



## **Problems and Prospects of Using ICT in Integrating Almajiri System into Formal Education in Dutsinma Local Government Area, Katsina State**

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### **ABSTRACT**

The Almajiri system of education in Nigeria deserves all the required attention and intervention by all sectors of human life because of the total neglect it is facing. This is to promote lifelong education, social development and economic empowerment. The most effective solution is the use of Information and Communication Technology (ICT) this research project examined the prospect and challenges of using ICT in the teaching and learning processes of Almajiri children/Almajirai (pupils and beggars) education Nigeria. The method was adopted and data were collected from the Almajiri pupils, their teachers, and parents from communities with high concentration of Almajirai schools in Dutsinma Local Government Area, Katsina State. This was revealed while the official language of communication in Nigeria is English, the language spoken by Almajiri pupils and teachers in the study area is mainly Hausa. Seemingly, the parents and the teachers were quite familiar with ICTs such as mobile phones, television, and computers. The Almajiri pupils were more familiar with television and mobile phones, and very few had ever seen or used a computer. Gradually however, the use of indigenous language was implemented in course-ware development and other ICTs- televisions, multi-media projectors were also used to ease the total implementation of ICTs. The study on the above explanation reveals that it is necessary for any teacher teaching the Almajiri pupils to acquire practical skills or experience in ICT so that the use of descriptive statistic such as frequency, cross-tabulation and independent test will provide a tremendous result. . Some strategies proposed for successful adoption of ICT in Almajiri education include the use of indigenous languages in courseware development and the use of one-to-many ICT facilities, such as multimedia teaching aids, projectors, and smart televisions. The findings, after testing hypothesis indicated a tremendous success in the performance of Almajiri children (pupils) in their various schools.

**Keywords:** Cultural and Social Implications. Information Literacy-Learning Communities. Teaching Learning Strategies.

### **INTRODUCTION**

The importance of education to an individual or society cannot be over-emphasized. Therefore, the total stability and maintenance of civil rule predicted by the synopsis of formal education. That is why, the philosophy of education emphasizes the importance of morality in every human society. There are three developments with regards to demand for education at the basic level, which compelled to make primary schools as the main agents for the delivery of education. There are large numbers of school- age children who are out of school despite years of investment in this regard. Secondly, among those enrolled, there are equally large numbers of such children that dropped out before completing the full cycle of schooling or before acquiring the basic literacy skills. Thirdly, many of those that completed the full cycle of schooling ended up having poor learning outcomes mainly due to the poor state of infrastructure and

personnel in those schools. There are problems associated of access to schooling, retention and achievement, all of these cumulatively leads to the poor state of education in the rural areas and on the populace in particular. There are fewer in the rural areas and the many of the available few ones are faced with acute shortage of personnel, and ICT centers especially in Katsina State. The consequences of these are irregular attendance to school drop- out or outright refusal to enroll. Children of the poor are unlikely to have the basic nutritional status necessary for effective learning (United Nation Educational Scientific and Cultural Organization 2003): these children often come to school hungry, tired and lacking motivation for learning.

Thus, the Almajiri education system is an integration of western education with the traditional Quranic School systems without interfering with the goals of the latter. It is a special education system, which aims at strengthening the ability of the learners to read, write, and memorise the Qur'an in conducive learning environments. At the same time, it aims at introducing secular subjects of education into Qur'anic school system to make the products of the system literate, numerate, and skilful as a way of meeting the goals of Education For All (EFA). In other words, it incorporates elements of basic education (literacy, numeracy, and life skills of the western type of education) into the traditional Qur'anic school system through certain strategic frameworks (UBEC, 2013).

Many state governments in Northern Nigeria had, indeed, begun the operation of the Almajiri education system, adopting different models to achieve its objectives. For instance, about 117 Model One Almajiri schools that integrate western education with Quranic education are in operation across 26 states of the federation and the Federal Capital Territory (FCT). Also, 138 schools in 30 states and the FCT are already adopting Model III of the Almajiri system, retaining the Islamiyya and Arabic training in a more formal environment provided through government intervention funds (UBEC, 2013).

#### **Statement of Problem**

Although the social interaction programme, such as the school feeding by the Federal Government of Nigeria has been reportedly yielding result such as increase in the school enrolment. (Taylor and Ogbogu, 2016), these this not yet reliable evidence of the success of the Almajiri objectives and outcomes. The affordable nature of ICT tools such as mobile phones and social media programmes created consequential and flexible learning environment. Other instructional materials can be delivered to improve interactive learning environment. The invention of communicative tools such as skype and zoom has the potential to revolutionise the learner experience of pupils (Carr and Hayes 2005). In addition ICT has shown that with the adoption of necessary technology, learning can be enjoyable experience. For example, social media teleconferencing and video – telephone would eliminates physical barriers passed by the distance between teacher and learners (Lau et al 2011).

Moreover, a lot of instructional materials can be delivered audio-visually. Studies have shown that ICT facilitates improved interactive and educative online environment for the pupils, enables greater levels of remote learning, and brings inclusion of students into a "live contact" with teachers through e-mail, chat sessions, e-learning, web-based learning including internet, intranet, extranet, CD- ROM, television and audio–video tape (Sharma et al., 2011; Sangra & Gonzalez- Sanmamed, 2016; van Brakel & Chisenga, 2003). In education, ICT has been proven to have the capacity for providing many opportunities for involvement, promoted by user-defined preferences, active object manipulation, real-time events, multiple representations of data, intelligent responses, and participation in games and communities—all of which can improve the learning outcome of pupils (Westera, 2004).

Taking the problem of curriculum delivery as a more plausible reason, this study explored the use and significance of ICTs in the effective delivery of the Almajiri curriculum with the main purpose of determining the extent to which ICT can be used to enhance teaching and learning in Almajiri schools and recommending strategies for its effective use in bringing about quality learning in the system. To this end, the study endeavoured to answer the following questions:

1. Which ICT devices are most recognizable and utilized by the different stakeholders (pupils, teachers, parents)?
2. How do the stakeholders perceive the use of ICT for teaching and learning in Almajiri schools and is there any effect of gender on this?

3. What challenges do stakeholders envisage in the use of ICT in Almajiri schools?
  4. Which ICT device(s) are currently being used in the Almajiri schools?
  5. What outcomes and what strategies for success can be recommended in the use of ICT for teaching and learning in Almajiri schools?
- 3 Educational situation of the Almajiri schools: The connection between public and Islamic education systems

Almajiri is a system of Islamic education practiced in northern Nigeria. It is an age- old tradition where parents send their children, mostly boys, to distant locations to acquire Qur’anic education. Many never received a formal education. Instead, they spent their formative years in traditional Islamic education memorizing the Qur’an. Under this educational system, many rural and poor families who cannot afford formal schooling have made this choice with the belief that they are fulfilling their obligation to provide a religious and moral education to their children and that the learning is provided free of charge.

The system was enthusiastically supported by all stakeholders in the education enterprise, which enabled it to record unprecedented success in the pre-colonial period. For instance, Ajayi and Oloruntimehin (1976, p. 78) observed that “It should be emphasised that majority of West Africans in the first three quarters of the nine- tenth century Islam, not the Christian abolitionist movement, was the revolution- ary factor creating larger political with new economic opportunities and establish- ing new religious obligations and social values”. According to Clarke (1978), “[i] n Kano fifteenth century there were an estimated three thousand mallams. Teaching and learning were by lectio and memoriter (reading aloud and rote memorisation). With time the peripatetic system gave way, never completely, to a formalised, insti- tutionalised Qu’ranic education” (p. 134).

Hence, for many centuries there existed in northern Nigeria an educational sys- tem considered by many to be largely acceptable. Thus, the introduction of a western system of education was not without a challenge. In the colonial era, western system of education was regarded by Muslims to be culturally and religiously unproductive. The arrival of the colonial rule affected the northern Islamic education scheme, its supporters as well as admirers. Islamic education became less and less a concern of the government and mainly left in private hands.

Almajiri system of education being a traditional and non-formal system of educa- tion is today faced with various challenges and they are not unrelated to funding and the level of support received by drivers of the system in contemporary period. That is why there are calls for more integrative and comprehensive system of learning that combines the western or the public system of education in the country as well as Islamic system of education.

## LITERATURE REVIEW

The relevance of ICT in combating the problem of teaching and learning among the most vulnerable group has explored (Ibrahim & Sanda, 2019, Ibrahim et al. 2019). In Nigeria, Almajiri children are considered a vulnerable group because they often abandon the Quranic schools to beg for food or money all the time and are denied full access to formal education. The Nigerian government is responding to this problem as established in the national commission for nomadic education in 1989. The commission was saddled with the responsibilities of providing quality basic education for nomads (which also include Almajiris or pupils). Today, the education has changed in its mood and pattern with ICT as new innovations. They can be used for anything provided there is appropriate programme for such a thing. The same computer can be used for diverse things for diverse people. One of impacts of ICT on education is that it is changing the nature of the teacher – learning process. The teacher used to be the master, custodian and importer of knowledge. Moreover the demand for education for Africa has been on the increase. Therefore, there is a need to improved people’s access to learning. Besides, technology which is one of the commonest means to communication in extending the possibilities for teaching and learning in education institution (Kabir & Kadage, 2017), Numerous studies have shown success stories of ICT tesching and learning in the developed world (Addo,2001) Guemide and Benachaiba, 2002 Hong & Songam, 2011). Olatunji et al, (2016) speak to the delicate nature of ICTs and young minds when they

observe that “technologies play important role in children lives who are residents in the digital era and operate and share and information on right and privileges of vulnerable people. In addressing how ICT and computer have been used in educating or changing children live positively or negatively, Drigas et al, (2015) in their study present an overview of studies between 2003 2004 which concentrates on collaborative co-learning and other ICT applications in kindergarten children, who face memory difficulties.

In addressing how ICT has been used in educating or changing children’s lives positively or negatively, Drigas et al. (2015) in their study present an overview of studies between 2003–2014 which concentrates on collaborative co-learning and other ICT applications in kindergarten children who face memory difficulties. They also examined the effectiveness of ICT in maths and in children who face learning difficulties as well as the effectiveness of a collaborative intervention and diagnostic tools for children with poor working memory. In concluding their study, they pointed out that certain technological breakthroughs can be noticed in several kinds of research that focus on the support of children with such deficits. Al-Huneini et al. (2020) investigated the introduction of touchscreen tablet computers into rural primary schools in Oman. The study found that the tablets changed the working culture of staff in the project and the behaviour and responsibilities of the pupils.

Today, many researchers are convinced that ICT in early childhood education provides multiple possibilities for young children (Kerckaert et al., 2015; Plowman & Stephen, 2003; Selwyn & Bullon, 2000). That is why many early childhood educators feel positive about using ICT with children. Also, it is believed that ICT and electronic gadgets can enhance and improve students’ learning process as well as provide better teaching methods (Sangra & Gonzalez-Sanmamed, 2016; Leung, 2011; Saruji et al., 2017). Ciccarelli et al. (2015) examined the health implication of children using mobile ICT at home. They focused on postures during ICT use and on musculoskeletal complaints. The study concluded that unconventional postures adopted by children in the home are questionable, hence can have negative repercussions (Ciccarelli et al., 2015). In addition, many children with disabilities are often segregated and ICT has been highlighted as a tool for communication and inclusion for children with disabilities.

It is worth noting that educators, researchers, and thinkers have taken up the challenges of using ICT since the 1980s with varied success. The advent of the internet and the World Wide Web has pressured new productivity and service demands as well as expectations (Carmona & Marin, 2013; Cox & Marshall, 2007; Melor et al., 2009). For instance, in a paper that investigated teachers’ and educational consultants’ perceptions of ICT integration in Québec English Schools, specifically with regard to the benefits and challenges of ICT integration therein. Results revealed higher student engagement levels and enhancement of the learning process as the main benefits of integrating ICT in English Québec Schools. The following challenges were also highlighted: lack of supporting school leadership, inconsistent investments in ICT equipment, infrastructure and resources, the inflexibility of funding, the need for additional professional development and support, and incorporation of technology in evaluations and curricular plans (Rabah, 2015).

Researchers have also attempted to address the factors affecting the successful implementation of ICT in schools. Some of the results showed that ICT was perceived as an important tool in improving performance, collaboration, learning experience, and learning outcomes. However, some challenges that affect the application of ICT are, for example, the lack of space, resources, maintenance, a lack of ICT skills among school along with a lack of ICT training and a lack of clear ICT policies. Personal factors therein also contributed to the challenges. There exist some levels of prevalence of teachers’ personal factors over contextual ones. Gender and age were also determining factors of teachers’ digital competence, followed by ease of use, confidence in using digital technology, and openness to new technology. However, the overcoming of these obstacles could turn these barriers into positive factors to aid in the success of ICT implementation (Albugami & Ahmed, 2015; Ali & Proctor, 2005; Mdlongwa, 2012). This could be achieved through strategic and practical professional training (Ifinedo et al., 2020). Besides, authors have also argued that school leadership determines how ICT is implemented and its subsequent impact on teaching and learning. This involves the Principal as a school leader to lead in implementation. A positive attitude of school leaders towards the implementation of ICT will encourage

the school community to be actively involved in its implementation. However, many challenges hinder effective ICT implementation including school leadership challenges. That is why there have been recommendations besides sensitizing development partners and waiting for their contributions, school leadership should consider ICT a priority in school and allocate budgets that would promote its implementation (Mingaine, 2013).

### **Theoretical Framework**

With the recent increase in the development of ICT tools for use in education and coupled with its integration into virtually every aspect of human life, a decision concerning its acceptance or rejection by users remains an open question. Several researchers had formulated many theories concerning the adoption, perception, acceptance, infusions, and ease-of-use of ICT in the education process. These theories include: the Diffusion of Innovation theory (DOI); Social Cognitive Theory (SCT); Theory of Reasoned Action (TRA); Theory of Planned Behavior (TPB); Technology Acceptance Model (TAM) among others (Rogers, 1999; Scurry et al., 2005; Venkatesh & Davis, 2000; Mun et al., 2006). Out of many of these theories propounded, the TAM and the Unified Theory of Acceptance and Use of Technology (UTAUT) are the most dominant and recent models for the investigation of the factor affecting users' acceptance or rejection of ICT in education (Ling et al., 2011). TAM which was developed by Davis et al. (1989) as an improvement of TRA considers Attitude (A) and Behavioral Intention (BI) to measure technology acceptance in the ICT domain. This model was developed by adopting Fishbein and Ajzen's (1975) Theory of Reasoned Action (TRA) which explains the person's behavior as a combination of personal attitude and subjective norm. TAM established that two particular beliefs "Perceived Usefulness" (PU), and "Perceived Ease of Use" (PEU) are key determinants of technology acceptance or rejection of ICT. PU is the expectation of a user that the use of an ICT tool will improve his performance on a specific job while PEU deals with the perception of a user that using an ICT tool will be stress-free (Marangunić & Granić, 2015; Jain et al., 2016; Ammenwerth, 2019). These two beliefs are then used to determine the user's Attitude (A) towards using the tool, which is in turn used to determine Behavioural Intention to use (BI).

The BI is then used to determine the actual usage of the system (U).

Based on the fact that TAM ignores some important social factors that can equally affect the perceived user's acceptance or rejection of ICT, Venkatesh et al. (2003) introduced a more veritable review of TAM known as The Unified Theory of Acceptance and Use of Technology (UTAUT). UTAUT identifies four constructs and four moderating variables rather than the two key variables of TAM.

The four constructs that were identified as the main determinants of whether or not a user will accept, use and adopt an ICT for a purpose are Performance Expectancy (PEX), Effort Expectancy (EEEx), Social Influence (SI), and Facilitating Conditions (FC). PEX means the gain in job performance attained by a user due to the use of ICT. EEEx is defined as the user's perception of the amount of ease involved in using a particular ICT tool. SI is related to the social perceptions associated with using ICT while FC means the perception of an individual towards the availability of the technical aspects and infrastructure that can assist in the use of an information system. Gender, age, experience, and voluntary use were listed as the moderating factors that can affect the four constructs identified in UTAUT.

In UTAUT, PEX, EEEx, and SI are used to determine the behavioural intention (BI) of a user to make use of the technology. The Actual usage of the technology (A) can be determined with BI and FC while the four moderating factors have a direct effect on the impact of BI and use behaviour (Ammenwerth, 2019). For this research, the TAM and UTAUT models provide a basis for investigating the place of ICTs in Almajiri education, while examining the effect of moderating factors such as gender, age, and experience, which are key components of interest.

### **METHODOLOGY**

The study used a descriptive methodology by employing a survey designed to achieve the aim of the research. The study is limited Dutsinma Local Government Area, Katsina State which is of the largest Almajiri schools presence. It is located south – east of Katsina State and high concentration of Almajiri

children just like any twenty four Local Governments it should be noted that the Almajiri schools system designed exclusively for boys (Fufunwa, 1974), and its characterized by parents taking their children to far places, usually to the big cities, and handing them to over to teachers (Malams) to obtained knowledge rooted in Islam (Sulaiman, 1999) leading to the schools also being described as Qur'anic schools. In pursuing the policy of integrating the Almajiri into the formal system, three models classified as model, I model II and model III have been identified by the universal basic education (UBEC) 2013). Model I school established to integrates traditional Qur'anic school also in to formal education system within their initial location. Model II school these are Ismiyyah and Tahfiz school supported by the government to provide boarding facilities to benefit Qur'anic school. Model III school- are already existing Islamiyyah and Arabic schools supported with funds for rehabilitation of their infrastructure. The population considered for the study were the unsupported Almajiri schools and those in Government supported school (I e model I, Model II, and Model III schools), teachers at these schools, parents in households and in the communities where the unsupported schools located were also part of the study. Thus the population comprised of these groups: 1.1 Pupils in the Almajiri schools in Ktsina State, Nigeria 1.2 Teachers in the Almajiri schools in Katsina State Nigeria 1.3 Parents of school- age children in Katsina State Nigeria. The sampling design adopted for the study used a purposive sample from Karofi village in Dutsinma Local Government Area, were such village haa a presence of any of the three model of Government – support Almajiri schools. Therefore, based on the sampling design, the pre-fluid samples were proposed as 200 Almajiri 50 teachers and 50 parents. Data were collection using the researchers administered questionnaires that were designed based on the key components of the Tam and the unified theory of acceptance and used of technology UTUTA. Questionnaire items were intended to identity responsibility with the ICT devices. The questionnaire of children had two sections – background details and familiarity with ICTs. The section of background details include items such as gender, age, class in school, home town focused section 2 on computers, mobile phones, television started asking the child to identity the devices from a street with picture of computer, cameras, mobile phones, television and radios. An open ended question was used to elicit what the child used the device for.

The questionnaire for teachers also consisted of participant consent section and four other major sections. These were; Background of the respondent; Frequency of use of ICT devices; and Ease of use of ICT devices. The last two sections used a 4-point Likert scale of “very often” to “never” and “very easy” to “very difficult” to characterize the respondents frequency of use of ICT devices; and ease of use of ICT devices, respectively. A battery of twelve statements measured with 5-point Likert scale of “strongly agree” to “strongly disagree”, were used to elicit teachers’ opinions on the use of ICTs for teaching and learning.

The questionnaire for the parents followed a similar arrangement with the teachers’, starting with background details such as gender, age, and educational level, then familiarity with ICTs, and opinion on its use by children. This last section also focused on characterizing the respondents’ frequency of use of ICT devices; and ease of use of ICT devices such as computers, mobile phones, and television. A pilot test was done in July, 2019, to validate the question- naires after which they were updated. The questionnaires were administered by the researchers simultaneously across the three towns from 27–31 August, 2019. The researchers worked with translators to aid communication with the respondents. Consent was obtained from the head teacher before pupils in the school were interviewed. The purpose of the research was explained to the chil- dren and they were informed that they could stop participating at any time if they so wished. Informed consent was also obtained from the teachers and par- ents before the questionnaire was administered.

Analysis of the data collected was done by using descriptive statistics such as fre- quency, cross- tabulation, and independent t-test to test hypotheses.q1.

**RESULTS**

A total number of 300 questionnaires were distributed to three categories of respondents representing the key stakeholders in the Almajiri education system- pupils, teachers, and parents. At the end of the data collection, the number of useable questionnaires was 164 from the pupils, 39 from teachers, and 41 from parents, totalling 244. This represents a 95% response rate.

**Background of respondents**

The background of the respondents described by their gender, age group, level of education, and the languages spoken are presented in this section. The gender distribution of respondents is shown in Table 1. Out of the 164 pupils that were sampled, 105 (64%) were male, while 59 (36%) were female. Similarly, 34 (87.2%) of the 39 teachers that participated in this study were male and 5 (12.8%) of them were female. Of the 41 parents that were also captured in this study, 87.8% were male while the remaining 12.2% were female. The number of female respondents was this low for all the population groups involved in this study (children, teachers, parents) because of the religious and cultural practice in the study area. In the north-central part of Nigeria, free interaction with women or girls is not encouraged.

A majority of the pupils involved in this study were between six and nine years of age (53.7%) as shown in Table 2. None was below the age of six as none of the children in the Almajiri school system began their primary education at an age lower than six years. The results in Table 3 also show that a majority of the teachers and parents in the sample were aged between 25 to 50 years – 52% of the teachers and 71% of parents.

**Table 1. Gender of respondents**

Sex	Children		Teachers		Parents	
	Frequency	%	Frequency	%	Frequency	%
Male	105	64.0	34	87.2	36	87.8
Female	59	36.0	5	12.8	5	12.2
Total (N)	164	100.0	39	100.0	41	100.0

**Table 2. Age group of children**

Age group (in years)	Frequency	%
Below 6	5	3.0
6 – 9	88	53.7
10 – 12	39	23.8
13 – 15	20	12.2
16 – 18	3	1.8
Above 18	1	0.6
No response	8	4.9
Total (N)	<b>164</b>	<b>100.0</b>

The educational level of the respondents is presented in Tables 4 and 5. The Table 4 shows that about 40% of the pupils involved in this study were in primary six. Meanwhile, 33 of the sampled pupils, representing 20.1%, were in primary 4; 19 (11.6%) in primary 5; 15 (9.2%) in primary 3 and 32 (19.5%) in Qur’anic class.

Table 5 shows that 17 (43.6%) of the total sampled 39 teachers had tertiary education ranging from the National Teachers Certificate to University degrees. A substantial number of the sampled teachers (38.5%) had secondary education, which is below the standard qualification for teaching in primary school. Also, surprisingly, 7 (17.9%) of the sampled teachers had primary education, which is well below the minimum acceptable standard for teaching in primary schools in Nigeria.

Respondents were asked to indicate the languages they often use in school, and the results are shown in Table 6. Notably, the most common language, which pupils and teachers speak and use for teaching and learning, is Hausa. Amongst children, 73.8%, speak Hausa while among teachers the proportion is 76.9% that speak Hausa. Other indigenous languages that are also spoken by pupils and teachers are Nupe and Gwari. Additionally, 20% of the pupils sampled and 59% of the teachers can speak Arabic language. Less than half (49.4%) of the pupils can speak English compared to a majority of the sampled teachers (76.9%). Thus, there is a multiplicity of languages spoken and used in school.

**Table 3 Age group of teachers and parent in the sample**

Age group (in years)	Teachers		Parents	
	Frequency	%	Frequency	%
Less than 25	6	15.4	7	17.1
25 – 30	11	28.2	13	31.7
31 – 40	14	35.9	7	17.1
41 – 50	7	17.9	9	22.0
51 – 60	-	-	3	7.3
Above 60	1	2.6	-	-
No response	-	-	2	4.9
<b>Total (N)</b>	<b>39</b>	<b>100.0</b>	<b>41</b>	<b>100.0</b>

**Table 4. Education level of children**

S/No.	Equivalent class	Children	
		Frequency	%
1	Primary 3	15	9.2
2	Primary 4	33	20.1
3	Primary 5	19	11.6
4	Primary 6	65	39.6
5	Qur’anic class	32	19.5
	<b>Total (N)</b>	<b>164</b>	<b>100.0</b>



### Respondents' familiarity with ICTs

One of the research questions has to do with familiarity with ICTs. It is important to identify this to have a baseline from where to launch the use of ICT in teaching and learning among the stakeholders in the Almajiri school system. Results from each stakeholder group are presented in the following sections.

**Table 5. Education level teachers and parents**

Highest qualification	Teachers		Parents	
	Frequency	%	Frequency	%
Primary	7	17.9	10	24.4
Secondary	15	38.5	15	36.6
Tertiary	17	43.6	16	39.0
	39	100.0	41	100.0

**Table 6** Languages spoken by children and teachers

S/No.	Languages spoken	Children		Teachers	
		Frequency	% of N*	Frequency	% of N**
1	English	81	49.4	32	82.1
2	Hausa	118	73.8	30	76.9
3	Nupe	80	40.9	20	51.3
4	Gwari	9	13.4	2	5.1
5	Arabic	33	20.1	23	59.0

Sample size: Children (N\* = 164); Teachers (N\*\* = 39)

### Children's familiarity with ICTs

Pupils were asked various questions about their familiarity and use of computers, mobile phones, and television. Such questions included confirmation of use, ease of use, frequency of use, and willingness to use ICT for learning. The results are pre- sented in Table 7.

The results in Table 7 reveal that a large proportion of children (70% or more) could identify all three ICT devices; a higher number identified the television set (81%), followed by the mobile phone (75%) which was more than those that could identify the computer (71%). These results are reflective of the pervasiveness of each of the different ICT devices in society. While a majority of the sampled children (60.4%) confirmed they had never used a computer for learning, a large majority (77.4%) of them confirmed that they had seen and learnt through television. Equally, a good number of the students (54.9%) confirmed that they used and had learnt through mobile phones.

Reasons why the pupils had rarely used a computer for learning is deduced from their perception about the easiness of using each of the ICT devices they had identified to be familiar with. Fifty-seven of the students, representing 34.8%, perceived the use of a computer to be "very difficult" while 15 of them, representing 9.1%, said computer is "very easy" to use, although a large majority of the students (92), equivalent to 56.1%, did not give any response in respect of how easy they found the use of computer for learning purposes. On the other hand, a large proportion (77.4%) perceived television to be very easy to use for learning and 79 (48.2%) also said mobile phone is similarly very easy to use.

Their perception about the ease of use or otherwise of each of the ICT devices identified supports or explains the frequency of using each of the devices by the students. Thus, while 105 (64%) of the students did not give a response to how frequent they use a computer, only 27 (16.5%) said they used it weekly and 8 (4.9%) of the students used the computer once in a year, explaining why a majority perceived it to be very difficult to use. On the other hand, 60 (36.6%) watched and used television for

learning every week while 62 (37.8%) watched and used television many times in a year. Only a small percentage of 3.7% said they watched and used television once a year. Meanwhile, nearly half of the students noted that they would be happy to use each of the identified ICT devices as part of their daily or normal lessons (47.0% for computer; 44.5% for mobile phone and 55.5% for television).

An open-ended question was used to obtain information on what the child did with the various ICT devices. Their responses are categorised and summarised in Table 8. The table reveals that there are several ways that the students who responded to this question in the Almajiri system use the identified ICT devices. For instance, most of the children (20%) that indicated what they used television for, used it “to watch film, play games and listen to music”. They also used the television for “listening to preaching and Islamic lectures”; and “to access information and news” (10% of the children in each case). On what they used the mobile phone for, many children (13%) indicated that they used it for “sending messages, receiving call, browsing, and downloading information”. Six percent (6%) of the children said they used the mobile phone also “to watch film, play games and listen to music” and 5% said they used it for “learning”. A smaller proportion used the mobile phone for “For reading Qur’an and listening to preaching/Islamic lectures” (2%), “for keeping record and snapping messages/pictures” (2%) and “to access social media” (2.4%). Unsurprisingly, of the devices presented to the children, only the mobile phone was identified as being used mobile to access social media. Of the children that responded to this open-ended question, the highest proportion of them (8%) used the computer mostly to “watch film, play game, and listen to music”. Next to this, was the use of the computer “to access information and news” (3%) and “for word processing and typing” (3%). Two percent (2%) each used the computer for “learning”, for the purpose of “reading Qur’an, listening to preaching and Islamic lectures”, for “keeping record and snapping messages and pictures”, and to send messages, receive call, browse and download information.

## RECOMMENDATIONS

Recommended strategies for success in the use of ICTs for Almajiri education. The findings from the study have various implications for ICT enabled education of Almajiri children in Nigeria. These are outlined below along with some recommendations:

- The dominance of the English language for computer systems and applications is a potential barrier to ICT adoption for educating the Almajiri given the finding that although the English language is the official language for teaching in Nigerian schools, a majority of the children and their teachers used other languages such as Hausa more frequently. To encourage the adoption of ICT, computer systems, applications, and courseware written in the most commonly spoken languages are needed.
- The Almajiri schools hardly get the teaching and learning facilities they require, therefore, there is a need to make adequate provision in this regard to enhance modes of communication, cost-efficiency in the long run, better teaching and learning methods, and easy student management. Facilities for ICT infusion, such as computers, projectors, smart televisions, and power backup, should be provided.
- A sizeable number of the pupils confirmed that they used and had learnt through mobile phone and other related devices; this avenue can be further explored to improve engagement, improve knowledge retention, encourage individual learning, encourage collaboration and enhance lesson delivery and class management for teachers.
- The Nigerian government needs to leverage the power of ICT devices for Almajiri schools especially because of the enthusiasm showed by the pupils and their teachers. Moreover, the benefits of ICT in teaching and learning far outweigh the disadvantages. The adoption of ICT is required to develop new, innovative ways to interact and communicate with students, higher engagement rates, faster learning, and improved teaching methods all of which invariably benefit the country at the end of the day.
- The Nigerian government should make the Nigeria Certificate in Education (NCE) a minimum qualification of teachers in Almajiri education. This will help bridge the divide between the

Almajiri education and the conventional schools in Nigeria. It is important because many of the teachers in Almajiri schools are not trained in the modern techniques used by conventional school teachers, and hence may be seen as not in tune with modern trends. This reflects back upon the subject matter of their lessons and the interest of pupils for a laudable future. The adoption of modern teaching facilities and techniques will go a long way in increasing the percentage of progress over time and encourage pupils to go into various fields of learning.

## CONCLUSION

The government of Nigeria has rolled out various policies towards reducing the exclusion of Almajiris in areas of education, economic empowerment, child abuse, and crime, with not much impact. Based on the results achieved by others on the use of ICT to improve learning and aid teaching, this study sought to examine a range of issues that could promote or limit the adoption of ICT in the education of the Almajiri in Nigeria. It is expected that the recommendations from this paper would serve as a guide for policymakers, funding agencies, researchers, educationists, NGOs, courseware developers, and philanthropists, in the quest to improve the educational achievement of the Almajiri children and eliminate the divide they experience in society.

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## DECLARATIONS

All authors listed have significantly contributed to the development and the writing of this article.

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