

**AN EXPLORATION INTO PUPILS' EXPOSURE TO MODERN
TECHNOLOGY AND THEIR SOCIAL BEHAVIOUR IN ILORIN
METROPOLIS**

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Abstract

The study explored influence of pupils' exposure to Modern Technology (MT) on their social behaviour in Ilorin Metropolis. The research adopted descriptive survey design. The population for this study was all primary five pupils in Ilorin Metropolis. Simple random sampling was used to select participants for the study. A total of 260 primary five pupils participated in this study. Two instruments were designed and used for data collection in this study. These were Pupils' Exposure to Modern Technology Questionnaire-PEMTQ ($r=0.86$) and Pupils' Social Behaviour Questionnaire-(PSBQ) ($r=0.76$). Data obtained were analysed using frequencies, percentages, Pearson Product Moment Correlation and t-test analysis. The results revealed that majority of children have access and exposure to MT. Also, pupils' exposure to MT has both positive and an overwhelming negative influence on their social behaviour ($r = .102$; $P < 0.05$). Male pupils are more exposed to modern technology than their female counterparts but there was no significant difference in the pupils' social behaviour based on gender. Based on the findings of this study, recommendations were made that children should not be denied access to modern technology tools but they should be closely monitored to make appropriate use of it so as to evade the risk of negative behaviours among pupils.

Keywords: Modern technology, Pupils' exposure to modern technology, Social behaviour, Internet, Web, Social media

Introduction

With the proliferation of modern technologies, societies have witnessed expansions and are able to devise solutions to a myriad of problems that would have remained unsolved without technology. Through technological advancement, the world itself has become a global village where information travels around unrestricted in less than a minute from its point of dispersal to everyone who has the gadget to tap into the web world. The new technology is fundamentally changing our

An Exploration into Pupils' Exposure to Modern Technology

life styles, makes communication possible and enables us to create friendship and relate with people all over the world. Perhaps, it helps in overcoming a sense of isolation and boredom.

Particularly, new technologies has given a boost to the educational and mental development of an average pupil of this age far above their counterparts who lived centuries ago. It is a productive tool for supporting young children's learning and development. Irirarte (2007) explained that modern technology offered pupils increased opportunities to study, acquire new skills and knowledge. Young children of today are growing up in a world which is increasingly shaped by modern technology as they use technology tools more than ever, across an increasingly wide range of platforms. Evidence of impact of modern technology on learning indicates that it allows innovative approaches to both learning and teaching (Becta, 2007). The level of information at the pupils' disposal via modern technology has actually made the speed of their mental development amazing and thus making them confident of themselves. Linn et al (2012) believed that modern technology makes young children more socially active. This is also corroborated by Wood et al (2016) who submitted that modern technology promotes development of skills involving cognitive and social development.

Presently, from studies and from personal observations, every child or youth in Nigeria lives in a home equipped with one or more technological tools available to pupils to access a lot of information and resources on various topics that anyone can access indiscriminately (Ajayi, 2003; Igbo, et.al. 2013). For example, television, computers, mobile phones, I-pad, radio, video console, internet connections, Mp3 and Mp4 devices are available in some homes and are accessible to children (O' Cornell et al, 2004; Igbo et.al., 2013; Holloway et al (2013); Adedigba, 2016). This opportunity has afforded primary school pupils in Nigeria presumed right to download information on nearly all facets of life regardless of their source. As noted by Willard (2007) and Adedigba (2016), this has given young children exposure to inappropriate and harmful contents. They believe and are carried away by the materials downloaded or information gotten online more than what their teachers teach them or what their parents tell them at home even if this information is misleading. However, Steiner (2015) submitted that modern technology can have incredible benefits but understanding the role it plays and the pitfalls in children's lives will lead to better products.

Literature reported a myriad of negative impact of modern technology on children. Bond (2016) observed that despite the fundamental role of modern technology tools like mobile phones in maintaining and managing children's friendship, it has a lot of negative impact. Becta (2003) and Longe (2004) reported erosion of individual self-worth and gradual loss of our value system as some of the damages modern technology has done to the youths of today. They were reported to have made web their idol and guardian who they consult on any single issue, digesting every information they get online. Longe et.al. (2009) observed that

modern technology can have lot of negative influences on youth. For instance, plagiarism, internet fraud, hacking, violent behaviours, cyber bullying, cyber crimes aka yahoo yahoo and all other social vices have been confirmed to be perpetrated through exposure to and use of the modern technology. Mare and Kretz (2015) reported that exposure to violent content on media increases the probability that young viewers behave aggressively too. Montgomery (2003) stated that the average child sees 12,000 violent acts on television annually and this accounts for the increase in violent behaviours. Research also confirmed that the skill of interpersonal social relationship has also been battered for Facebook friendship and 2go relationships as many children cannot constructively socialize anymore while laziness, laxity and poor time management have also become noticeable in them (Beebe et al, 2004; Byron, 2009; Adedigba, 2016; Bond, 2016).

Likewise, Adedigba (2016) submitted that it has become noticeable that some sites prescribe drugs on the web for every ailment. It is gradually becoming the practice of pupils to google search drugs for their supposed ailments; this is common among the timid ones who do not want to discuss their problem with anyone. Young girls consult the web for solution when their menstrual cycle begins instead of confiding in an adult who can offer better counsel (ISG, 2001).

Also, studies have confirmed that pupils have found a good friend in modern technology to deepen their game of cheat in schools (Longe, 2004; O'Connell, et.al. 2004; Ofcom, 2014). The menace of cheating in schools has become elaborately sophisticated and is equally advancing among primary school pupils in Nigeria. The advent of GSM – Global system for mobile communication, Android and apple operating systems/software in mobile phone operation, which are now commonly seen with children, the game of cheat has become even more simplified in schools.

Furthermore, the news of a twelve-year-old boy from a city in Nigeria who beat security at airport to travel dangerously on the tyre of a boeing airline passenger plane cannot be forgotten so soon. From the boy's confessional statement and the parents' description of his ambition, it was revealed that the boy had high exposure to internet and modern technology gadgets. This equipped him with techniques he used to beat security and perpetrate such dangerous act which could have resulted in his death. In the same vein, modern technology is responsible for making robbery reach a high level of sophistication among youths today because the robbers is being educated from early childhood via the internet.

Another horrible menace is the issue of sex and child pornography. Pornography is inadvertently becoming a problem among children (Thornburgh & Lin, 2002; Mitchell et al 2003; Philadelphia Trumpet, 2003). It has been estimated that over 40% internet usage is related to browsing of sex sites and that in a week 10 million people (including young children) visit pornographic websites in Nigeria alone. The Nigerian child is not protected from the scourge of this new age phenomenon. Young or under-aged girls post and send their nude pictures on the

An Exploration into Pupils' Exposure to Modern Technology

internet. The pathetic incidence of young girls chatting on the web and using the webcam to show their naked figures is rapidly growing in Nigeria.

All the observations reported from literature have implications on the development of children. Social behaviour as an aspect of development has strong implications for the wellbeing and school achievement of children (Weber & Ruch, 2012). Social behaviors have to do with the way they children think and act in social situations and their emotions, temperaments, values and attitudes. Weber and Ruch (2012) identified two types of social behaviour which are positive and negative behaviours. Positive behaviours represent the skills the child uses in dealing with both peers and adults. It denotes absence of behaviour problem which represents the behaviour that deviates from social norms or indicates distress and unhappiness. The most common measures of problem behaviours suggest two extremes: externalizing and internalizing problems. Externalizing problems involve low levels of behaviour control-aggression, defiance, anger, and socially disapproved actions while internalizing problems are indicated by social withdrawal, sadness, and signs of anxiety.

Children's social behaviours develop as they interact with supporting, stimulating, safe people materials and places. The way children think or act in a social situation is predicted by what they are exposed to. Effects of exposure on viewers' attitudes and behaviors was established in the General Learning Model which proposes that technology-based experiences offer people knowledge structures, including their person schemata and their behavioral scripts which includes expectations of how people behave in particular situations. The exposure to these modern technologies and the knowledge of their contents or programmes will in the long run alter pupils' personality, beliefs and attitudes.

Literature revealed that the impact of modern technology use among children has created controversies among researchers. Steyer (2014) is of the view that modern technologies with their new and rapid changes have created exciting new opportunities and pitfalls which present a host of new challenges for parents and children alike. In actual fact, literature confirmed that modern technologies do have negative impact depending on the way they are used. Gonzalez et.al. (2015) submitted that not all impacts of modern technology could be perceived negative. Thus, the new technologies, because of the benefits cannot be done away with as pointed out by Siraj-Blatchford and White bread (2003). As we embrace exciting new technological innovations, it is important that both parents and teachers have clear and accurate understanding of how they are changing pupils' behaviour. Therefore, this study investigated pupils' exposure to modern technologies and the influence on their social behaviour in Ilorin Metropolis

Careful observation is also suggestive of the fact that pupils' gender determines their level of exposure to modern technology and consequently the influence modern technology has on male gender in Nigeria is relatively different from that which it exerts on the female children. This is because the boy child is

notoriously more active, vibrant, versatile and highly inquisitive than their female counterparts. This is corroborated by William (2007) who said that curious behaviour accounts for gender disparity in modern technology exploration. Obviously, the boy child is more adventurous at an early stage of life, their tendency to play pranks naturally make them susceptible to exploring new world. They have energy to burn and this vast energy is being directed at the exploration of the internet, logging in on phones, BBM Black Berry Mobile and other mobile devices. Pornographic site exploration has nearly become the exclusive reserve of young school boys in Nigeria, who unfortunately see it as social status when discussing such in school among their contemporaries. Internet addiction is the result of all these problems afore mentioned, due to the immoral gains young boys derive when they visit the web, so many of them have become hooked on these sites permanently. Therefore, the study also examined gender differences on the level of exposure to modern technology and the social behaviours they exhibit.

Research Questions

1. What is the level of pupils' exposure to modern technology?
2. What are the social behaviours pupils exhibit as a result of their exposure to modern technology?

Hypotheses

Hypothesis One: There is no significant relationship between the pupils' exposure to modern technology and their social behaviours.

Hypothesis Two: There is no significant difference between male and female pupils' level of exposure to modern technology.

Hypothesis Three: There is no significant difference in the social behaviours of male and female pupils that are exposed to modern technology

Methodology

The research design for this study was descriptive survey design. The population for the study was all primary five pupils in both public and private schools in Ilorin Metropolis. Simple random sampling technique was used to select 20 primary schools from Ilorin Metropolis. A total of 260 primary five pupils participated in this study. Two instruments were designed and used for data collection in this study. These are Pupils' Exposure to Modern Technology Questionnaire (PEMTQ) and Pupils' Social Behaviour Questionnaire (PSBQ). PEMTQ contained 10 items structured in four Likert scale and PSBQ consisted of 10 items also structured in four Likert scale. The reliability coefficient of the instruments was measured through test re-test method. Using Pearson Product Moment Correlation, PEMTQ yielded reliability coefficient of $r=0.86$ and PSBQ yielded $r=0.76$. Data obtained were analysed using descriptive statistics of frequencies,

An Exploration into Pupils' Exposure to Modern Technology

percentages to answer the research questions while t-test analysis and Pearson Product Moment Correlation. All hypotheses tested at 0.05 Level of significance.

Results

Research Question One: What is the level of pupils' exposure to modern technology?

Table 1: Respondents exposure to modern technology

S/ N	STATEMENTS	Always (f) (%)	Almost Always (f) (%)	Sometimes (f) (%)	Never (f) (%)	Mean (f) (%)	SD
1	I visit the internet	106 (40.8 %)	66 (25.4%)	84 (32.3%)	4 (1.7 %)	2.92	.796
2	I play computer game	115 (44.2%)	101 (38.8%)	40 (15.4%)	4 (1.6%)	3.22	.747
3	I watch movies on Africa Magic	116 (44.6%)	98 (37.7%)	43 (16.5%)	3 (1.2%)	3.19	.745
4	I use earphone to listen to music and radio	115 (44.2%)	83 (31.9%)	61 (23.5%)	1 (.4%)	3.08	.752
5	I watch movies on computer	129 (49.6%)	103 (39.6%)	26 (10.0%)	2 (.8%)	3.28	.671
6	I watch cartoon network	89 (34.2%)	71 (27.3%)	86 (33.1%)	14 (5.4%)	2.83	.892
7	I chat and transfer pictures on whatsapp	127 (48.8%)	74 (28.5%)	48 (18.5%)	11 (4.2%)	3.02	.800
8	I chat and update on Facebook	128 (49.2%)	72 (27.7%)	51 (19.6%)	9 (3.5%)	3.01	.783
9	I send and receive messages through email	117 (45.0%)	76 (29.2%)	58 (22.3%)	9 (3.5%)	3.00	.810
10	I read entertainment news on the internet	129 (49.6%)	67 (25.8%)	52 (20.0%)	12 (4.6%)	2.97	.802

Table 1 presents pupils' exposure to modern technology. It shows that 106 or 40.8% visits the internet always, 66 or 25.4% of the pupils visits the internet almost always, 84 or 32.3% visits the internet sometimes while 4 or 1.7% never visits the internet. Further, 115 or 44.2% plays computer games always, 101 or 38.8% of the pupils play computer games almost always, 40 or 15.4% plays sometimes while 4 or 1.6% never play computer games. Moreover, 116 or 44.6% watches Africa magic always, 98 or 37.7% watch movies almost always, 43 or 16.5% watches sometimes while 3 or 1.2% never watch movies on Africa Magic. Still, 115 or 44.2% uses earphone always, 83 or 31.9% of the pupils almost always use earphone to listen to music and radio, 61 or 23.5% sometimes uses the earphones and 1or .4% never uses earphone. 129 or 49.6% always watch movies on computer, 103 or 39.6% of the pupils almost always watch movies on computer, 26 or 10.0% of the pupils sometimes watch movies on computer while 2 or .8% of the pupils never watch movies on the computer. Again, 89 or 34.2% of the pupils always watch You tube, 71 or 27.3% of the pupils watch,

86 or 33.1% sometimes watch while 14 or 5.4 never watch you tube. Moreover, 127 or 48.8% of the pupils always chat and transfer pictures on whatsapp, 74 or 28.5% of the pupils almost always, 48 or 18.5% of the pupils sometimes while 11 or 4.2% never did. Again, 128 or 49.2% always chat and update on Facebook, 72 or 27.7% of the pupils almost always did, 51 or 19.6% sometimes did while 9 or 3.5% of the pupils never did. Still, 117 45.0% of the pupils send always receive messages through e-mail, 76 or 29.2% almost always did, 58 or 22.3% sometimes did while 9 or 3.5% never did. Lastly, 129 or 49.6% of the pupils always read entertainment news on the internet, 67 or 25.8% of the almost always did, 52 or 20.0% sometimes did while 12 or 4.6% of the pupils never did.

Research Question 2: What are the social behaviours pupils exhibit as a result of their pupils' exposure to modern technology?

S/N	STATEMENTS	YES (F) (%)	NO (F) (%)
1	I learn to cooperate with others through the media	158 (60.8%)	102 (39.2%)
2	I learn to respect opinions of others through movies	179 (68.8%)	81 (31.2%)
3	I learn to avoid fighting from movies and TV	75 (28.8%)	185 (71.2%)
4	I learn to speak English from watching cartoon	185 (71.2%)	75 (28.8%)
5	I learn to apologize for wrong doing through movies and the media	95 (36.5%)	165 (63.5%)
6	I learn slangs and abusive words on movies	143 (55.0%)	117 (45.0%)
7	I learn violent behaviours from movies	171 (65.8%)	89 (34.2%)
8	I learn to bully and insult from movies and internet	178 (68.5%)	82 (31.5%)
9	I like to be on computer or with TV or radio Always	173 (66.5%)	87 (33.5%)
10	I use earphone to listen to music when walking on the road	154 (59.2%)	106 (40.8%)

Table 2 presents the behaviours children exhibit from their exposure to modern technologies. Items number 1 to 5 show positive behavior children can learn through modern technology. It shows that 158 or 60.8% of the pupils learn to cooperate with others through the media while 102 or 39.2% of the pupils do not. Again it shows that 179 or 68.8% of the pupils learn to respect the opinions of others through movies while 81 or 31.2% do not. The table further reveals that 185 or 71.2% of the pupils learn to avoid fighting from movies and TV while 75 or 28.8% do not. Further, it shows that 185 or (71.2%) learn to speak English from watching

An Exploration into Pupils' Exposure to Modern Technology

cartoon while 75 or 28.8% did not. Also, 95 or 36.5% of the pupils learn to apologize for wrong doing through movies while 165 or 63.5% do not. It reveals that pupils' exposure to modern technology influenced their social behaviour positively in the area of cooperation with others and respect for others' opinion

Table 2 also presents item number 6-10 showing negative behaviours children can learn through modern technology. 143 or 55.0% of the pupils confessed that they learn slangs and abusive words from movies, while 117 or 45.0% did not and 171 or 65.8% confessed that they learn violent behaviours from movies while 89 (34.2%) did not. Further, 178 68.5% of the pupils learn to bully and insult from movies and internet while 82 (31.5%) did not. In the same vein, 173 or 66.5% of the pupils like to be on computer or with TV or radio always while 87 or 36.5% did not. Lastly, 154 or 59.2% of the pupils confessed to use earphone to listen to music when walking on the road while 106 (40.8%) do not. This reveals that pupils' exposure to modern technology influenced their social behaviour negatively as seen in items 3,5,6,7,8,9,1.

Research Hypothesis One: There is no significant relationship between pupils' exposure to modern technology and their social behaviour.

Table 3: Table showing the relationship between pupils' exposure to modern technology and their social behavior

		Family size	Social skills
Family size	Pearson Correlation	1	.102**
	Sig. (2-tailed)		.000**
	N	260	260
Social skills	Pearson Correlation	.102**	1
	Sig. (2-tailed)	.000**	
	N	260	260

Table 3 shows the relationship between pupils' exposure to modern technology and their social behavior. There was positive and significant relationship between pupils' exposure to modern technology and their social behavior ($r = .102$; $P < 0.05$). The hypothesis is therefore rejected in the light of the result; since the significant value is less than 0.05.

Hypothesis Two: There is no significant difference between male and female pupils' level of Information and Communication Technology

Table 4: Summary of t-test analysis of difference between male and female pupils' level of exposure to modern technology

Exposure to Modern Technology	n	mean	Std. D	t	df	Sig.	Remark
Male	140	3.29	.742	2.292	258	0.23	Significant
Female	120	3.08	.735				

Table 4 presents the difference between pupils' level exposure to modern technology and gender. It shows that there is significant difference between pupils' level of exposure to modern technology and gender ($t = 2.292$; $df = 258$; $p < 0.05$). Therefore, the null hypothesis 1 is rejected and the alternative is accepted. The mean value shows that males are more exposed to modern technology ($x = 3.29$) than their female ($x = 3.08$) counterparts.

Hypothesis Two: There is no significant difference in the social behaviour of male and female pupils that are exposed to modern technology.

Table 5: Summary of t-test analysis of difference between male and female pupils' exposure to modern technology and their social behaviour

Variable	n	mean	Std. D	t	df	Sig.	Remark
Pupils' social behaviour	140	1.36	.483	-.998	258	.319	Not significant
Male							
Female	120	1.43	.492				

Table 5 presents the difference between male and female behaviour and exposure to modern technology. It shows that there is no significant difference in the social behavior of male and female and exposure to modern technology ($t = -.998$; $df = 258$ $p > 0.05$). Therefore, the null hypothesis 2 is accepted. The mean value shows that female have a slightly higher means score in behaviour ($x = 1.43$) than their male counterparts ($x = 1.36$).

Discussion of Findings

The result of the study revealed that majority of the pupils have unlimited access to modern technology and their exposure to them is well above average. This is in line with the observation of Holloway et al (2013) who noted that a large percentage of children have access to internet in search of information and for social

An Exploration into Pupils' Exposure to Modern Technology

interaction. Igbo et.al. (2013) also reported that in Nigeria every youth lives in a home equipped with the basic tools of information. This is also in agreement with the finding of Sebele (2015) who found that 91.7% South African children use smartphones.

The finding of this study also revealed that pupils' exposure to modern technology have positive influence on their social behaviours. Their exposure to internet and social media impact their communication, encourage them to respect and cooperate with others. This result is supported by the finding of Linn et.al (2012) who found that computer games children play in pairs encourage collaboration and social interaction among them. The finding also agrees with Christakis & Garrison (2009) submission that engaging in various forms of social media is a routine activity that research has shown to benefit children by enhancing communication, social connection, and even technical skills. So, also it corroborated Wainwright and Linebarger (2006) opinion that the children's exposure to modern technology benefits them educationally. This indicates that modern technology has a clear potential for learning. Zevenbergen (2007) also submitted that modern technologies are beneficial to learners with regard to their being more socially active. The result confirmed part of the submission of National Association for the Education of Young Children (2012) where they noted that technology and media are tools that are effective only when used appropriately. Technology should be used to carry out educational activities that are developmentally appropriate. Inconsideration of this can amount to inappropriate use of modern technology in childhood education settings.

The result also revealed an overwhelming or alarming negative influence of modern technology on the social behaviours of the pupils. The pupils admitted that their activities through modern technology make them to grow more violent, bully, insult others, use abusive languages and make them to be arrogant. The finding agrees with Montgomery (2003) who found a relationship between watching violent television programme and increase in violent behaviour in children. This is in conformity with Anderson & Pempek (2005) who identified possible negative outcomes children have from their exposure to modern technology. Negative outcomes such as irregular sleep patterns, behavioral issues, focus and attention problems, decreased academic performance, negative impact on socialization and language development, and the increase in the amount of time young children are spending in front of screens. The result is also in agreement with observation of Brooks-Gunn & Donahue (2008) that children and adolescents are at some risk as they navigate and experiment with social media. The result also conforms to the report of Linn et.al that children's exposure to media violence can make them to be more angry and aggressive. On the other hand, Wainwright and Linebarger (2006) submitted that the most logical conclusion to be drawn from the existing scholarly literature is the educational content that matters not the format in which it is presented. This is not in conformity with the disposition of Common Sense Media

(2008 and 2011) that issued many warnings against television and computers and their negative effects on children's learning. Bond (2016) also documented that mobile phones cause increase of risky relationships, bullying and stalking in young children.

The result also revealed a significant difference between pupils' exposure to modern technology and also found that being a female or male does not have separate influence on pupils' behaviour. This is in line with the words of William (2007) who said that curious behaviour accounts for gender disparity in modern technology exploration. The male pupils having more exposure to modern technology is not surprising as their make can adequately account for the finding. The boy child has aptitude for technical oriented activities and is more adventurous and susceptible to exploring new world. They are full of energy and this vast energy enables them to explore the internet, with the use of smart phones and other mobile devices.

Conclusion

Interaction with modern technologies is a global phenomenon. The rapid changes and the new opportunities offered cannot be repudiated. Its incredible benefits relating to children's cognitive and social development are also commendable. Nevertheless, the study revealed that the pupils' exposure to modern technology has both positive as well as an overwhelming negative influence on their social behaviour. In spite of its negative influences, modern technology promotes social behaviours and on the overall is found to be efficacious to the learning and development of children. When modern technology tools are used appropriately and their use is adequately supervised by parents and concerned adults, there is likelihood that the negative influences on the pupils' social behaviour be reduced. Access to the modern technologies is highly essential for young children but will be mostly beneficial when they are used effectively.

Recommendations

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

- Considering that the amount of time children spend with technology and media is important for their educational benefit, children should not be denied access to modern technology but they should be closely monitored to make appropriate use of it.
- Realizing the importance of modern technology to children's learning and development, female children should also be encouraged to make proper use of them but under close monitoring of the teachers and parents.
- Government, school administrators and parents should encourage children's interactions with modern technology facilities and endeavour to provide adequate provision of facilities.

An Exploration into Pupils' Exposure to Modern Technology

- Teachers and other relevant agents should educate parents and guardians on proper use of modern technology among children to enable them benefit from all the opportunities it can offer and escape the danger(s) of its harmful impact.

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An Exploration into Pupils' Exposure to Modern Technology

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