AVAILABILTY AND UTILIZATION OF INFORMATION COMMUNICATION TECHNOLOGIES BY SPECIAL EDUCATION TEACHERS TO ENHANCE INCLUSIVE EDUCATION GOALS IN ANAMBRA STATE, NIGERIA

Abstract

The study sought to investigate availability and utilization of ICTs by special education teachers to enhance inclusive education goals in Anambra State, Nigeria**.** The research design was descriptive design. The total population of 92 teachers from special education centers was used; therefore no sampling technique was used because of the manageable size of the entire population. The instrument for data collection was a structured questionnaire administered through direct delivery approach. Research question 1 was answered using percentage, while research question 2 was answered using mean and standard deviation. Finding from this study revealed that some of the ICTs were available but not fully utilized. Based on the findings, it was recommended that teachers should be grounded on ICTs skills so as to impart the required knowledge on students with special needs and in turn enhance inclusive education goals. Also government through the ministry of education should ensure that before commissioning or accrediting any special education center, required ICT facilities must be put in place to enhance learning in special education centers.

Keywords: Availability, Utilization, Inclusive education, Special education, Information, Communication, Technology.

1. Introduction

Inclusive education as a concept in education is gaining wide publicity by the day. It is becoming very popular in education because inclusion is the most effective means of fighting discriminatory attitudes towards persons with special needs. Inclusive education remains a factor for building strong and self-reliant inclusive communities

throughout the country. This is because a well-educated individual will avoid the shame of street begging. Products of inclusive education will be able to make a living and thus will not be nuisance to their communities but assets capable of making their contributions to the development of their communities. It is therefore through inclusive education that effective education can be made to reach majority of the children if not all [1]

Inclusive education according to [2] is defined as the child's right to participate in school's duty and programmes regardless of his or her challenge as against special education that is meant for students with special needs only. Adetoro further posited that inclusive education implies providing to all students, including those with significant need, equitable opportunities to receive effective educational services, with the needed supplementary aids and support services, in age appropriate classrooms, in order to prepare students for productive lives as full members of the society. Nevertheless, there has been a major challenge facing educational systems around the world. In some developing countries like Nigeria, inclusive education is thought as an approach to serving children with special needs within general education settings, however this is in line with the goals of special education as stated in the National Policy on Education [3] which are;

   a. To give concrete meaning to the idea of equalizing educational opportunities for all children, their physical, sensory, mental, psychological or emotional disabilities notwithstanding;
   b. To provide adequate education for all people with special needs in order that they may fully contribute their own quota to the development of the nation;
   c. To provide opportunities for exceptionally gifted and talented children to develop their talents, natural endowments/traits at their own pace in the interest of the Nations' economic and technological development.
   d. To design a diversified and appropriate curriculum for all the beneficiaries.

Similarly, special education is created as a formal special educational training given to people (children and adults) with special needs, and they can be classified into three categories which are the disabled; the disadvantaged; and the gifted and the talented

61 [3]. Generally, over 650 million people around the world live with disabilities of

62 which 150 million live in Africa [4, 5]. Over 80% of these persons with special needs

63 live in developing countries such as Nigeria where their challenge often exclude them

64 from full participation in societal activities with most of them not having the

65 opportunity to attend school, obtain gainful employment, and make a home and family

66 [5]. However, the right to education as a universal right which ought to have extended

67 to all with special need in all parts of the world has not in the main time been

68 implemented.

69 According to a flagship project report by United Nations Educational, Scientific and

70 Cultural Organization under the Education for All Programme, the goal of education

71 for all was aimed at meeting the learning needs of all children, youths and adults by

72 2015. The report further stated that these goals will only be achievable when all

73 nations (developed and developing) recognize that the universal right to education

74 extends to all and when all nations act to establish or reform public education systems

75 that are accessible to meet the needs of individuals with special need [5]. This

76 however draws attention from the general public towards the issue of special

77 education for people with special need. In the same vein, there is a growing

78 recognition that including students with special needs in general education (inclusive

79 education) can provide them with the opportunity to learn in a natural and stimulating

80 setting, which also could lead to increased acceptance and appreciation of individual

81 differences. Thus, the debate continues among educators, local, state and federal

82 policy makers, parents, and even people with special need in Nigeria regarding the

83 efficacy of inclusion and the inevitable restructuring of general education that will

84 occur to make learning meaningful in an inclusive environment.

85 In view of these personnel's (people with special need) and the need for basic and

86 compulsory education for all, it becomes pertinent to introduce tools, facilities, and

87 necessary modalities by special education teachers to enhance inclusive education for

88 people with special needs. One of such widely known and acceptable tool is the

89 information and communication technology (ICT) which comprises audio, visuals,

90 and audio-visuals as well as hardware, and software. To buttress this, [6] noted that

91 the array of information provided through ICTs would help tremendously in

92 production of professionally competent graduate's, therefore ICT introduction in the
93 educational system is a big boost to education at that level.

94 In order to plan, design and successfully integrate ICTs in the educational system of
95 Nigeria, there is need for strong and committed professionals (teachers) in this field
96 and adequate facilities must be in place for successful integration of ICT in schools
97 and special education centers. Literatures on successful ICT integration and
98 implementation in countries like Japan, Malaysia, Spain and Israel has showed great
99 emphasis on ICT implementation at different levels of schooling with adequate
100 facilities. The incorporation of ICT for special education shows great impact on the
101 academic performances students in these countries. This is a result of the integrating
102 ICT into the curriculum at different levels in schools and has proven to be effective.
103 Teachers and lecturers of special education to effectively use these ICT tools provided
104 for them need to be trained in this area so that they can integrate technology in the
105 classroom. However empirical investigations on ICT implementation at school level
106 has shown that the thinking and task performance process of these students has
107 improved considerably with the help of different ICT tools used in the classroom,
108 therefore the need for special education teachers to implement available ICTs to foster
109 and achieve the set goals of special education programmes becomes glaring.

110 Availability of ICT facilities in schools and centers for special education presupposes
111 that teachers and lecturers of special education can utilize them to enhance awareness,
112 adjustment and particularly inclusive education. According to [6], investment in ICT
113 facilities will help in teaching and coping with people of different societal
114 background, [6] further stated that other support services necessary for effective
115 delivery of an ICT-based curriculum should be utmost in government priorities. In
116 view of this, the need for education at all level which promotes national consciousness
117 and societal participation for national development makes its necessary to equip
118 schools for special education with required facilities (ICTs inclusive) to facilitate
119 learning and achieve effectiveness. Effectiveness and growth of special education
120 requires that teachers of special education ought to incorporate new ICT facilities to
121 facilitate teaching and learning in order to measure up with needs of people with
122 special learning needs.

123 Given the importance of ICT and the need to promote inclusive education at all levels,
124 the utilization of ICTs by teachers/lecturers of special education is vital in promoting
125 and achieving the goals of special education as aforementioned and giving students
126 with special needs a sense of belonging. Therefore, it is on the premise of this that this
127 paper examined the availability and utilization of ICTs by special education teachers
128 to enhance inclusive education goals in Anambra state, Nigeria.

129 **1.1 Purpose of the Study**

130 This study investigated:

131 1. Information and communication technology facilities available for teaching
132 special education in Anambra State.
133 2. Information and communication technology facilities utilized by special
134 education teachers for teaching special education in Anambra state.

135 **1.2 Research Questions**

136 The following questions guided the study:

137 **1.** Are there information and communication technology facilities available for
138 teaching special education in Anambra state?
139 **2.** Do teachers utilize information and communication technology facilities for
140 teaching special education in Anambra state?

141 **2. Method**

142 The design of the study was descriptive survey. The study was carried out in Anambra
143 state, Nigeria. A total of ninety-two (92) teachers in special education centers situated
144 in Umuchu, Isulo, Odoakpu, Ozubulu, Oraifite, and Awka constituted the population.
145 No sampling was done due to the manageable size of the population. The instrument
146 was a structured questionnaire developed by the researchers. The instrument was
147 validated by two experts, one from the Department of Educational Management and
148 Policy and one from the Department of Guidance and Counselling. The reliability
149 analysis yielded co-efficient of 0.81. The instrument was therefore deemed reliable for
150 the study.

The researchers adopted direct approach in administering the questionnaires to the respondents. In this method, copies of the questionnaire were distributed to the respondents with the help of two research assistants. Data collected was analyzed using percentage, mean, and standard deviation. Responses that attracted mean ratings of 2.50 and above were seen as fully utilized, while those with mean ratings below 2.50 were seen as not fully utilized.

3. Results

Research Question 1: Are there information and communication technology facilities available for teaching special education in Anambra state?

Table 1

Summary table showing percentages of available and not available ICT facilities

S/N	Items	Available (%)	Not Available (%)
1.	Social networks (blog, wikis, twitter)	49 (53.26)	43 (46.73)
2.	Interactive white board	63 (68.47)	29 (31.52)
3.	Webcams	15 (16.30)	77 (83.69)
4.	Screen casting	35 (38.04)	57 (61.95)
5.	Virtual classroom	35 (38.05)	57 (61.95)
6.	Digital microphone	89 (98.73)	3 (3.26)
7.	Instructional video	70 (76.08)	22 (23.91)
8.	Speech trainer	90 (97.82)	2 (2.17)
9.	Internet facilities (Laptops and others)	91 (98.91)	1 (1.08)
10.	Projectors	76 (82.60)	16 (17.39)
11.	Audiometers	2 (2.17)	90 (97.82)
12.	Abacus	1 (1.08)	91 (98.91)
13.	Photo vocabulary	4 (4.34)	88 (95.65)
14.	Frequency modulation systems (FM)	1 (1.08)	91 (98.91)
15.	Electronic tables	3 (3.26)	89 (98.73)

Data presented in Table 1 reveals that 46.73% of special education teachers rated social networks unavailable, while 53.26% rated it available and probably have social network applications installed in their smart phones. 31.52% of special education teachers indicated that they lack interactive white boards in their schools while 68.47% indicated that interactive whiteboard is available in their schools. 16.30% have access to webcams in their school while 83.69% indicated that they do not have webcams in their school. 38.04% indicated the availability of screen casting while 61.95% indicated not available. Visual classroom was rated available by 38.05% of special education teachers, while 61.95 rated it unavailable. Digital microphone was rated available by 98.73% of the teachers while 3.26 rated it unavailable. Instructional video was rated available by 76.08% of the teachers while 23.91% rated it available. Speech trainer was rated by 97.82% of the teachers as available while 2.17 rated it unavailable. 98.91% of the teachers rated internet facilities as available while 1.08% rated it as unavailable. 82.60% of teachers rated projectors as available in teaching special education while 17.39% rated it as unavailable. Audiometer was rated by 2.17 % of the teachers as available while 97.82% rated it unavailable for teaching special education. 1.08% of special education teachers rated Abacus as available while 98.91% rated it unavailable. 4.34% of the teachers rated photo vocabulary available in teaching special education while 95.65% rated it unavailable. Frequency modulation system was rated by 1.08% of teachers as available while 98.91% rates it unavailable. Finally, electronic tables were rated available by 3.26% and unavailable by 98.73% of teachers teaching special education in special education centers.

Research Question 2: Do teachers utilize information and communication technology facilities for teaching special education in Anambra state?

Table 2

Summary table showing utilization of available ICT facilities

S/N	Items	Mean	SD	Decision
1.	Use of social networks to interact and teach your students	2.65	.84	**Fully Utilized**
2.	Use of interactive white board	2.32	.76	**Not fully Utilized**

during teaching process			
3. Use of digital microphone **Utilized**	**2.55**	**.96**	**Fully**
when speaking to students			
4. Use of instructional video during **Utilized**	**1.78**	**1.01**	**Not fully**
teaching			
5. Use of speech trainers when **Utilized**	**2.78**	**.69**	**Fully**
interacting with students			
6. Use of internet facilities (laptop **Utilized**	**3.01**	**1.01**	**Fully**
and others) to access teaching materials online			
7. Use of projectors to project learning **Utilized** Activities	**2.33**	**.62**	**Fully**
Grand mean	**2.48**		**Not fully**
Utilized			

192   Data presented in Table 2 shows utilization of Information Communication
193   Technology in by special education teachers in special education centers in Anambra
194   state. The results indicated that available information and communication technologies
195   are not fully utilized by special education teachers in special education centers. This is
196   evident in the grand mean of 2.48 which is below the 2.50 bench mark of fully
197   utilized.

198
199   **4. Discussion**

200   The result from the data analyzed revealed that based on the respondents response,
201   information and communication technology facilities available in special education
202   centers include social network tools (wikis, blogs, twitter), interactive white board,
203   digital microphone, instructional video, speech trainer, internet facilities (laptops and
204   others), and projectors. This reveals that other necessary ICT facilities are inadequate.
205   This however does not conform to [6], who revealed that investment in ICT facilities
206   will help in teaching and coping with people of different societal background, and
207   further stated that other support services necessary for effective delivery of an ICT-
208   based curriculum should be utmost in government priorities.

On the other hand, result on the utilization of available ICT facilities by special education teachers revealed that teachers of special education do not fully utilize ICT facilities available for them during instructional delivery. This could lead to insufficient knowledge transfer. This however disagrees with [6] noted that the array of information provided through ICT use would help tremendously in production of professionally competent graduate's, therefore ICT introduction in the educational system is a big boost to education at that level. This could be a result of lack of ICT training on the part of special education teacher.

5. Conclusion

Information and communication technologies if adopted could serve as the backbone for many educational activities (special education inclusive). Nevertheless, this study revealed that most special education centers have these ICTs but fail to utilize them in the course of instructional delivery probably due the number of factors which could be studied by other scholars/future researchers. However if the aforementioned and available ICTs are used by teachers of special education, it could give students with special needs a sense of belonging, and improve their learning and overall academic achievement.

6. Recommendations

In view of the fact the results showed non-utilization of available ICT facilities, it is recommended that:

1. Teachers of special education should be exposed to ICT facilities during training and retraining processes.
2. Teachers who are not ICT digital natives should be mobilized for vigorous training and workshops
3. Government (federal and state) through the ministry of education should ensure that before commissioning or accrediting any special education center, required ICT facilities must be put in place to enhance learning in special education centers.
4.

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