

Children and Families Experience with Technologies in the Digital Age: The Nigeria Perspectives

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Abstract

Children between the ages of zero to eight years are at their formative stages of development and require parental attention in almost all areas of development. They require bonding and need help in attending to academic, behavioural and personality development. However, in this age of technology, it appears there is divided attention from parents to children. Studies have focused on the expectations of parents from their grown-up children in the use of technology but attention has not been directed to the perspectives of younger children on their parental use of technology and how it affects them especially in the Nigeria context. The study, therefore, assessed the experience of children on the use of technologies by Nigerian parents. Three objectives were set for the study, from which three research questions and two hypotheses were raised and formulated to guide the study. The study was premised on the theories of attachment and bonding of John Bowlby and psycho-social development of Erik Erikson. It adopted both qualitative and quantitative research design. The sample for the study comprised 200 children in Nigeria schools with 196 pupils whose responses were coherent were finally used for the study. One research instrument was used to collect data for the study namely: Interview Guide for Children (IGFC) The instrument was used to collect data from the children. Data obtained were analyzed using Simple Percentages, Bar-chart, and Chi-square respectively. The findings showed the trend of technology usage among parents and the impacts on the psycho-social milieu of children and recommendations were given to various appropriate stakeholders.

Keywords: *Children, Families, Technology and Digital Age*

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Introduction

The world is changing with the advent of technology all over the place. No doubt technology has come to stay in human existence. Its benefits to humans are beyond quantum. It is useful in every area of life; in other words, it is a tool that makes life easier and sustaining. Different scholars have defined technology in their own ways. According to Skrbina (2015), it is in the work of pre-Socratic Greek philosophers that the principle of (divine) ordering in the word “Logos,” which implies that the principle of creation was conveyed in the meaning of “Techne.” It was only over the last century and a half that the word, ‘technology’ came into use and its meaning described various concepts. Liddell, Henry, George, Scott, Robert (1980) in their own view define technology as the collection of techniques, skills, methods, and processes used in the production of goods or services in the accomplishment of objectives, such as scientific investigation. Examples of such technology are televisions advancements, the internet, iPads, computers, iPods, cell phones, pagers, beepers, music devices, video games, just to mention but a few. With advancements in technology, the impact is felt on individuals, families (Lanigan, 2009) as well as on society. Bray (2007) also indicated that technology has not only increased human life span, but it has also influenced how human lives, the population, the nature of interactions, work and learning procedure. This implies that technology has impacted every aspect of human endeavor and family life is not an exemption. It appears now that family ties are being influenced not only positively by technology, but the negative aspect seems to outweigh the positive aspect. For instance, the outcry of children in Germany over the excessive use of technological devices by their parents at their own expense set a signal to the fact that there is a great problem on family ties (DW News, 2018).

It is a fact that should be reiterated that the developmental stages of children depend greatly not only on the nature of the child but also the nurture they received especially from their parents. From conception to birth, and birth through the formative years, the bond between the parents and the child cannot be quantified. The social interaction between parents and children has a greater impact on the development of the child. Deshpande (2018) indicated that parental responsiveness to their children in the formative years would result in the development of patterns of attachment that would create internal working models that would influence the children’s feelings, thoughts and expectations in later life and relationships. It is further stated that where the bonding is hampered because of one thing or the other, there would be a missing link and a sense of insecurity and anxiety would set in into children’s lives. This is in line with the theory of attachment by John Bowlby who believed that the bond existed between children and their caregivers, especially the primary caregivers (parents) will have an incredible impact on them throughout life and as children are so close to their parents, it improves their chances of survival (Cherry, 2019). For further explanation, Erik Erikson’s theory of psychosocial development explained the process of children’s development at this formative stage. The theory emphasizes the influence of social interaction and

relationships in the growth and development of a child stating that when there is conflict, and it is not properly managed, it may lead to negative reactions. Erikson identified different stages of development but the stage that is most connected with this study is trust and mistrust. This stage is for infant children who must develop absolute trust in the caregivers/parents. This can be established in children when there is warmth, love, and adequate nurturing from the parents/caregivers to the children but when there is inconsistency, or the adults/parents are physically or emotionally unavailable, mistrust will set in.

One spectacular issue that needs to be examined is technological devices in the home. When it comes to the use of technology the question ought to be, is technology strengthening or damaging relationships among family members? Researchers have focused on broad descriptions of trends in the use of the technology, such as time spent using computers and the Internet and the ways in which children and adults use these technologies (Gehan, Moawad, Gad & Ebrahim, 2016). Some have focused on the adolescents' usage of technology which was discovered to sever their attachment with their parents (Khan, 2011; Gehan, Moawad, Gad & Ebrahim, 2016). Few researchers have examined the ways in which the Internet has altered family functioning. The Internet can be used to help families when it is used to create new ways of providing peer support, family life education, but when it begins to affect the relationship between the family members and their children, then it causes alarm, and something needs to be done about it on time. Studies have been connecting advancement in technology with many family issues such as poor bonding or poor parent-child interactions.

Technology is undoubtedly useful in our daily lives, but both parents and children alike need to understand that technology should be used as a tool and should not substitute for real world interactions. It is important to look at children's faces during various interactions such as feeding, nappy-changing for babies, discussions with other children. They needed a hug and a quick kiss. Children need to be talked to, tickled, massaged, and played with. Communication must be a two-way process. A mother and her child need to be paying attention to each other, they need to engage and connect. It is not just about a baby bonding with the parents but a vice versa procedure. There is no study of early child development that does not prove this. A baby's attachment neurologically coded by their earliest experiences with parents and caregivers. A good attachment style is formed by consistent interactions. In later life, an individual's attachment style affects everything from their confidence and ability to easily interact with others, form friendships and other relationships. Babies thrive and develop by experiencing facial expressions of parents, the calm acceptance of them, the love and attention, as well as groggy irritation of parents. Therefore, the time parents spend with or interact with children at the early stage is very important and crucial to the child's growth and development. If technology has taken over the interaction that ought to exist between parents and children, it might be disastrous to the optimal development of children.

As the trend of things is, advances in technology seem to be affecting families' opportunities to keep up with one another in sharing life events, stories, and activities. So, communication among family members seem to be affected and creating wide gaps in family ties (Small, 2009; Taylor, 2013; Williamson, 2019), this is an antecedent to the Germany children's protest who desire more attention from their parents. More

importantly, there seems to be an increasing wave of mental health problems and suicidal cases among children even in Nigeria, (Muanya et al., 2019) which therefore calls for a critical analysis of the situation. It is not certain whether the children in Nigeria are having similar experience expressed by the German children, since Nigeria is still a developing nation even in the technological drive, hence this study.

Objectives

This study was carried out to achieve the following objectives:

- examine the forms of technology in children's homes in the study area.
- examine the pattern of parents' use of technologies as reported by their children.
- assess the influence of parents' use of technology on parent-child bonding.

Research Questions

The following research questions were asked from the stated objectives and answered in this study:

- What are the forms of technology in children's homes?
- What is the pattern of parents' use of technologies as reported by the children?
- How do children perceive the effect of parents' technology used on them?

Hypotheses

Two hypotheses were formulated for the study.

- There is no significant influence of parents' technology use on parent-child bonding.
- There is no significant influence on the usage of technology on gender.

Method

The study adopted both qualitative and quantitative research design. The population comprised primary school children in Southwestern Nigeria while the sample for the study comprised 200 children which were selected using random sampling technique however the responses of 196 children that were coherent were used for analysis. One research instrument was used for the study namely: Structured Interview Guide for Children (SIGFC). The instrument was divided into sections based on the objectives of the study. The researchers were posing questions or statements to children while their responses were indicated against the appropriate responses stated in the instrument by the researchers. The instrument was used to collect data from the children. Data obtained were analyzed using Simple Percentages, Bar-chart, and Chi-square respectively.

Results

Research Question One: What are the forms of technological devices in children's homes?

To answer this research question, data collected on various forms of technology in children's homes was subjected to descriptive analysis and the results are presented in Table 1. Results in Table 1 showed the descriptive analysis of the forms of technology in children's homes in the study area.

Table 1

Descriptive analysis of forms of technology in children's homes

S/N	Forms of technology Percentage (%)	Frequency (f)
1.	Androids 63.3	95
2.	Smartphones 84.7	127
3.	Computer 53.3	80
4.	iPad 56.7	85
5.	Television 63.3	95

Table 1 shows that 95(63.3%) indicated that androids and television sets are the forms of technology available in their homes. As many as 127(84.7%) indicated the possession of smart phones as a form of technology. In the same vein, 80(53.3%) and 85(56.7%) pointed out that computer and iPad are forms of technological devices in their homes respectively.

Research Question Two: What is the pattern of technological gadgets/Activities usage by parents in the study area?

Table 2*Pattern of use of Technological Gadgets by Parents*

<i>Technological Gadgets/Activities</i>	<i>Frequency of use</i>			<i>Weighted Total (Σ)</i>	<i>Weighted Mean (\bar{X})</i>	<i>Rank</i>
	<i>Never (f_1)</i>	<i>Occasionally (f_2)</i>	<i>Always (f_3)</i>			
WhatsApp	9 (4.6%)	62 (31.6%)	125 (63.8%)	508	2.59	1 st
Phone Calls	0 (0.0%)	84 (42.9%)	112 (57.1%)	504	2.57	2 nd
Facebook	19 (9.7%)	68 (34.7%)	109 (55.6%)	482	2.46	3 rd
Watching Football	22 (11.2%)	92 (46.9%)	82 (41.8%)	452	2.31	4 th
Favorite Soap Opera on Television	38 (19.4%)	79 (40.3%)	79 (40.3%)	433	2.21	5 th
Browsing	29 (14.8%)	105 (53.6%)	62 (31.6%)	425	2.17	6 th
Listening to News	6 (3.1%)	156 (79.6%)	34 (17.3%)	420	2.14	7 th
Instagram	54 (27.6%)	130 (66.3%)	12 (6.1%)	350	1.79	8 th
Games	102 (52.0%)	69 (35.2%)	25 (12.8%)	315	1.61	9 th

Table 2 shows the different technological gadgets and the frequencies of their use by parents. It was shown that 63.8% of the parents always used WhatsApp and this was found to be the most frequently used, having had a weighted mean (WM) of 2.59 (out of a maximum of 3.0 attainable). Following this, it was reported that 57.1% of the respondents' parents were always on Phone calls and this came second in the list of the most used technological gadgets. About 35% used Facebook occasionally and it was shown to be the third most used technological gadget with a WM of 2.46. On the other hand, 52% reported that their parents never played games while 66.3% expressed that their parents used Instagram occasionally and these two technological gadgets were found to be the least used of all the gadgets used with WMs as 1.61 and 1.79 respectively. However, further analysis of the pattern of the usage of these technological gadgets indicated that the parents were accustomed to regular use of these gadgets since the least WM was 1.61 which is quite higher than average (1.5, being half of 3.0).

Research Question 3: How do children perceive the effect of parents' technology usage on them?

Table 3

Children's Responses on the perception of Parents' technology usage on them.

<i>Question /Statements</i>	<i>Responses</i>	
	YES	NO
Parent helps you with school assignment at home	142 (72.4%)	54 (27.6%)
Parent checks your schoolwork at home	153 (78.1%)	43 (21.9%)
Parent spends time to ask you about how you are doing	119 (60.7%)	77 (39.3%)
Parent visits your teacher in school	76 (38.8%)	120 (61.2%)
If you are relating with your parent when they receive message on phone/computer, do they stop interacting with you and attend to phone or messages?	168 (85.7%)	28 (14.3%)
If your parents are pressing phone or computer, do they answer you if you need their attention?	97 (49.5%)	99 (50.5%)
Do you feel neglected at home even when your parents are at home busy with their phone/computer. iPad?	80 (40.8%)	116 (59.2%)
Your parents do not care about you each time they are watching their favorite television program	73 (37.2%)	123 (62.8%)

If your parents want to watch their favorite program when you are watching any program of your interest on the television, will they change the channel?	62 (31.6%)	134 (68.4%)
Do your parents ignore you if you need their attention at a time they are chatting, calling, or browsing?	158 (80.6%)	98 (19.4%)

Table 3 indicates that 72.4% of the respondents' parents did help them with school assignment at home and 78.1% did have their books checked by their parents at home. Also, 60.7% expressed that their parents spent time to ask them about how they felt. However, the responses of 61.2% indicated that their parents were not in the habit of visiting their children's teachers in school, perhaps to ask about their school wellbeing and academic performance. Furthermore, 85.7% of the respondents expressed that if they are engaging with their parents when they receive message on their phone/computer, their parents would stop engaging with them would opt to attend to their phone or messages. Also, 80.6% indicated that their parents would ignore them if they needed the attention of the parents at a time the parents were chatting, calling or browsing. About 41% said they were used to feeling lonely at home even when their parents were at home because they were always busy with their phones.

Figure 1

Percentage Rate of Pupils' Perception of Bonding with their Parents

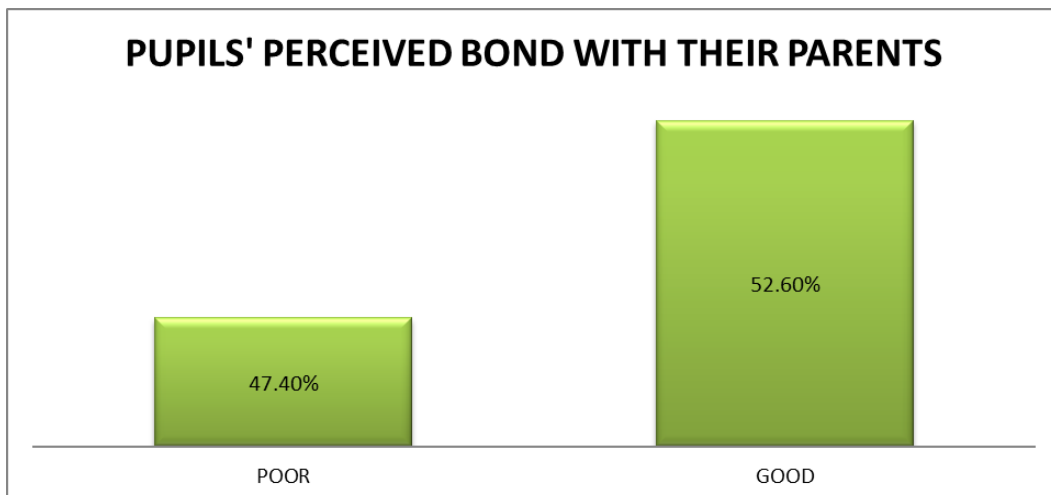


Figure 1 presents the summary of results shown in Table 2. The perception of 47.2% of the children about their parents' bonding with them was poor, as they felt that technological gadgets had impaired the attention they got from their parents.

Hypothesis 1: There is no significant influence of the pattern of technological gadgets use on parent-child bonding.

Table 4

Influence of Pattern of Technological Gadgets' use on parent- child bonding.

Frequency of use of Technological Gadgets		Students' Perceived Bonding with Parents			χ^2 (<i>sig.</i>)
		Good	Poor	Total	
WhatsApp	Never	8 (88.9%)	1 (11.1%)	9 (100%)	97.54 0.001
	Once in a while	40 (64.5%)	22 (35.5%)	62 (100%)	
	Always	45 (36.0%)	80 (64.0%)	125 (100%)	
Phone Calls	Never	0 (0.0%)	0 (0.0%)	0 (100%)	1.08 0.190
	Once in a while	13 (15.5%)	71 (84.5%)	84 (100%)	
	Always	80 (71.4%)	32 (28.6%)	112 (100%)	
Facebook	Never	18 (94.7%)	1 (5.3%)	19 (100%)	102.68 0.000
	Once in a while	58 (85.3%)	10 (14.7%)	68 (100%)	
	Always	17 (15.6%)	92 (84.4%)	109 (100%)	
Watching Football	Never	17 (77.3%)	5 (22.7%)	22 (100%)	4.13 0.175
	Once in a while	40 (43.5%)	52 (56.5%)	92 (100%)	
	Always	36 (43.9%)	46 (56.1%)	82 (100%)	
Favorite Soap Opera on Television	Never	32 (84.2%)	6 (15.8%)	38 (100%)	60.15 0.007
	Once in a while	39 (49.4%)	40 (50.6%)	79 (100%)	
	Always	22 (27.8%)	57 (72.2%)	79 (100%)	

	Never	21 (72.4%)	8 (27.6%)	29 (100%)	
Browsing	Once in a while	55 (52.4%)	50 (47.6%)	105 (100%)	67.25 0.003
	Always	17 (27.4%)	45 (72.6%)	62 (100%)	
Total		93 (47.4%)	103 (52.6%)	196 (100%)	

Table 3 shows the relationship between the pattern of technological gadgets' use and the respondents' perceived bonding with parents. It was shown that 88.9% of the parents who never used WhatsApp, compared with only 36% of those who always used it, had good bonding with their children. The relationship between pattern of WhatsApp use and parent-children bonding had a chi-square value of 97.54 at $p=0.001$. This p-value is less than the 0.05 significant level and this meant that there was a significant relationship between the variables. Using WhatsApp always had an impact on the attention children got from their parents. Phone calls, however, had no significant influence on children-parent bonding ($\chi^2 = 1.08$; $p=0.190$).

Furthermore, results showed that 84.4% of the parents who always used Facebook had poor bonding with their children and this was significant at $p < 0.05$. Also, always browsing on phone had significant impact on parent-children bonding. The pattern of this relationship was such that the proportion of students who had good bonding with parents reduced consistently as the frequency of browsing increased. That is, 72.4% of the parents who never browsed, 52.4% of those who occasionally browsed and 27.4% of those who always browsed, were reported to have good bonding with their children ($\chi^2 = 67.25$; $p=0.003$).

Hypothesis 2: There is no significant influence of the parents' usage of technology by gender as reported by children.

Table 5

Chi-square analysis of the influence of parents' usage of technologies by gender

Usage	Gender		Total	χ^2	df	Sig.
	Male	Female				
	f(%)	f(%)				
For Children's School work	17 (8.7)	21 (10.7)	38 (19.4)	38.204	7	.000

Browsing	30 (15.3)	18 (9.2)	48 (24.5)
Watching sport activities	32 (16.3)	4 (2.04)	40 (20.4)
Making calls	9 (4.6)	19 (9.7)	28 (14.3)
Games	6 (3.1)	11 (5.6)	17 (8.7)
News	13 (6.6)	1 (0.5)	14 (7.1)
Cartoons	1 (0.5)	14 (7.1)	15 (7.7)
Total	108(55.1)	88(44.9)	196(100.0)

($\chi^2 = 38.204$, $p < 0.05$)

In order to test this hypothesis, data collected on the usage of technologies and gender was subjected to chi-square analysis and the results are presented in Table 5. Data presented in Table 5 showed that there is significant influence of the usage of technologies on gender ($\chi^2 = 38.204$, $p < 0.05$). Therefore, the null hypothesis that states that there is no significant influence of the usage of technologies by gender is hereby rejected.

Discussion

The finding of this study showed the various forms of technological devices in the children's homes which is an indication that families in Nigeria are becoming technologically sophisticated in this technology age. This is because technological devices are becoming affordable, and many families are having access to them. This status is a confirmation of Common-Sense Media (2013) study that discovered that larger percentage of families in United State of America have access to technological devices, with five-fold increase in the ownership of tablets devices of different types and the possession will be on the increase every year (Bright Horizon, 2019). Ramey (2012) reported in his study that the most common technologies in children's homes are Video games, Smartphones, Television, Computers, Tablets, Internet, social networks, chatting services, calculators and much more, majority of these are in children's home.

The study also revealed that the parents used the technology devices in diverse ways. It is also in line with Belykh (2016) that stated that parents used different technology devices to gather information that can lead to increase in educational opportunities, maintaining familial contact, and communicating with people that they normally would not have the chance to. In the current study, the parents' usage of the devices revolved around WhatsApp, phone calls and Facebook which are more of maintaining familial contact as stated by Belykh (2016). Anderson (2016) also emphasized that these technological devices have become more prominent in the lives of parents as well as children to the extent that it is referred to as having the whole world on one's lap. The implications, therefore, are that technology has become household equipment even in Nigeria and parents are not exempted in the use only that they should use the devices in such a way that would benefit the development of their children.

Furthermore, the present study indicated that a high percentage of children perceived that parents still have the time to attend to their schoolwork while (27.6%) perceived the use of technology to be affecting them negatively because their parents do not have time to attend to their schoolwork. The study corroborated Ramey (2012) and Sinaria, Al-Shboul, Tannous, Banat and Aldreabi who pointed out that technology has both positive and negative impact on children. From the result of this study, a considerable percentage of children expressed feelings of neglect and loneliness from their parents' use of technology. The current study is like DeName (2018) that reported the feelings of a 6-year-old child of been sad the way his parents often neglected and abandoned him once they were on phone. The finding further showed variations in the perception of children. They're existed poor bonding between parents and children according to the perception of the children because of technological gadgets use by their parents. This is in line with Williamson (2019) statement that children had feelings of jealousy and distress in them as they had to compete with the devices for their parents' attention. Some other children viewed a higher bonding with their parents. It might be that the parents of children who had good bonding have learnt to get screen time under control as indicated by Mostafavi (2016) or they have learnt to structure more family activities around their technologies to promote family interaction as pointed out by Kraut, Sherlis, Mukhopadhyay, Manning, & Kiesler, (1996). Another reason that may be adduced is that a larger percentage of parents might still esteem cultural family ties despite any modernization.

The finding further revealed that there is a significant influence of various technological gadgets on parents' attention to their children. The implication is that technology influences parents' attention and bonding with children anywhere

in the world, whether white or children of color. This is in support of Williamson (2019) who explained that the divided attention children get from parents has negative influence on them. Small (2009) also reiterating the negative influence indicated the ultimate outcomes on children as the exhibition of high-risk behaviors such as violence, academic problems, and other serious ones.

Lastly, the finding showed that gender as a variable is significant when it comes to technological devices usage. The finding is in line with Kay, Li, and Benzimra (2017), Goswani & Dutta, (2016), Okazaki, and Santos (2012), Orji, (2010), who drew out the fact that there is a significant difference between male and female in the use of technological devices and the significance was established for various purposes. Though some research activities did not find any significance in the usage based on gender, which indicates that there is still no consensus among researchers as far as technological devices usage is among gender.

Conclusion

The study examined the experience of children and families use of technologies in the digital age in Nigeria. It is evidenced from the results that parents' use of technologies is on the high rate, showing that the nation is becoming technological driven. It is therefore affecting the children's relationships with their parents both in a positive and negative way as being experienced in other parts of the world where technology is being used. If it is being used moderately, it will be good, and it may give a positive result. It must be emphasized that technology is not a substitute for parents in the life of children, especially at the crucial stage of development.

Recommendations

In the light of the findings, it is therefore recommended that:

- Parents should create more time with their children in order to improve parent-child bonding and trust between parents and children.
- Since technology has become part of life, parents can have a policy on when and how to use technological devices so as not to interfere with family socializing moments. As much as possible, parents should not keep double standards on the policy.
- Parents and children may use the technological gadgets together in order to foster more rapport.

- Parents should be more sensitive to their children's emotions and should not be carried away when using technological devices.
- Parents should take time out with children, having a break from technology to play with children.

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