

Generational Tensions in the Uptake of Digital Financial Services: Adolescent Girls and Adults in Nigeria

Jude Kenechi Onyima and Francis Chinedu Egbunike
Nnamd Azikiwe University, Awka- Nigeria

Research Report Submitted to IMTFI, University of California, Irvine

Abstract

This article is based on a descriptive and exploratory study conducted in Nigerian Christian and Muslim neighborhoods on the new social space created by digital innovations. It examined the intrigues that characterized adults-adolescent girls' relations as regard to how and when digital innovations like digital financial services should be used. Questionnaires, ethnographic interviews, school debates, observation and focus group discussion methods were used to study the logics, antics and new social behaviors that evolved due to uptake of digital innovations. Mobile phones provided young people the opportunities for exploring and constructing identities but mobile phones have also upset social traditional resources and routes to adulthood. Both adults and adolescent girls play identity politics, and are struggling to (re)construct their roles and identities in the new social space. For this population, smart phones display contextual symbolism that transcends their technological meaning, shifting girls' social dependence from adults to peers and technology. Apart from configuring boyfriend-girlfriend negotiation in a unique way, DFS uptake has given adolescent girls a voice in family finance as well as assigned new roles to them. Adults' concern about adolescent girls' uptake of DFS is rooted in adults' fears about the possible negative influences of smart phone use, which they see as entertainment driven and inimical to adolescent girls' development. Findings of this study, which rest primarily on Christian neighborhoods, revealed that tensions between adults and adolescent girls over DFS uptake originated from mistrust, misconceptions and poor awareness of DFS, which effective marketing campaign could address. It is recommended that these tensions can be managed better when adults act as midwives to adolescent girls' entrance to the digital era as well as open up to discovering their new roles in a world where digital innovations are necessities.

Key Words: Adolescent girls, digital innovations, identities, smart phones, digital financial services.

Introduction

Many studies have focused on how youths construct their identities, but only a few have examined how adolescent girls who are still under adults' guardianship in the wake of the digital revolution have struggled with adults in finding their identities in the new social space (Tatz, 2001; Musharbash, 2007). Adult-adolescent relationships are usually marred with tensions, arguments, antics, and maneuvering. These tensions are more pronounced in the areas of relationship with the opposite sex, career, religion and finance. Adults struggle to inculcate desired habits in the adolescents while adolescents tend to express their perceived freedom - their likes and dislikes. These tensions, as sociologists have believed, result in habit formation (Nanda et.al, 2013; Lerner et.al, 1998; Weber & Claudia, 2008). The digital revolution brought about a rapid social change, especially in developing economies, affecting every aspect of culture and social structure. It brought fluidity into what was known to be static and has led to the juggling of social identities in an unparalleled way. The change is such that both adults and young people are creatively negotiating their identities in the new social order. When we interviewed Rachael,

mother of five children in our attempt to understand the tensions between adults and adolescent girls with regard to uptake of digital innovations, it became glaringly clear that both adults and young people are no longer certain about their identities, unlike before. Rachael refused to pay her daughter's school fees until her daughter revealed the person who had purchased the smart phone for her. She explained, "...Children of nowadays always think they can outsmart their elders. How my 15 year old daughter came to know so much about online transaction is a mystery to me because she has no mobile phone." Rachael continued,

"....I could not upload the Diamond bank app in my new phone and I went to my friend three miles away from here to help me download it, only to realize that it was my daughter who I have not seen with mobile phone that downloaded and maintained the app for most of the women in the area. When I came back, I entered her room only to discover a smart phone hidden in her school bag...." (Rachael, a 54 year old Christian in Enugu, 19/12/2015)

This story is similar to many stories we gathered in our 12-month ethnographic fieldwork and shows that adults and young people now juggle their roles and identities. These changes, which were strikingly obvious in Christian neighborhoods, were, however, mild in Muslim neighborhoods. Adults now depend on young people for many tasks in the digital age, unlike before when adolescents turned to adults who they saw as embodiments of knowledge and skills. This new culture brought about by the digital revolution provides young people with experience, and resources that are cosmopolitan and require much improvisation (Wexler, Eglenton and Gubruim, 2012). Improvisation requires that young people depend more on peers and technology, a shift that adults see as an infringement on their identities as guardians of young people. As a result of the upsurge in access to resources brought about by the digital revolution, the route to adulthood has become malleable. Many options are now available to young people. This contrasts with a time when young people depended largely on the traditional guidance and resources provided by adults in the process of transitioning to adulthood.

In Nigeria, many adults tend to resist liberal approaches to grooming young people in a digital era. This is because digital innovations such as mobile phones create access to some aspects of western culture which some find unattractive. Two different generations exist in this new social space: one where digital innovations are luxuries and one in which digital innovations are necessities. Aside from balancing western and indigenous social expectations, guardianship of young people has become ambiguous. What is markedly clear in this context is that the social space where adults grew up is not the same as the social space young people now find themselves in (Buckingham, 2008). How young people navigate their identities and carve out their future trajectories is fundamentally dissimilar with that of the adults. This increases adults' mistrust and perverse feelings towards adolescent girls' uptake of digital innovations. Young people, too, tend to gravitate towards technology/peer-driven routes to adulthood and resist traditional resources proposed by adults. These circumstances generate uncertain feelings and attitudes, which we refer to as "tensions" in this study. Both adults and adolescent girls experience these internal and external tensions as they struggle to construct their roles and identities in a new social landscape. There are also contextual dimensions to the way in which these tensions manifest as seen in Muslim-Christian environment (This was discussed in details in later section)

The new social space has intricately linked finance and relationships in a subtle way, creating room for improvisation and duplicity. This is because a number of financial services can be transacted using digital platforms. Digital financial services (DFS) as used in this context consist of all forms of financial services that are delivered through digital platforms (Morcos and Sebstad, 2011; Macnee, 2014). These innovations deliver a broad range of financial services such as savings, payment, transfer, financial literacy and insurance services at near marginal cost. Popular forms of digital financial services include mobile money, bank applications, online payment systems and a

wide range of savings and payment platforms where transactions can be made using mobile phones. The Nigerian DFS landscape has its own peculiarities in terms of rate of uptake, governance and myths when compared with other developing economies. Over sixty five percent of DFS structure in Nigeria is domiciled and driven by the Christian dominated Southern region. The mobile technology revolution is also more pronounced in Christian neighborhoods than is the case in Muslim neighborhoods and what happens in the former region tend to define what happens to the Nigerian digital landscape as a whole (Andagalu, 2012).

Uptake of digital financial services by adolescent girls, unlike other segments of the population, is plagued by mixed feelings, bickering and tensions. There are conflicting logics on how and what digital financial services should do for adolescent girls. This issue has become topical because of the lower adoption rate of DFS among adolescent girls. Women and girls are always lumped together as the same market due to the mindset that women and adolescent girls share a similar identity. This poor understanding of generational shifts/differences results in 25% lower adoption rate among adolescent girls (Andagalu, 2012; Abayomi, 2010 and Alade, 2012). Addressing this imbalance is critical because these adolescent girls will soon move into adulthood and their uptake of DFS will determine the success and longevity of this innovation. Addressing these challenges requires a proper understanding of who and what shapes the logic around DFS in the life of critical segments of the population such as adolescent girls, and how.

Regrettably, many digital financial services operators do not much care about the demographic composition of their customers and this affects their strategies, acceptability and scale of outreach. Indeed, the nature of the behavior adolescent girls exhibit when they interface with DFS will not be the same as for adult women. This is because adolescent girls possess evolving capabilities: they are willing to take risks, adventurous, more open to technological innovations, more flexible about cultural rigidities, easier to influence, willing to overcome gender barriers and ready to explore new ideas. However, the literature on adolescent girls' digital financial service story is lacking despite girls' critical importance for (and particularity in) uptake of digital finance in society. The focus of this study is therefore on the new social space created by digital innovations and how it affects uptake of DFS. This study examines the intrigues that characterized adolescent girls' relationships with adults with regard to when and how digital innovations should be used. Specifically, it seeks to understand the logics, antics, patterns of usage, and new social behaviors (gifting, identities and networks) that have evolved due to the uptake of digital innovations such as DFS.

Review of Literature

Digital innovations provide significant opportunities for exploring facets of identities especially those that were hitherto stigmatized and denied. According to Buckingham (2008), digital technology provides avenues for discovery of one's true self and for identity play. In other words, it gives the potential for fluidity and access to resources that can enable users to bend their identities or meet people that were originally considered inaccessible. Young people are arguably the early adopters of digital innovations. As teens, they are more aware of the local influences but as adolescents, they become more aware of self and global influences (Damon et.al, 2003).

Adolescents consist of teens who are in early adolescence (between 11-15 years) and young adults who are in late adolescence (Between 16-20 years). Adults always misconstrued them as vulnerable, unwise, quarrelsome and unpredictable. Adolescence, as used in the context of this study, refers to the period within the life span when most persons' biological, cognitive, psychological and social characteristics are changed from what is considered child-like to what is considered adult-like (Ozmete and Bayoglu, 2011; Lerner et.al, 1998; Nanda et.al, 2013) Adolescence is described by many researchers as a phase of life beginning in biology and ending in society. For most

adolescents, this period is challenging, requiring adjustment to changes in self, family, peer groups and in the community. Hall (1992) describes adolescence as a period of storm and stress characterized by intergenerational conflict, mood swings and enthusiasm for risky behavior. Adolescence is indeed a period for experimenting with different types of identities.

Tensions arising from conflicting expectations experienced by adolescents are often expressed in delinquencies, sexual deviance and attraction to dissimilar cultures. In the view of Jensen (2013), this attraction to other cultures enables them to confront conflicting expectations in their indigenous culture. As adolescents transit to adulthood, they navigate multiple cultures and identities before they make their choice about which identity to assume. Adolescence is a period of life characterized by fundamental psychological conflict about which identity to assume as well as which social role to accept (Weber & Claudia, 2008). The output of such conflict, which can be successful or unsuccessful, is commonly referred to as identity formation. Successful resolution of the conflict confers the ability to perform key tasks as adults while unsuccessful resolution of the conflict manifests in the form of fanaticism or avoidance of adult responsibilities. Developing identity therefore comes from the tension of “being myself and finding my true self”. This process of identity formation is crucial for adolescents in order to develop a coherent and beneficial sense of worth and role in the social space. Owing to the digital revolution, the traditional resources for identity formation are no longer sacrosanct or attractive. Adolescents now make greater use of technological innovations, interaction with peers, and self-reflection to construct their identities. As Buckingham (2008) observed, young people use more technology as a means of bypassing otherwise restricted spaces.

Adolescent girls have become more reflexive, making decisions about what and who they will be on their own, with little or no influence from the guardian figure. Digital innovation increases individualization and offers a plethora of guidance about choices. In other words, the ultimate decision making about which identity to take has shifted away from customary defined confines to spaces that adolescent girls can easily access. Gidden (1993) argues that the new culture made possible by the digital revolution has made identity fluid both for adults and young people. However, this fluidity and freedom experienced by adolescent girls also comes with new responsibilities. Adaptation to the new responsibilities may account for the perceived shift from guardian figures to peers and dissimilar cultures when seeking guidance.

Identity politics intrigue adults-adolescent girls’ relations, especially with regard to uptake of digital innovations. Identity politics involve squabbles for positive identities by groups of individuals (Buckingham, 2008). It is exhibited when one group of people owing to their social status appropriate particular identities to themselves and also impose some identities on other groups of people. Identity politics also manifest as a struggle to resist identities constructed and imposed by other people. Understanding identity politics is crucial in analyzing why a group of people can have the tendency to make generalizations about members of another group and assimilating them as single entity, ignoring their diversity. Adults usually label adolescent girls as gullible and vulnerable and as a result are skeptical about their use of digital innovations. Adolescent girls usually resist the identities constructed and imposed upon them by adults because girls are aware that there are multiple dimensions to their identities. Griffe (1991), in emphasizing the roles of mobile phone in constructing identity, argues that it has changed the manner in which power is exercised. This is similar to the assertion by Buckingham (2008) that power in the digital era is diffused through social relationships which empower individuals to regulate and confine themselves into acceptable norms. As Nikolas (1991) observed, digital innovations have increased the “technology of self”, where technology in a bid to give freedom and choice to human beings ultimately acquires the power to regulate and control human behavior. Digital innovations therefore not only shift social relationships, they also influence the way in which identities are constructed and defined in the digital era.

Methodology

We employed exploratory and descriptive research designs that emphasized participatory and ‘bottom up’ approaches to generating information with a focus on locally defined contexts and perspectives. Four communities from both northern and southern Nigeria constitute the area of study - two communities from southern Nigeria (Christian neighborhoods) and two from Northern Nigeria (Muslim neighborhoods), from both rural areas and urban slums, were used as samples. These communities were selected from Enugu and Delta states in southern Nigeria, Taraba and Nassarawa states in northern Nigeria. This approach enabled effective comparison between Christian and Islamic perspectives, traditional and modern society perspectives, and rural poor and urban poor perspectives.

We generated data using different methods such as questionnaires, school debates, interviews and focus group discussions. Some innovative methodologies were employed in Muslim neighborhoods due to their peculiar characteristics. In both neighborhoods, we distributed questionnaires to one hundred and twenty adolescent girls in high schools, colleges, apprentice shops, homes and commercial centers who have used or stopped using DFS (78 respondents in Christian neighborhoods and 48 in Muslim neighborhoods). The questionnaire was used to generate descriptive data on the nature of phone and DFS usage, networks, and emerging cultures. For the purpose of generating exploratory data, we conducted debates in two girls high schools on the topic, *“Adults are right at what they think and do about adolescent girls’ use of digital financial services.”* The arguments made between the proposing and opposing parties enabled us to capture and track the tensions and logics between adolescent girls and adults on the uptake of DFS. We interviewed some adolescent girls and their parent figures, some DFS operators, and some community leaders in order to understand their arguments and attitudes towards adolescent girls’ use of digital innovations. We employed observational methods to capture adolescent girls’ attitudes to mobile phones and DFS, both when girls are alone and when they are in groups. We met girls informally at phone repair shops, school shops, motor parks, public sit-outs and entertainment spots. We bought airtime for them and engaged them in discussions about their attitudes towards DFS and mobile phones, the new behaviors it created in them, and the new community culture that is emerging as a result of adoption. We obtained the permission and consent of the parents/guardians of the girls who are minors.

Generating data in Muslim neighborhoods presented some challenges to the researchers. Our research team was seen as people with ulterior motives, even after we have lived with them and taught their children extramural lessons to convince them that we are academic researchers. It took the intervention of religious leaders for us to gain acceptance. Notwithstanding the cleric’s clarification, some parents insisted that they must vet the responses we obtained from their girls. Since such vetting could defeat our purpose, we enlisted the services of young university students who grew up in the area to assist us in interacting with the girls. In addition to employing a Muslim female assistant to help in interacting with Muslims, we also used door-to-door knocking techniques to create familiarity and acceptance. It was also difficult to identify adolescent girls who should be included in the sample because DFS usage was not popular, unlike in Christian neighborhoods. As a result, a majority of our respondents came from Christian neighborhoods. We singled out and investigated rich cases, such as ones where there was no crisis (adults actively introduced adolescent girls to DFS), cases where adult-adolescent girls’ tensions with regard to DFS had degenerated into crises, and those in which the phone was shared between adult and adolescent girls. We conducted Focus Group Discussions (FGD) in each of the communities in order to verify the information generated, as well as their contextual meanings.

Study Results

Findings of the study were based more on observations from Christian neighborhoods. This is because the Nigerian DFS landscape is largely driven by the Christian-dominated Southern region. Uptake of DFS services was also higher among Christians than among Muslims. (Sixty-five percent of the adolescent girls in our study sample were Christians, while thirty-five percent were Muslims). However, interesting comparisons and differences between Muslim and Christian neighborhoods will be discussed below, in a later section. The sample for our study was comprised of adolescent girls who used or have stopped using DFS. In the area we studied, DFS is synonymous with smart phones. There was a popular belief that DFS can only be done with smart phones. As a result, much emphasis was placed on smart phones. It is also the reason why the type of phone adolescent girls use became significant in our analysis for understanding adults-adolescent girls' tensions. Most of the girls have two phones (smart and feature phones), which evoke different meanings. One of the Christian girls who own two phones told us, "I kept my feature phones for calls and text messaging and to have something to give armed robbers in case of robbery, while my smart phone is for other phone services such as browsing, fun, networking, DFS and to attract prestige". There are fewer adolescent girls who used DFS (38% in Christian neighborhoods and 22% in Muslim neighborhoods) such that we employed snowballing technique to generate a reasonable sample. The low uptake of DFS is attributed firstly to the tension that surrounds adolescent girls' use of DFS (which is rooted in adults' concerns about adolescent girls' use of smart phones). Second, there is poor awareness on the uses and benefits of DFS, especially in Muslim neighborhoods. Third, is the general lukewarm-ness that characterized DFS uptake in Nigeria, owing to the nature of DFS policy design and implementation in the country. Licensed providers of DFS in Nigeria are financial institutions, not telecommunication operators. This goes against the popular belief that telecommunication operators are more positioned to drive the innovation. Financial institutions see DFS as services that are complementary to other products and not as a product line with its own life. As a result, many Nigerians see DFS as additional product features of financial institutions and telecommunication operators, and not as a product line with great potential.

DFS and Changing Identity of Adolescent girls

The new social space driven by digital innovations is still evolving, but what is clear is that it has created a web of interdependence and roles that redefined the traditional social landscape. It has juggled the earlier known identities of both adults and adolescent girls such that both adults and adolescent girls are still trying to find their feet in the new social order. Adults who used to be guardians and embodiments of knowledge for adolescent girls now depend on girls to be able to do certain tasks that require digital knowledge. In the same way, young people's social dependence has shifted from adults to non-relatives and technology. Traditional resources for constructing identities have gradually filtered away creating mistrust between adults and adolescent girls. Adolescent girls' uptake of DFS has subtly empowered adults. (This observation was more common in Christian neighborhoods than in Muslim neighborhoods). A 72-year old Muslim pensioner narrated that the smart phone he bought for his 18 year old caregiver has reduced the frequency of visits to the bank " ...She uses the phone to know when I am paid my pension as well as pay my groceries. I am able to know when my children send remittances and check my account balance from my bedroom...". Our female research assistant observed that some adolescent girls play bookkeeping and other accounting roles for many cooperative societies. The secretary of one of the cooperatives in Muslim neighborhoods explained to her why they invite adolescent girls in to their meetings in these words, "Some of them help us with their phones to track our members who could not come to meetings, but who paid their money into our account. We invite them sometimes to our meetings since some of our members use DFS. They help us to check

account balances, make transfers, identify who made payments and help us to keep records of our accounts in digital form...”(Turai, a 41 year old Secretary of Wukari Farmers Cooperative in Wukari, 12/2/2016)

Uptake of DFS had some positive effects on the life of adolescent girls. It has increased financial literacy, reduced the frequency of visits to banks, changed payment patterns, and increased financial autonomy of adolescent girls. Before the uptake of DFS, most transactions and exchange performed by adolescent girls were in cash. But now, DFS has enabled easy tracking of transactions, ability to make transfers, provided avenues to manage different accounts, access to different financial products, avenues to surf and compare financial products, and a stronger voice in family finance. The digital revolution has generally altered the social space we studied especially with regard to the route to adulthood. Young people who were previously molded through traditional institutions and extended family structures now depend on peers and technology. Market squares, age grade meetings and hanging-out-spaces as spaces for identity formation have been replaced by online and virtual friendship websites. There is an increase in virtual friendship and interest-driven activities that are outside cultural and religious affiliations. Many adults attribute the moral decadence in society to this shift. “Experience has taught us that whereas young people learn good behavior from families, they learn bad behaviors from peers and media”. Such is the soliloquy of a 68-year community leader in a Christian neighborhood.

As Kenny (2016) observed, mobile phones - in a bid to make life better - have acquired the ability to regulate important aspects of society’s social lives. It has configured boyfriend-girlfriend negotiation in an intriguing way. Mobile phones - especially smart phones - display symbolism that transcends economic or technological meanings. It embodies now-popular socio-cultural ways of constructing identities especially among young people. Our findings revealed that in most Christian neighborhoods, adolescent girls’ acceptance of a smart phone from adult males signifies acceptance of friendship. In the same view, turning down an offer of a mobile phone means turning down a relationship. By purchasing a phone, a man extends his influence and control over a girl. Edna, a 16-year old student returned a smart phone to her boyfriend when she realized that he bought a similar phone for another girl. A man whose phone is accepted has a love trophy, which comes with privileges and responsibilities. It gives males access to adolescent girls’ lives, shifting their “phone-life” accountability from their parents to their boyfriends. “...the mobile phone I bought for my girl made me her number one. She owes it to me to answer my calls first and explain to me what she does with the phone because I also maintain the phone for her....” (Nnamdi, a 21 year old taxi driver in Asaba, a Christian neighborhood on 28/1/2016). A similar incident observed in a Muslim neighborhood was about Fatima, a 16 year old Muslim, who resisted her parents’ pressure to peruse her phone, but her boyfriend knows her password and accesses the phone all the time to know what is new. None of the adolescent girls in our sample from Christian neighborhoods agreed to have accepted a feature phone from an adult male as a gift. Despite the fact that male friends acquire the smart phones and most of the time also buy airtime/data for adolescent girls, they rarely manage the services for which the phone is put to use except monitoring their girlfriends’ use to ensure that no male intruder edges them out of their privileged position.

The nature of gifts received from the opposite sex has also been transformed both in Christian and Muslim neighborhoods. Before the revolution, gifts from boyfriends to their girlfriends included jewelries, paintings, handbags, shoes, clothes and sometimes food-stuffs. At present, gift items include airtime/data bundles, digital money, online purchases, customized gifts, videos and electronic gadgets. .

Digital Profile of Adolescent Girls

Despite the fact that the results presented in this study hinge more on Christian neighborhoods, averages of findings in both Christian and Muslim neighborhoods were computed in order to explain the digital profile of

adolescent girls in Nigeria. Seventy-six percent of the adolescent girls in our sample own both feature and smart phones (96% own feature phones only, while 81% own smart phones only). We observed that adolescent girls did not recognize feature phones as something of value, as many of the girls were ashamed to display their feature phone. It took us time to discover that the word “I don’t have a phone” means that I do not have a smart phone. Eighty-seven percent of the smart phones that were given to girls were gifts from male friends, especially in Christian neighborhoods. Surprisingly, 24% of adolescent girls who used smart phones agreed that their parents did not know that they own and use smart phones. They used the smart phone in hiding because their parent figures frown at their use of such phones. Adolescent girls used their phones basically for fun, peer-based learning, networking and occasionally for financial transactions. Sixty-two percent of the adolescent girls found it difficult to stay for 24hours without their mobile phones. The average adolescent girl spends 4.5 hours daily on her mobile phone and phone related quarrels occur at least every 72hours where adolescent girls live with adults (especially in Christian neighborhoods). With regard to the DFS profile of adolescent girls in this study, our findings revealed that of the adolescent girls who used DFS, 86% had been introduced to DFS by peers, boyfriends, and friends online. Only 3% of the respondents agreed that parents/relatives did. Seventy-six percent of adolescent girls have heard about DFS but only 6% use these services. Average distance to a DFS agent is between 5-8 kilometers. Popular DFS used include banks’ mobile apps, mobile money and online payment platforms. They use DFS to buy airtime, receive gifts, check balances, make financial inquiries and make payments (for Interesting differences in the DFS profile of adolescent girls in Christian and Muslim neighborhoods see the appendix and the later section on Christian-Muslim DFS perspectives).

Adult-Adolescent Girls Tensions

Adults do not directly oppose uptake of DFS; rather, they oppose in general smart phone use by adolescent girls. Many adults, especially less educated ones, do not segregate the use of smart phones for DFS and use of smart phones for other services. “Smart phones-phones connected online are dangerous in the hands of adolescent girls,” a mother of three children burst out at one of the school debates in a Christian neighborhood. “Whether it is for DFS or for any other services, who cares! They will tell you they are on Yahoo site whereas they are on dating sites! A phone with Internet connectivity is a bomb waiting to explode...”. In the area we studied, a smart phone is synonymous with Internet connectivity and browsing. Many adolescent girls did not believe that feature phones could be used for DFS and that is why feature phones do not evoke great symbolism, and girls do not struggle to acquire them. Feature phones evoke functionality whereas smart phones evoke prestige, attachment, connectedness to a global community, and secrecy and independence. Most feature phones are not encrypted and do not evoke digital mindedness. Adults’ attitudes to DFS would have been different if they understood the possibilities of conducting DFS through feature phones. Adolescent girls’ attitudes to smart phones as well as adults’ beliefs around smart phones created the tensions we observed. There is little or no tension with girls’ usage of feature phones. Different uses of smart phones are intertwined; phone services outside calls and text messaging are lumped together and attributed to smart phones services. Adults’ attitude towards DFS is informed by their belief around the smart phone buzz. “...I know that DFS is the future,” a 46-year old school teacher told us during one focus group discussion:

“...but the current socio-economic environment does not encourage its uptake. Many adults are reluctant to introduce adolescent girls to DFS because they do not trust the services. Prevalence of financial fraud perpetrated using DFS, poor corporate accountability, insider abuse of procedures and weak reporting mechanisms have discouraged many people from uptake of DFS. As you know, at least one out of every five Nigerians has been defrauded; that contributed to the skepticism around uptake of DFS. I may not

encourage my students to use them because they are not safe...." (Aisha, a 46 year old Muslim in Lafia, 2/2/2016)

The issue of trust in DFS mechanisms and operators was significant in understanding why many adults do not encourage uptake of DFS. Some adults felt that if adults have been defrauded, the worst could happen to adolescent girls. A grandmother of six children told us at one of the focus group discussion sessions in a Muslim neighborhood "... it is not your topic but your refreshment that brought me here. If DFS offers are genuine, let them make our clerics and schoolteachers to start using them. That is easier gospel than radio advertisement."

A 17 year old debater told the audience in a Christian neighborhood that DFS uptake has led her to develop an interest in digital technologies, influenced her financial attitudes and has led her to open a bank account for herself and her siblings (she refused to participate in the debate until we subtly led her aunt away from the audience). Another debater, who listed, 'the seven lies adults tell about adolescent girls and DFS - loss of concentration, waste of financial resources, openness to unapproved acquaintances, secretive lifestyle, tendency to tell lies and undisciplined financial habits - was sharply opposed by Ugoo, a 16 year old high school student in these words: "Many other things distract adolescent girls other than the phone. Why do adults offer little or no restriction to adolescent boys' uptake of DFS if their reasons are not the usual prejudice against the female folk? Their attitude is informed by their perceived need to protect the girls. All the attributes they listed were also exhibited by girls who do not even use DFS..." Indeed, uptake of DFS has made monitoring of boyfriend-girlfriend relationship difficult. Our findings suggest that DFS uptake increases a self-reflexive lifestyle, weakens communication with relatives, and increases girls' interaction with "strangers".

Seventy-two percent of adults we interacted with in the study disagreed with allowing adolescent girls, who are minors, to own and use smart phones. Their reasons were classified under domestic, social and health reasons. Domestic reasons include abandonment of house chores, conflicting moral values (increases the tendency to tell lies), conflict with family members, and the need to get money to buy data. Social reasons include access to unapproved males and increased chances that they can be cajoled into unwholesome behavior. Other reasons adduced include poor interpersonal relationships (especially with relatives), cyber bullying, cultural extinction, distractions from academic activities, spreading of gossip and increases in road accidents due to careless use of phones on roads. Health reasons include obesity due to increases in snacking while pinging, less time for exercise and poor sleeping patterns owing to night chatting. A 58 year old adolescent health physician reported during our interview that she was against giving adolescent girls access to smart phones because of negative trends she had observed when they use smart phones consistently: "...they begin to lose attention easily and could not focus for the long term. They do a lot to please their peers, not their relatives, they pick role models and follow them sheepishly, they exhibit incoherent sleeping pattern and they rarely exercise..." These reasons are, however, associated with smart phone use in general and not specifically for DFS.

"...She must get good grades and secure university admission before I will allow her to use smart phone," a 49 year old father of three children insisted. This statement is common among adults in both Christian and Muslim neighborhoods as they reiterate their stand on adolescent girls' use of smart phones. Adults enforce these conditions by refusing to acquire smart phones and confiscating smart phones bought by friends. When her daughter queried how she could do her school assignment and download her favorite music without a smart phone, the mother insisted that she could use her own phone if need be. "...I made it clear to her that she cannot be on Whatsapp or Facebook and should not surf the Internet if I am not there. She knows that I cannot buy data for such unfruitful adventures..."

Adolescent girls view restrictive attitudes of adults as unnecessary display of authority. "...My mother is afraid of my going into pornographic sites..." a 16-year old Christian student complained. "...She failed to realize that I have seen it all in uncensored DVDs sold in the open market. Although her phone is available but I rarely use it. I am not desirous of owning a smart phone because of the services." Adults monitor adolescent girls' use of smart phones especially in Christian neighborhoods. According to a 16-year old daughter of a local bank manager,

"...my parents usually sneak into my room at odd hours to see what I do with the phone and sometimes asked me to lend them my phone under the guise that they want to search for something. I have no fear because I have learnt to cover my tracks and how to keep developing tricks to make their monitoring ineffective...I need it because of prestige; many girls I am better than has it..." (Jennifer, a 16 year old student in Warri. 4/12/2015)

Our study revealed that adults view protecting adolescent girls as their critical parental responsibility. Many adults have developed punitive measures towards adolescent girls who use smart phones such as physical assault and denying them parental favors. This is because of the belief that smart phone use is fun-driven and hostile to learning. In contrast, adolescent girls see mobile phones as containing the potential for social exploration and freedom from traditional confinement. "...My phone is my life, my best friend. I do not need to hang out in the open space as before, my phone keeps me company," a 15 year old caregiver in Christian neighborhood told us. "...My guardian can control any other thing about me but not this one; I have used the phone for about three months without her knowledge". Indeed, "networked publics," as Buckingham (2008) called them, have taken over the roles of formal hanging out spaces, such as streams and market squares. They have become attractive avenues for socialization despite being entertainment-driven, as many adults perceived them to be.

Our interaction with adolescent girls who used smart phones acquired by their boyfriends revealed that such a gift comes with consequences. Especially in Christian neighborhoods where males purchase smart phones for their girlfriends often, there are incessant phone related misunderstandings, violence and battering. Men tend to take their privileges to the extreme. Girls, who out of naivety accepted the offer, did not find it easy to exit the relationship when they become uncomfortable. A 19-year old school dropout told us that she was raped by the man who bought her smart phone: "...Men do not believe in a free lunch; any kindness they show is an investment of which no pleading can deter them from raping." She continued, "Many of us who accepted guys because of phone reasons regret the act and wished we were smarter..." (Gloria, a 19 year old trader at Nsukka Market, 21/02/2016). Men who bought smart phones for their girls tend to be adamant and avoid interference from third parties when they have a misunderstanding with their girlfriends. It is one of the reasons why parents and guardians frown at acquisition of smart phones in such manner, because they understand the risk involved. Some men insist that their smart phone should be returned to them whenever the relationship collapses, and such tensions have generated issues involving police and community leaders. "... He has slapped me for allowing another man to use the phone he bought for me. He had seized the smart phone from me many times and had uninstalled whatsapp services in it to avoid my interaction with other men," Amaka, an 18 year old fashion apprentice revealed to us. When we inquired why some girls accept smart phones from men knowing the consequences, Muna, a 17 year old university student shared her views, "...They accept because it is a 'smart phone'. It gives them identity, smart phones is freedom and reputation. It shows that you have arrived. Smart phone is girls' best friends; it cures loneliness..."

Christian-Muslim Neighborhood Perspectives to DFS Uptake

There are interesting differences in the ethnography of Christian and Muslim neighborhoods. It was easier to generate discussion with people in Christian communities on digital innovation than in Muslim neighborhoods.

We observed that there were fewer smart phones among adolescent girls in Muslim neighborhoods and the urge to acquire smart phones is not as strong as it is in Christian neighborhoods. There is less tension and phone related quarrels and most girls do not hide the use of their phone in Muslim neighborhoods. Some Muslim parents encourage their adolescent girls to get phones from male friends whom they see as potential husbands, and both feature and smart phones from friends were welcomed. However, unlike in Christian neighborhoods, the purchase of a phone does not increase a man's influence over a girl.

A major hindrance to uptake of DFS observed in Muslim neighborhoods was lack of awareness, not skepticism from adults, in contrast to the Christian neighborhoods. Aside from a few exceptions, smart phone ownership in a Muslim environment was not shrouded in secrecy, nor did it evoke attachment to somebody. In Muslim neighborhoods phones are publicly shared and phone life accountability rests more on peers and relatives than on male friends. It does little to consolidate opposite sex relationships, unlike in Christian neighborhoods. However, Christian adolescent girls have more chances for uptake of DFS, more than their Muslim counterparts, because awareness was higher in Christian neighborhoods. Surprisingly, a larger percentage of DFS uptakes in Muslim neighborhoods were "midwife" (overseen) by adult relatives - especially among educated households, unlike in Christian neighborhoods, where boyfriends play a significant role. Adult-adolescent girls' tensions are also more pronounced in Christian homes. There are also significant similarities in what we observed among the urban and the rural poor, except that tensions are higher among the urban poor.

Conclusion and Recommendations

The arguments/counter arguments on whether adolescent girls should use DFS, when to use them, and how to use them were not considered in designing market offerings and marketing campaigns by DFS operators. As a result, media information being disseminated failed to correct misconceptions and mistrust around adolescent use of DFS. Marketing campaigns for this segment of the population should be targeted at how adolescent girls can benefit from DFS. Their needs, experiences, and particular needs should inform the marketing campaign. Marketing campaigns should also focus on correcting erroneous views about smart phone use that militate against DFS uptake. This is critically important because a large percentage of information that reaches people focuses more on the negative effects of digital innovations, causing most adults to view DFS uptake with skepticism. More adequate creation of awareness should be embarked upon to change people's belief - from the idea that DFS is a value added service of financial institutions to the idea that DFS is a product line with great potential. Adults should be encouraged to play a midwifery role in ushering adolescent girls into the digital age. Adults need to realize that unnecessary restrictions to uptake could hinder adolescent girls' development and survival in the digital age. Adolescent girls need to share knowledge and resources that are not locally available and learn new norms of participation in the digital world. Indeed, digital innovations have become necessities integral to identity construction in contemporary society.

Suggestions for further research

Digital innovations are having a tremendous impact on the autonomy of Muslim girls. It has enabled them to appear on platforms they never thought was feasible and provided access to knowledge which people of their age have been denied long ago. Although a larger percentage of Muslim adolescent girls we interacted with are still naïve and timid about using digital devices for social exploration, It has opened up room for possibilities that uptake could cause a revolt and tensions that could redefine local Islamic cultures and practices in an unprecedented way. Girls' interests in other cultures have been heightened and some clerics are taking advantage of the enthusiasm by

adapting their teachings in favor of, or against, western cultures to curry converts. We suggest that future research should explore:

- Digital religion and identity conflicts among Muslim adolescent girls.
- The attitude of middle class families in Christian neighborhoods to boyfriend purchases of smart phones for their girls.
- Dimensions of phone-induced domestic conflicts and their effects on societal digital transformation
- Changing facets of opposite sex negotiations among adolescent Muslims in Digital Nigeria.

REFERENCES

- Abayomi, S.A (2010) Latest Development in Nigeria's Mobile Payments Regulatory Framework: Central Bank of Nigeria Publications.
- Alade, M.O (2013) Agricultural Transformation and Rural Development through Mobile Technology: People's Daily Newspaper February 13.
- Andagalu, E (2012) Nigerian Mobile Money Model Conference Proceedings organized by Ecobank PLC in Johannesburg
- Buckingham, D. (2008) *"Introducing Identity." Youth, Identity, and Digital Media. Edited by David Buckingham.* The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning. Cambridge, MA The MIT Press
- Damon, W., Menon, J., & Bronk, K. C. (2003). The development of purpose during adolescence. *Applied Developmental Science, 7(3), 119-128.*
- Giddens, C (1993) *Representations of Youth.* Cambridge. Polity
- Griffen, C (1991). *Modernity and Self-Identity.* Cambridge. Polity
- Hall, S (1992) The Question of Cultural Identity in Hall, S, Held, D and McGrew, A (eds) *Modernity and its Futures.* Cambridge. Polity
- Ito, M, Horst, H, Butanti, M, Boyd, D, Herr-Stephenson, B, Lange, P, Pascoe, C and Robinson, L (2008) *Living and Learning with new Media: Summary of Findings from Digital Youth Projects.* The John D. and Catherine T. MacArthur Foundation Reports on Digital Media and Learning. November
- Jensen, L. A. (2003). Coming of age in a multicultural world: Globalization and adolescent cultural identity formation. *Applied Developmental Science, 7, 189-196.*
- Kenny, E (2016) "Phones means lies": Secrets, Sexuality and the Subjectivity of Mobile Phone in Tanzania. *Economic Anthropology 3: 254-265.*
- Lerner, R., Brennan, A.L., Noh, E.R. and Wilson, C. (1998). *The Parenting of Adolescents and Adolescents as Parents: A Developmental Contextual Perspective.* Parenthood in America. online: http://www.allacademic.com/meta/p195372_index.html. (access date: 01.03.2009).
- Macnee, W (2014) *What Opportunities Mobile Banking can Offer Women in Developing Countries.* <http://www.cherieblairfoundation.org> (Access date: 22.01.2015)
- Morcos, C and Sebstad, J (2011) *Financial Education for Adolescent Girls.* Washington DC. Making Cents International
- Musharbash, Y. (2007). Boredom, time, and modernity: An example from aboriginal Australia. *American Anthropologist, 109, 307-317.*
- Nanda P, Das P, Singh A & Negi R (2013), *"Addressing Comprehensive Needs of Adolescent Girls in India: A Potential for Creating Livelihoods"*, New Delhi, International Centre for Research on Women.
- Nikolas, R (1991). *Governing the Soul.* Second edition, London, Free Association.
- Ozmete, E and Bayoglu, A.S (2011) Parents- young adult Conflict: A measurement of Frequency and Intensity of Conflict issues. *Journal of International Social Research Vol. 2 (8)*
- Weber, S and Claudia M. (2008) *"Imagining, Keyboarding, and Posting Identities: Young People and New Media Technologies."* Youth, Identity, and Digital Media. Edited by David Buckingham. The John D. and Catherine T. MacArthur Foundation Series on Digital Media and Learning. Cambridge, MA: The MIT Press,
- Tatz, C. (2001). *Aboriginal suicide is different: A portrait of life and self-destruction.* Canberra, Australian Capital Territory, Australia: Aboriginal Studies.

i. Digital Profile of Adolescent girls in Christian and Muslim neighborhoods

Item	Christian neighborhoods (78 respondents)	Muslim neighborhoods (42 respondents)
Phone Ownership		
Feature phone	94%	98%
Smart phone	87%	75%
Both feature and smart phone	80%	72%
I share with adults	3%	5%
Source of the phone		
Parents/relatives	2%	20%
Boyfriend	96%	74%
Self	2%	6%
Others	0%	0%
Frequency of phone related quarrels		
Several times a day	13%	2%
Daily	24%	16%
Weekly	60%	30%
Monthly	3%	48%
Does not occur	0%	4%
Average Hour Spent on Different phone activities daily		
Networking	0.65hr	1.30hr
Peer-based learning	0.30hr	0.30hr
Financial transaction	0.10hr	0.10hr
Learn new skill	0.25hr	0.30hr
Play games	0.80hr	0.70hr
Play music and videos	1.00hr	0.25hr
Ownership of bank account		
Yes, with commercial bank	47%	33%
Yes, with microfinance bank	16%	19%
No, I share with someone	28%	34%
No, I do not have	9%	14%
Who introduced you to DFS		
Parents/relatives	3%	18%
Boyfriends	94%	74%
Peers and school mates	3%	5%
Opinion leaders	0%	3%
Percentage of adolescent girls hiding their mobile phone from adults		
Feature phones	1%	3%
Smart phones	36%	16%

ii. DFS Profile of Adolescent Girls in Christian and Muslim Neighborhoods

Average frequency of DFS transactions in the last 30 days	Christian neighborhoods (78 Respondent)	Muslim neighborhoods (42 respondents)
Buy airtime		
Online purchase	12times	10times
Transfer money	2times	2times
Save money	6times	5times
Receive/give gifts	0times	0times
Make payment	8times	4times
Make inquiry	3times	2times
	6times	7times
Adolescent girls major concern about using DFS		
Security of transaction/identity	84%	79%
Loss of phone	72%	69%
Reporting framework	63%	60%
Unstable network	58%	63%
Lack of trust on financial institutions	87%	84%
Unstable government policies	53%	49%
Adults major concerns towards adolescent girls uptake of DFS		
Lack of trust on operators	73%	65%
Poor awareness	62%	79%
They are still young and vulnerable	79%	56%
It is difficult to monitor their behavior	60%	48%
It gives access to unapproved relationships	60%	44%
New role assumed because of the uptake of DFS		
Stronger voice in family finance	78%	70%
Link between people and DFS operators	63%	52%
Increased interest in online business	8%	9%
Financial adviser to some people	9%	12%
Educator/teacher	18%	16%

iii. Effect of DFS uptake on the socio-economic lives of adolescent girls

Item	Christian neighborhoods	Muslim neighborhoods
1.Involvement in family decision	Very significant effect	Significant effect
2.Ease of gifting	Very significant effect	Very significant effect
3.Extending and maintaining friendship	Very significant effect	Very significant effect
4.Independence and autonomy	Very significant effect	Minimal effect
5.Spending habit	No effect	No effect
6.Payment pattern	Significant effect	Significant effect
7.Savings habit	Minimal effect	Minimal effect
8.Visit to banks	Very significant effect	Very significant effect
9.Control over finance	Very significant effect	Significant effect
10.Financial literacy	Significant effect	Significant effect
Boyfriend-girlfriend relationship	Very significant effect	Significant effect