey method as a way to document current conditions that describes what exist at the moment. The instrument of data collection for this study is the questionnaire. The questionnaire was adopted for the study as the most appropriate instrument for data collection because it captures

the opinion of people of different location about a phenomenon. The targeted respondents of this study are mothers in Lagos, Nigeria. Since the population is large, convenience sampling technique is believe to be the most feasible method suitable for this study. This is because it is very useful in obtaining general ideas about the phenomenon of interest. (Sekaran and Bougie, 2010). A total of 650 copies of questionnaire were randomly disseminated to cover Surulere, Lagos Island and Ikeja Local Government Area of Lagos, Nigeria.

DATA ANALYSIS AND PRESENTATION

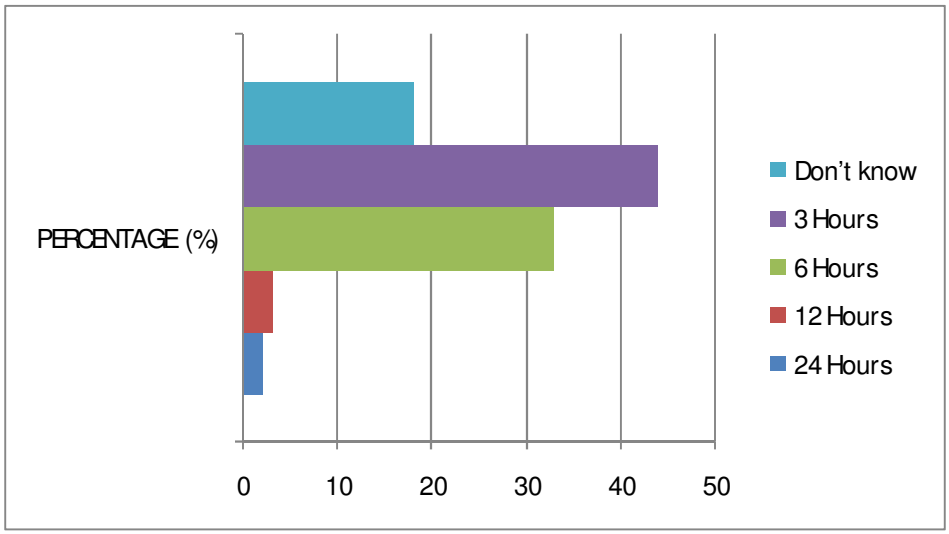
For the purpose of data collection, a total of 650 copies of questionnaire were distributed to respondents in Surulere, Lagos Island and Ikeja Local Government of Lagos state, Nigeria. After distribution and collection of the result 600 copies of the questionnaire was retrieved leaving a deficit of 50 copies of the questionnaire either void or was not returned. The response rate was 92% of the total questionnaire distributed were analyzed and interpreted in the tables and bar charts below.

Figure 1: Respondent number of children



It is clearly revealed from figure 1 that 17% of the respondents have a child, 25% only have two children, 26% have three, while 32% of the respondents have more than three children.

Figure 2: Time respondent monitor children when playing video games



It was discovered from figure 2 that 44% of the respondents' children spent 3hours playing video game, also 3% spent 12 hours playing video game, 33% spent 6 hours while 18% of the respondents cannot provide the actual time their children spend playing video game. Since

mothers spent an average of 6 hours with their children, we can infer that mothers spent ¼ of 24 hours with their children therefore indicating that insufficient time spent with children can make the children vulnerable to imitate copy or perhaps be identified with what he spent most of his time with. This is as a result of lack of proper monitoring. Be that as it may, 2% of the respondent claimed that children watched video game. We can deduce from the above statement that mother does not monitor child when playing video game or perhaps cannot not actualize the number hours child spent playing video game. We can affirmatively say that the number hours children spent playing video games can increase aggressive traits depending on the content the children is exposed to if not properly monitored or checkmated.

Frequency and mean were used as follows to analyze the research questions posed for this study:

Strongly agree -5, Agree -4, Undecided -3, Disagree -2 Strongly disagree -1.

Determination of cut off point and finding mean of nominal values are as follows:

X = Nominal values (5,4,3,2,1)

F = frequency

x = mean = $\Sigma fx/n$

The real limit of numbers in this scale were used to determining the extent of agreement or disagreement in respect of each item as follows:

Strongly agree	5 = 4.50-5.49
Agree	4 = 3.50-4.49
Undecided	3 =2.50-3.49
Disagree	2 =1.50-2.49
Strongly Disagree	1 =0.50-1.50

Based on this, any mean below 3.50 was considered as disagreement and any mean of 3.50 and above was considered as strong agreement.

Research question 1: in what ways can interactive media act as a tool for cognitive learning and development in children?

TABLE 1:

S/N	Item	F	X	REMARK
1	Having a computer with internet connectivity at home contribute immensely to children achievement in school	600	4.00	Agreed
2	The internet and the computer are tool for cognitive learning in children	600	4.70	Agreed

It is apparent from table 1 that the respondents are affirmative to the statement (item 2 and which is question 16 in questionnaire) with a mean score of 4.70 indicating an agreement to the statement. In addition the table above also revealed that interactive media can enhance or act as a tool for cognitive learning in children (item 1 and which is question 15 in questionnaire) and this can tremendously influence children's learning culture with a mean score of 4.00. We can deduce from item 1 and 2 that there is a great significance of interactive media, as it can be beneficial in helping children with different learning styles discovers new ways to explore, exhibit and understand material and to demonstrate their learning.

Research question 2: what are the roles of interactive media in character building of children?

TABLE 2:

S/N	Item	F	X	REMARK
1	Interactive media build children's character	600	4.07	Agreed
2	A child social development can be modeled by interactive media	600	4.52	Agreed

It is evident from table 2 that interactive media can influence children character (item 1 and which is question 14 in questionnaire) with a mean score of 4.07 indicating agreement to the statement. Be that as it may, it is believed that this media technology has the capacity to positively influence young children's cognitive and socio-emotional development in significant ways. More so, it was revealed that a child social development can be model by the kind of interactive media content he is exposed to (item 2 and which is question 17 in questionnaire) with a mean score of 4.52. We can affirmatively say that the effects of interactive media on children are highly polarized; interactive media has become a significant part of the environmental context and has the potential to influence development from an early age.

Research question three: What are the implications of the use of interactive media on children?

TABLE 3:

S/N	Item	F	X	REMARK
1	Violent games can influence children's behaviour	600	4.16	Agreed
2	A child social formation of identity can be modeled by the kind of interactive media he is exposed to	600	3.91	Agreed

The result of data analyzed in table 9 exposed that violent games can activate the innate aggressive traits in children (item 1 and which is question 18 in questionnaire) with a mean score of 4.16.It is obvious that playing violent video games encourage relatively immediate increase in aggressive behaviour, attitude and thoughts but only in short term. In addition, the table above also prove that a child formation of identity can be as a result of the kind of video game he is exposed to (item 2 and which is question 19 in questionnaire) with a mean score of 3.91 affirmatively indicate strong agreement to the statement . We can affirm from item 1 and 2 that ultimately the effects of interactive media is extremely limited. Children do not have the capability to act aggressively when they are born. Instead, aggressive behaviour develops or is a reflection of the kind of video game children watch or are exposed to most especially in their formative years.

FINDINGS AND DISCUSSIONS

From the findings above we can assert that majority of homes can boast of a computer system. On the other hand, from the questionnaire distributed, only 15% of the total respondents cannot

boast of a computer system at home, despite that, they visit their neighbours to play video games or perhaps the video game houses.

Essentially, most children like to play video game at leisure but another area in the findings is the number of hours children spend playing video games. According to the findings, it is evident that in question 7 of the questionnaire at least 44% of the respondents emphasize that their children spend an average of three hours playing video game daily, 18 of the 600 respondents say that children would like to spend above twelve hours playing video game. According to the findings it was discovered that only 70% of the total respondents can boast of 1-5 video games in their household.

In the same vein, it was revealed that at least 22% of the total respondents say that their children play video games with their friends. However, we can declare that 39% of respondents confirmed that their children do not play video game because children tend to get excited and emulate most of the graphic violent stunts displayed in most of the video games thereby activating the innate aggressive traits.

Ultimately, it was discovered from the findings that 60% of the total respondents can only enumerate some of the video games and educational software used by their children. In view of this, we can affirmatively say that the respondents may not be aware of the effects of interactive media on children

Similarly, interactive media as a tool for learning simply are effective at supporting young children's understanding and skills. Nevertheless learning is a day to day affair and majority of the respondents maintain that their children tend to learn something new whenever they stumble over the computer thereby proving Albert Bandura social learning theory, and that behaviour is learned in a social context.

Research question one which seeks to find out; in what ways can interactive media act as a tool for cognitive learning and development in children? From the findings it was revealed that interactive media can enhance or act as a tool for cognitive learning in children and this can tremendously influence children's learning culture. We can deduce that there is a great significance of interactive media, as it can be beneficial in helping children with different learning styles discovers new ways to explore, exhibit and understand material and to demonstrate their learning. It is commonly accepted that play and learning are closely intertwined among children. However, children seldom play in order to learn, but constantly learn new skills in order to participate in the play community. This applies to all kinds of play and games, including those involving digital and interactive media. In exactly the same way as children can spend a long time learning specific physical skills, they can invest a great deal of energy in acquiring skills linked to interactive media. One of the most socially beneficial uses of interactive media is enhancing play and learning for children. It is very important to understand the needs of children and craft visionary interactive systems designed to enhance education and entertainment.

Calvert et al (2005) advocate that using interactive technology can pull children into a learning experience, as interactivity allows children to have amazing focus in learning. It was also confirmed by Warren (2002), that interactive media can teach children; logical thinking, writing skills and math skills. She also observed that interactive media can enhance children's creativity, cognitive development, social and emotional development. Warren(2005) also agree that games is a potential tool in teaching pre-school children, because they provide instant feedback and are flexible, empower children and also foster active learning. This findings also supported by Calevant, Strong & Gallagher (2005) note interactive can motivate children learning culture.

Addessi & Pachet (2005) also uphold the findings of this study when they advocate similar evidence with an interactive music programme. Furthermore, Addessi et al (2005) see interactive media as a tool that can be beneficial in helping children with different learning styles find new ways to explore and understand material and to demonstrate their learning.

One reason why interactive media is seen as a powerful educational tool is that content can be easily and cheaply repeated. Literal repetition of episodes can enhance comprehension and subsequent learning. Direct learning of specific information from educational media is certainly useful, but a goal of most (if not all) educational initiatives is to empower children to apply what they have learned to real-life problems. It was established from the findings that at least 70% of the total respondents claim that during the formative years engagement with video game violence can create distorted views of society and the acceptability of certain behaviour. Children who spend much time with video game will be inclined to attempt to imitate the dangerous stunts they see.

Consequently, research question 2: what are the roles of interactive media in character building of children? It was evident from the findings that interactive media can influence children character. It is believed that this media technology has the capacity to positively influence young children's cognitive and socio-emotional development in significant ways. More so, it was revealed that a child social development can be modeled by the kind of interactive media content he is exposed to. Identity formation is an ongoing process that children and adolescents are constantly working through. With new technologies that are offered today, children have the opportunity to explore their identities in different ways. In these cases, interactive media are thought to be more powerful than previous media as social influencers because users are actively engaged in constructing and acting out social roles.

Comstock (1994) argues that entertainment media offer children an "informal curriculum" regarding social behaviour that is taught through the social content of entertainment in media, and that children are likely to learn this content as they are to learn the formal curricula in the schools, this findings uphold this study.

We can affirmatively say that the effects of interactive media on children are highly polarized; interactive media has become a significant part of the environmental context and has the potential to influence development from an early age.

Be that as it may, the uses and gratification theory tends to support this findings, since mothers actively select children media based on social or psychological disposition, assessments of the value of media use, and beliefs expectations about possible benefits on children learning culture.

More so, research question 3: what are the implications of the use of interactive media on children? From the findings it could be argued that violent games can activate the innate aggressive traits in children. It is obvious that playing violent video games encourage relatively immediate increase in aggressive behaviour, attitude and thoughts but only in short term. In addition, it was said from the study that a child formation of identity can be as a result of the kind of video game he is exposed to. We can affirm ultimately that the effects of interactive media is extremely limited. Children do not have the capability to act aggressively when they are born. We should not forget the fact that the environment also is a determinant factor in determining the extent to which aggressiveness is to be perceived in children. In the same way, the home is also another factor which can promote aggressiveness in children if the children has an aggressive father or mother. However, interactivity is not always beneficial to learning, although researchers have suggested that various aspects of interactivity may accelerate children's cognitive development. By allowing children to organize information, provide

structure to the activity, adjust the material to suit their needs and abilities, and receive feedback, interactive technologies may encourage processing that will enhance children's learning and increase their meta-cognitive abilities by prompting them to think about their cognitive strategies (Calvert, 1999; Papert, 1980 in Wartella et al,2004).

According to the social learning theory children may imitate the acts of aggression as seen through interactive media. It is believed that children may learn that violence is a useful and appropriate way of solving one's problems. In specific laboratory settings researchers found that children can be encouraged to behave more aggressively following exposure to violent behaviour on film or television. Accordingly the relationship between viewing media violence and the level of aggressiveness builds over time, with children appearing to develop. This finding is supported by Clements (1995) proposition that games are at the forefront of the battle over violent video games and the effect thereof on children. It is argued that games desensitizes children to cruelty and may make them more likely to commit violent acts in real life.

Nevertheless, from the findings there is a clear indication of the implications of violent video games on children, as heavy exposure is significantly linked to increase in real-life aggressive behaviour.

Moreover, majority of the respondents establish that the internet and the computer are appropriate media technology as it facilitates learning.

Since Nigeria is experiencing development of its cultural society, interactive media and its side effects cannot be totally eliminated from the country especially with recent developments in communication technology which has brought up a new choice of home entertainment.

CONCLUSION

This study has exposed us to the great benefits associated with interactive media. It also declared that interactive media is more of a blessing than a curse to children because of the numerous benefits embedded in it. It facilitates children learning culture most especially when they are in their formative years. We must recognize the fact that the risks and threats to children's character and as well as the benefits of interactive media may be difficult to separate; and that avoiding risks may also mean avoiding potential benefits.

Nevertheless the heavy exposure of violent media content can harm, influence or perhaps modify children's behavior.

RECOMMENDATIONS

Having inferred that to a large extent that the risks and threats to children's character and as well as the benefits of interactive media may be difficult to separate; and that avoiding risks may also mean avoiding potential benefits. I make the following recommendations to interactive media producers and mothers

INTERACTIVE MEDIA PRODUCERS

1 I therefore appeal to this media technology that they should ensure that violent video games content should be strictly categorized for adult only.

2 Also rating system should be encouraged of the kind of video games manufactured so as to reduce the violent content that influences children to act in deviant ways.

3 In addition the interactive media manufacturers should be aware that their products interfere to a large extent with cognitive development of children and help reduce graphic violent content in interactive media video game in particular.

4 I also appeal that aside making profit they should endeavour that their products should be profitable and positively influence the character of children.

5 I recommend that a body or an institution should be establish in order to censor the kind of interactive media produced by this media technology, for strict compliance to the following recommendations stated above.

PARENTS

Parents, mothers in particular are most relevant as regards children and violence control. If censors board, interactive media producer fail to perform their duties, mothers still have their responsibilities to protect their children by the following suggestions:

1 Mothers should make it as a point of duty to checkmate, censor, monitor and above all act as a gatekeeper to matters concerning their children's cognitive, emotional and social development, with respect to the kind of interactive media they are exposed to.

2 Internet service providers now offer screening/filtering technology to enable parents limit the access their children have to the entire world.

3 Regulate the hours children spend playing video game.

4 Ensure that they monitor the kind of video games children play

5 Ensure that children are exposed to educational softwares so as to facilitate and enhance their learning culture.

Also the government is not left out in curbing graphic violent content embedded in video games, they have a crucial role to play in formulating policies that will facilitate speedy implementation of the above recommendations but it is left to us to sharpen our appetite for entertainment.

REFERENCES

Addessi .B., Pachet . H (2005): Individual characteristics and Web-based courses. In C. R. Wolfe (Ed.), *Learning and teaching on the World Wide Web* (pp. 47-73). San Diego, CA: Academic Press.

Agun C. (2000): The effect of computer on the learning process of students; In Sola Akinyemi. (2005): *The importance of computer Aided Instruction: a tool for learning in secondary schools*: *unpublished project* Adeniran Ogunsanya College of education, Ijanikin, Lagos.

Anderson, D.R. & Hanson, K.G. (2009) 'Children, Media and Methodology', *American Behavioural Scientist,* 52, 8, 1204-1219.

Anderson, M. D. (2004). Individual characteristics and Web-based courses. In C. R. Wolfe (Ed.), *Learning and teaching on the World Wide Web* (pp. 47-73). San Diego, CA: Academic Press.

Bandura A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory.Upper SaddleRiver*,NJ: Prentice-Hall

Becker, H. J. (2000). Who's wired and who's not: Children's access to and use of computer technology. *The Future of Children*, 10, 44-75.

Blumler J. G. & E. Katz (1974): *The Uses of Mass Communication*. Newbury Park, CA: Sage

Calvert, S.L. (1999). *Children's journeys through the information age*. Boston, MA: McGraw-Hill College.

Comstock, G. (1991). *Television and the American child*. San Diego, CA: Academic.

Calvert, S.L., Strong, B.L., & Gallagher, L. (2005). Control as an engagement feature for young children's attention to and learning of computer content. *American Behavioral Scientist* 48(5), 578-589.

Calvert, S. (2002). Identity construction on the Internet. In S. L. Calvert, A.B. Jordan, & R.R. Cocking (Eds.), *Children in the Digital Age* (pp. 57-70). Westport, CT: Praeger.

Calvert, S. L., Jordan, A. B., & Cocking, R. R. (Eds.). (2002). *Children in the digital age: Influences of electronic media on development*. Westport, CT: Praeger.

Cheok, A., Hiroshi Ishii, H. and Osada,J (2008) : Interactive Play and Learning for Children, retrieved at http://downloads.hindawi.com/journals/ahci/2008/954013.pdf

Clements, D.H. (1994), 'The uniqueness of the computer as a learning tool: Insights from research and practice', in J.L Wright & D.D. Shade (eds) Y*oung Children: Active Learners in a Technological Age*, National Association for the Education of Young Children, Washington DC

Cordes, C., & Miller, E. (2000). Fool's gold: A critical look at computers in childhood. College Park, MD: Alliance for Childhood. Retrieved at http://www.allianceforchildhood.net/projects/computers/computers_reports_fools_gold_contents.htm on November 20th 2012

Drotner, K. (2001) *Media for the Future: Children, Youth and the New Media Landscape*. [Medier for frem-tiden: Børn, unge og det nye medielandskab]. København: Høst & Søn.

Haugland, S. W. (1992). The Effect of Computer Software on Preschool Children's developmental. *Journal of Computing in Childhood Education* 3(1), 15-30.

Haugland, S.W. (2000).What role should technology play in young children'slearning? Part 2: Early childhood classrooms in the 21st century: *Using computers to maximize learning. Young Children,* 55, 12-18.

Heim, J., Brandtzæg, P.B., Kaare, B.H., Endestad, T., & Torgersen, L. (2007) Children's Usage of Media Technologies and Psychosocial Factors', *New Media & Society*, 9, 425-454.

Herzog, H. (1942). Professor quiz: a gratification study. In Radio Research, 1941, eds P. F.

Jaffe, J. M (1995) *Media Interactivity, Cognitive Flexibility, and Self-efficacy. A dissertation submitted in partial fulfilment of the requirements for the degree of Doctor of Philosophy (Communication)*, The University of Michigan. Online URL: http://research.haifa.ac.il/~jmjaffe/#papers.

Kirkorian,H. Wartella, E and , D Anderson (2008) Media and Young Children's Learning Retrieved at www.futureofchildren.org on November 20th, 2012

Kraut, R., Kiesler, S., Boneva, B., Cummings, J., Helgeson, V., & Crawford, A. (2002). Internet paradox revisited. *Journal of Social Issues*, 58, 49-74.

Lazaras, P (1944). 1944. *Radio research, 1942-3* New York, Duell, Sloan and Pearce

Lazarsfeld and F. N. Stanton. New York, Duell, Sloan and Pearce.

Livingstone, S. (2002). *Young people and new media: Childhood and the changing media environment.* London: Sage.

McQuail, Denis (1987): *Mass Communication Theory: An Introduction* (2nd edn.). London: Sage

Papert, S. (1980). *Mindstorms: Children, computers, and powerful ideas*. New York, NY: Basic Books.

Roberts, D.F., Foehr, U.G., & Rideout, V. (2005) *Generation M: Media in the Lives of 8-18 Year-0lds*. Menlo Park, CA: Kaiser Family Foundation.

Rideout, V. J., Vandewater, E. A., & Wartella, E. A. (2003). Washington, D.C.: *Kaiser Family Foundation.Zero to six: Electronic media in the lives of infants, toddlers and preschoolers (Report):* The Henry J Kaiser Family Foundation; Children's Digital Media Centers.

Sekaran, U. and Bougie, R. (2010), Research Methods for Business: A Skill Building Approach, Wiley, New York, NY.

Schwartz, L.L. and Matzkin, R.G. 1999. Violence, viewing and development: does violence in the media cause violence in youth? In Hall, H.V. (ed.), *Lethal violence*. London: CRC Press.

Tapscott, D. (1998) *Growing up Digital: The Rise of the Net Generation.* New York: McGraw-Hill.

Tejumiye Adepoju (2003): *Mass Communication Research (an Introduction).* Ibadan: Sceptre prints Ltd

Wright, J.C., Huston, A.C., Vandewater, E.A., Bickham, D.S., Scantlin, R.M., & Kotler, et al. (2001) 'American Children's Use of Electronic Media in 1997: A National Survey', *Journal of Applied Developmental Psychology*, 22, 31-47.

Wartella, E., O'Keefe, B., & Scantlin, R. (2000) 'Children and Interactive Media. A Compendium of Current Research and Directions for the Future', *A report to the Markle Foundation. Markle Foundation*. Retrieved at http://www.markle.org/news/digital_kids.pdf on November 20th 2012

Warren.S.,(2005) *Girl Wide Web: Girls, the Internet, and the Negotiation of Identity* New York: Peter Lang,.

Wartella, E. Allison G. Caplovitz, &. Lee.H, (2004): *Social Policy Report Giving Child and Youth Development Knowledge Away*. Volume XVIII,