

25

Repositioning Special Education with Information and Communication Technology (ICT) for Sustainable Economic Development of Exceptional Children in Nigeria

By

MAGDALEN UGHOCHI TUOYO

*Adeyemi College of Education,
Ondo,
Ondo State.*

Abstract

The impact of the Information and Communication Technology in education is commendable. Special education is not left out in this profit. The purpose of this study is to examine the place of Information and Communication Technology (ICT) in enhancing the economic development among special needs children in Nigeria. The survey research design was adopted. Three research questions and two hypotheses were formulated. The special education graduates in Oyo town, Ibadan metropolis in Oyo State, Nigeria constitute the population. 150 of them were selected with purposive sampling technique. A 25-item questionnaire was used for data collection. It was validated by experts and its reliability coefficient was about .79. The data collected was analyzed with SD, X and t-test. The result shows that special needs education can be helped with ICT for sustainable economic development. It was recommended that modern ICT facilities should be provided not only by the government but also by all agents of education such as parents, teacher, NGOs and educated philanthropists.

Economic development is urgently needed especially all over Africa. It is the core of all development such as social development, educational development, physical development, environmental development and eventually, national development (Tuoyo, 2012).

Unfortunately today, the world is witnessing serious economic recession. This is manifested in form of unsuccessful economy of most nations, deteriorating business

conditions, low level of industrial production and trade, unemployment as well as well as other variables. In Nigeria and many other nations of the world, many businesses are failing because of continuing recession. This is why in the first place this study is interested in economical development in special education. The concept is that to help issues, no one should be allowed to be a liability to the family, community or nation. In essence, “all hands should be on the deck” for production and to contribute their quota to bring about the required most needed economic change in the world. Nobody should be regarded as a nonentity and so, everybody that is born has something to offer the world, no matter how little or insignificant (Adedokun, 2008).

Education, from time immemorial has always been believed and defined as means and process of bringing about positive changes in specific and desired directions (Oyesoji, 2011). Hence, the children with special needs in Special Education can also be made productive through the instrumentality of appropriate education. This necessitated the incorporation of Special Education into National Policy on Education. Hence, Special Needs Education and Schools abound in Nigeria.

Meanwhile, observation of these schools all over the nation shows that they are degraded and nothing to write home about them. Some of them were founded about three decades ago and up till date remain in their old glories with almost no significant improvement. In fact, some of the schools are like ghost cities and appeared deserted (Okafor, 2009). Some of the buildings are inhabitable for the inmates yet without any other option. Not only the structures and buildings, the facilities expected to be in the schools are either non-existent, non-functional or in the worst state of repairs (Udoka, 2010).

Despite this sorry state of the schools, there are candidates that must be educated. The method adopted in educating them has remained the same from time immemorial. It is the same old fashioned Braille machine, typewriter, chalkboard, posters and so on that are still being used (Okafor, 1992). This is so serious that the learners hardly come out of the schools to be any productive relevance to themselves and their community. These people were born with diverse disabilities not caused by themselves.

The schools which were really desired to serve as succour, rehabilitation venues, redemption and positive change seem to have nothing meaningful to offer. In some cities, such as Lagos, the physically disabled students with uniforms are often seen by the road side in groups of four or five begging for alms (Adedokun, 2010).

Comparatively, information from video tapes and internet show that schools for exceptional children of most advanced nations are equipped with facilities for teaching

and learning. They are found to be the most technologically equipped schools with all forms of information communications technology facilities (Tuoyo, 2012). They have provision of computers for all forms of handicap conditions. Each computer and ICT equipment is suitably designed to serve as personal tutor, colourful and captivating, interesting and capable of arresting the learners' attention irrespective of their disabilities. Hence, introduction of total embrace of ICT into special education has made almost all exceptional children that attend such schools to become economically productive citizens (Papalia and Olds, 2009).

On the contrary, no trace of ICT or computer can be found in the Nigerian nation's special schools (Adedokun, 2010). Where they exist, it is only for administrative purposes. Meanwhile, Nigerians have been importing all forms of second handed goods. Till date, one is yet to see any of them that is useful for exceptional children (Akunyili, 2012).

Government has been single-handedly financing special education in Nigeria. In developed world, the reverse is the case because all hands of various organizations, individuals and also the government are on deck in sponsoring special education. Though the importance of ICT for economic improvement of special education is paramount in the minds of educators but financial capacity is lacking. Without the intervention of the government and occasional donations from few organizations, special education could not have moved much forward.

Meanwhile, despite the scope and perhaps depth of the above research studies, they only examined the use of computer in enhancing the academic performance of children with learning disabilities. This study is mainly concerned with using ICT to improve special education and hence, reposition it economically.

Statement of the Problem

The rate of low academic performance of children with special needs has assumed a worrisome dimension. With low academic achievement, the children with special need will not be able to obtain any meaningful jobs or economic development. Can't the situation be improved? It is against this background that the study seeks to examine some of the ways Special Education can be improved through the use of modern methods of teaching, especially ICT for children with special needs at Oyo and Ibadan towns to reverse the ugly situation of non-achievement in economic development such as being employed in meaningful jobs. Moreover the children with learning needs should not be allowed to be liabilities to their families, community and the nation. They should be made to contribute their quota to bring about the required most needed economic change in the nation.

Purpose of Study

The purpose of this study is to find out the extent to which special education and special needs children have embraced ICT. It is also to find out how the special schools, the special needs children and their education can be better improved and empowered with ICT for their sustainable economic development.

Research Questions

1. What is the extent of ICT compliance of special education schools?
2. In what ways can the exceptional children be repositioned with ICT for sustainable economic development?
3. In what ways can special education be repositioned with ICT?

Hypothesis for the Study

Ho₁: There is no significant difference in the opinion of special educators in Oyo town and Ibadan town on the state of special education schools.

Ho₂: There is no significant difference in the opinion of teachers in Oyo town and Ibadan town on the need to reposition special education, its recipients and the school for economic development through the provision of ICT training.

Research Design

The descriptive survey research design was adopted for the study. Information was collected from a representative sample of the target population with the use of a survey questionnaire and personal observation. The result based on the sample was generalized to the population.

Population for the Study

The population for this study comprised of special educators of University of Ibadan and Oyo Special College of Education. They were a total of three hundred and fifty special educators from both towns.

Sample and Sampling Technique

A purposive sample technique was used to select 80 special educators from Federal College of Education (Special), Oyo and 70 special educators from the Department of Special Education, University of Ibadan. Hence, a total of 150 special educators were used for the study.

Instrument for Data Collection

Questionnaire and personal observation were used for data collection. The questionnaire based on the purpose of the study was prepared by the researcher. It contained 26 structured items divided into sections A and B. Section A sought for information about the bio-data of the respondents while section B contained the items

for the questionnaire. It contained a list of option statements followed by a set of four options. The options ranged from Strongly Agreed (SA), Agreed (A), Disagree (DA) and Strongly Disagreed (SD). The options were assigned weights of 4, 3, 2 and 1 respectively.

The participants responded to options as they applied to them and which corresponded to their respective answers. Observation was the second instrument used in data collection. This was personally conducted by the researcher in some of the schools in Ibadan Township. This was to observe the state of the schools, facilities and student/teachers and their needs.

Validity of the Instrument

The questionnaire was personally prepared by the researcher based on the purpose of the study, and the dependent and independent variables. The draft was given to two experts in the Department of Special Education, University of Ibadan and one expert in measurement and evaluation for corrections, suggestions and modifications. Their efforts helped to ensure that the instrument had high content and constructive validities.

Reliability of the Instrument

Validated copies of the questionnaire were pilot tested on six participant special teachers in Ibadan. The resulting data was divided into two equal parts and correlated statistically with Spearman's Rank Order Correlation. This gave a correlation (reliability) coefficient of .81. This is an indication that the instrument was highly reliable.

Method of Data Collection and Analysis

The questionnaire was personally administered by the researcher with the assistance of a colleague. They personally visited all the schools during when observations of the schools were carried out side-by-side the questionnaire administration. The data generated with the questionnaire for the main study was analyzed with mean, standard deviation and t-test statistics.

Research Questions Testing

Data Analysis and Presentation

Research Question 1: What is the extent of ICT compliance of Special Education schools?

Table 1: Extent of ICT Compliance of Special Needs Schools (No. of respondents = 150)

S/N	Extent of ICT Compliance	SD	Mean	Decision
1.	The special schools are well equipped with computer for training the children with special needs.	1.04	1.11	Little extent
2.	There is provision for interesting facilities.	0.08	1.25	Little extent
3.	There are ICT trained teachers who teach the students on computer education.	1.21	1.84	Little extent
4.	There are modern electronic software and hardware materials in the school for teaching the children.	0.75	1.33	Little extent
5.	The exceptional children are often taken to cyber café to be taught how to use computer and internet usage.	1.13	1.28	Little extent

Grand mean N=150

The analyzed data in Table 1 shows the extent of ICT compliance of the schools for exceptional children. It revealed that most of the schools have no computer training for the exceptional children. There is no provision for internet facilities and no ICT trained teachers. There are no soft and hardware materials for teaching ICT. The children are not taken to cyber café. These were revealed by mean response of 1.11, 1.25, 1.84, 1.33 and 1.28 respectively for items 1, 2, 3, 4 and 5 with the low standard deviation of 1.04, 0.08, 1.21, 0.75 and 1.13 respectively also testified to these. So there is little of ICT compliance of Special Needs Schools.

Research Question 2: In what ways can the exceptional children be repositioned with ICT for sustainable economic development?

Table 2: Repositioning the Exceptional Children

S/N	Repositioning the exceptional children	SD	Mean	Decision
1.	Special needs children can be repositioned through training and re-training in ICT.	0.84	3.12	Little extent
2.	Computer soft and hardware are necessary for training and re-training the exceptional children to reposition them.	0.91	3.26	Little extent

3.	Internet facilities can also be used for teaching of exceptional children to reposition them.	1.44	2.92	Great extent
4.	Specially designed electronic hard and software suitable for the nature of the handicap children can be used to reposition them.	1.06	3.08	Great extent
5.	ICT can enhance capacity to work, economic productivity and financial societal stability of the exceptional children.	1.32	3.31	Great extent

\bar{x} of x_s N=150

The data in Table 2 shows that the exceptional children can be re-positioned through ICT training, computer soft and hardware and internet training. The mean in agreement of participants ranges from 2.92 to 3.31 and low standard deviations of 0.84, 0.91, 1.44, 1.06 and 1.32 respectively for items 1, 2, 3, 4 and 5. Hence the exceptional children can be repositioned to great extent with ICT for sustainable economic development.

Table 3: Strategies for Re-positioning Special Education

S/N	Re-positioning the exceptional children	Mean	SD	Decision
1.	Special education needs rebranding and should be re-positioned for better impact.	3.38	0.41	Agree
2.	All agents of education should participate in re-positioning special education.	3.16	1.05	Agree
3.	Re-positioning of special education can be done through provision of ICT facilities such as computer, internet, special kits and agents.	3.64	0.89	Agree
4.	Adequate teachers and ICT specially trained experts and personnel are needed to re-brand special education.	3.97	1.15	Agree

In Table 3, the opinion of participants revealed mean average of 3.38, 3.16, 3.64 and 2.97 respectively to all the items 1, 2, 3 and 4. This indicates their agreement to all the items.

Table 4

Ho₁: There is no significant difference in the opinion of special educators of oyo and ibadan about the worthless state of special education schools

Teachers	N	SD	X	df	t-cal	t-crit	Remarks
Oyo Special Educators	80	2.14	3.26	148	0.39	1.98	Ho ₁ Accepted
Ibadan Special Educators	70	1.88	3.04				

Level of significance = 0.05

The t-test analysis of the means of the opinion of the special educators in Oyo town and Ibadan revealed a calculated t-value of 0.39. The corresponding critical t-value is 1.98 at 0.05 level of significance and 148 degrees of freedom since the calculated value is lower than the critical value, the hypothesis was accepted, this implies that the special schools are in deplorable states and needs repositioning.

Table 5: T-test of Opinion of Teachers on the Need to Reposition Education, the Learners and the Special Schools in Nigeria

Ho₂: There is no significant difference in the opinion of Oyo and Ibadan special educators on the dire need to reposition special education, its recipients and the special school through provision of ICT trainin

Teachers	N	SD	X	df	t-cal	t-crit	Remarks
Oyo Special Educators	80	1.11	3.69	148	1.11	1.98	Ho ₂ Accepted
Ibadan Special Educators	70	2.13	3.25				

Significance level = 0.05

The data in Table 5 gave a lower t-calculated value of 1.11 compared to its corresponding critical value of 1.98. The hypothesis was accepted because the critical value is higher at 148 degree of freedom and 0.05 level of significance. This connoted that the schools, special education and its recipients need repositioning.

Discussion and Implication of Findings

The first finding of this study revealed that most of the schools for exceptional children have no traces of what is called ICT facilities, not even computer. This is in line with the observation of Okafor (1992) that the method of educating the exceptional children remained the same from time immemorial, the same old fashioned Braille machine, typewriters, chalk-board and posters. It is also in line with Adedokun (2010) assertion that no trace of ICT or computers can be found in the nation's special schools.

On the contrary, internet and video coverage of schools for exceptional children in the developed countries of the world embrace the use of ICT. It shows that they are far much more computerized and equipped (with all forms of ICT equipment) than their conventional schools for the normal children. This was done to cater for diverse forms of exceptional children. That is, each form of exceptionality among the handicapped has specially and suitable designed ICT equipment to meet such needs. For instance, there are specially designed computer hard and soft ware and other ICT gadgets especially for the blind. There are different types for variation of handicapping conditions.

These materials, in addition to serving as instruments for educating the children who would have been great liabilities to all and sundry, also serve as motivational devices. They always prompt almost automatic responses from the disabled children because they are so designed. They are always colourful, inviting, engaging, attractive and programmed to be personal tutors which the children can converse with using different modes of communication peculiar to them. This equipment is also designed to be very simple and easily learnt by the least intelligent child.

Furthermore, the study reveals that the special education schools, the children and the school system can be re-positioned like those in advanced nations as discussed above. Similarly, the special teachers believed that this can be done with the introduction of computerized and ICT equipment and facilities. Not only that, special education teachers should be specially trained to handle different computer and ICT facilities. This is because it is one thing to have and equip the school with all forms of ICT gadgets; it is another for the teachers to have its know-how and yet another to understand its operations and able to apply the same to effectively teach the children to mastery. Moreover that effectiveness of instruction, especially for the handicapped, depends on the level of mastery learning that has taken place (Adedokun, 2002).

The two hypotheses tested further revealed that there is a high degree of consistency in the opinion of special education teachers from Ibadan and Oyo town about the dire need to re-positioned not only the special education but also the exceptional children and their school environment and system. This correlates with the

Papalia of Old's 1990 observation who stated that there is urgent need for enhancement of special education with modern and information technology equipment by the government and interested human organizations. They encouraged "all hands to be on deck" for this purpose in Nigeria. The two sets of teachers also uncommonly believe that ICT is the major means of re-positioning special education, its learners and system. This finding is in line with the opinion of Nigeria Ministry of Information and the initials of re-positioning Nigeria. Akunyili (2009) asserted that education and appropriateness of information is the best way of re-positioning Nigeria. She emphasized it will work better through the computer, ICT facilities and internet.

A glaring observation is the fact that Nigerians travel to advanced nations en-masse, bring in used goods including computers and ICT facilities. These items are not suitable for teaching the handicapped children. The time has come for computers and ICT facilities for the exceptional individual to be imported en-masse even if they are used types. They will be significantly beneficial to increasing number of exceptional children in Nigeria (Kaun, 2003) and will render education more enticing to them and will increase their patronage.

Conclusion

Special education is a recognized form of education in Nigeria and has been inculcated into the National Policy on education of the nation for decades. Despite this and increasing number of exceptional children, the patronage remains relatively low. There is campaign to re-position Nigeria and Nigerians through all means possible. This paper sees education especially through the instrument of re-positioning Nigerian and the exceptional children for economic development as it can help the disabled to acquire employment and help to develop the nation economically.

The first purpose of this study was to establish the degree of ICT compliance of the schools, education and exceptional children. Based on the findings, it can be concluded that there is almost no traces of computer and ICT facilities in the schools. Observation of the researcher shows that the schools are poorly funded, lack instructional facilities, lack trained teachers and structurally remained what they used to be from inception while the buildings are seriously dilapidated. The number of candidates in the schools is very few compared to the population of exceptional children around the vicinity and locality of the schools.

Another purpose of the study was to find out how the schools, their education type and children can be re-positioned. It can be concluded from the findings that the special education teachers believe that the two (i.e. school children and their education) can be and should be re-positioned through the introduction of ICT. This will make special education more attractive to its recipients. It will also help to meet the specific

needs of the children based on the nature of their handicap and assist in their sustainable economic development.

Recommendations

Based on the findings, it is recommended that:

1. Education is the largest business in Nigeria and hence expected to consume a lion share of our annual budget; this is telling much on the government who cannot adequately provide education for all.
2. ICT should be inculcated in the education of children with learning needs in Nigeria.
3. “All hands should be on deck” to make this project a reality, so individuals, NGOs, companies and well meaning humanitarian organizations should augment the effort of the government.
4. With the introduction of ICT, needs of children with learning needs will be easily achieved with ease.

References

- Adedokun, J.A. (2008). *Educational Measurements and Evaluation*. Sagamu: The Stronghold Education Publishers.
- Adedokun, J.A. (2010). Rebranding special need education for sustainable development of exceptional Children: A “Clarion Call”: *The Exceptional Child*. 12 (1) June 2010. 140-156.
- Akunyili, D. (2012). Rebranding Nigeria. “We Cannot Grow in an Atmosphere of Corruption”. *Nigerian Journal in Education*. 23rd March (1) 20-37.
- Federal Ministry of Education. (2008). *National Policy on Education*. Abuja: Nigeria Educational Research and Development Centre (NERDC) Press Ltd.
- Kanu, S.A. (2003). *Autistic manifestation among children with learning disabilities in Oyo State*. University of Ibadan, Ibadan unpublished Ph.D. Thesis.
- Okafor, L.E. (2009). *A day of Darkness*. Ibadan: LaFAMCAIC End-time Ministries.
- Oyesoji, A.A. (2011). Impact of Education on the Development of Special Need Learners. *Journal of Special Education*. 12 (2) 36-52.
- Papalia, D.E. & Olds, S.W. (2010). *A Children World: Infancy through Adolescence* (5th Edition). New York: McGraw-Hill Publishing Company.

- Tuoyo, M.U. (2001). Developing the Undeveloped in Special Education. Impact of homes, schools, government and educational agents. *The Exceptional Child* 5 (1) 106-110.
- Udoku, E.N. (2012). Assessing the Progress of Special Education in Nigeria so far. *African Journal in Education* (2012) 8 (1) 281-292.
- Udoka, S.T. (2010). Special Education in Nigeria, the Progress so Far. *Paper presented on the proceeding Education Summit, Abuja, Nigeria.*