

1 Factors Militating against the Implementation of Computer
2 Education in Secondary Schools in Ondo State South West,
3 Nigeria

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6 *Received: 6 December 2013 Accepted: 1 January 2014 Published: 15 January 2014*

7

8 **Abstract**

9 This study investigated the factors militating against the implementation of computer
10 education in secondary schools in Ondo State South West, Nigeria. The study investigated
11 availability of computer resources in the schools, the budgetary and funding of computer
12 education in schools, availability of trained manpower in teaching computer education in
13 schools, the attitude of the school community towards the teaching and learning of computers
14 in schools, adequacy of time for computer lessons on the timetable and Remedies to ensure
15 computer education is fully implemented in schools. The descriptive survey design was used
16 for the study. The population consisted of all the teachers and principals of the secondary
17 schools in Ondo State. The sample consists of 500 teachers and 50 principals randomly
18 selected from 50 secondary schools in Ondo States. A selfdesigned questionnaire tagged
19 ?Computer Education for Secondary Schools (CESS)? was used to collect the data for the
20 study. Data collected for the study were analysed using frequency counts, percentage scores
21 and bars. The study revealed that computerresources were lacking in schools. Moreover, the
22 study revealed that budgetary and funding constraints militating against computer education
23 in schools; there is lack of trained manpower in teaching computer education in schools; the
24 school community show positive attitude towards the teaching and learning of computers in
25 schools; there is no adequacy of time for the computer lessons on the timetable. However,
26 despite the above constraints, the study also revealed some remedies that can be put in place
27 to make sure computer education is fully implemented in schools: school authority
28 shouldsource for funds and computers from well-wishers: Government to provide funding to
29 schools for computer procurement; Invigorating the training of manpower to teach computers
30 in schools; Teacher education institutions to incorporate computer education into their
31 curriculum; Government to

32

33 **Index terms**— implementation, computer education, secondary schools, teaching and learning processes.

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3 STATEMENT OF THE PROBLEM

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51 of manpower to teach computers in schools; Teacher education institutions to incorporate computer education
52 into their curriculum; Government to make it compulsory for schools to offer computer education; There should
53 be regular in-service training for computer education. It was therefore recommended that government should
54 increase the funding of the education sector. There should also be periodic training for teachers on computer
55 skills acquisition.

56 1 Introduction

57 Computer education is of paramount importance to national development and it is on this premise that the Federal
58 government of Nigeria sought to introduce computer studies in the education system from primary through to
59 secondary schools. Education systems around the world face formidable challenges that are taxing conventional
60 strategies. Fresh approaches are needed to address persistent problems of the past and provide students with
61 an education appropriate to the needs of a modern, informationbased global economy. Now, after more than
62 two decades of unfulfilled promises to revolutionize education, computer and communication technologies are
63 finally able to offer opportunities to significantly improve teaching and learning. In any educational system, the
64 level of available resources places a restriction on the degree to which any new subject can be introduced into
65 the school curriculum, especially where only the most basic facilities have so far been provided. But ICT is of
66 such importance to the future industrial and commercial health of a country that investment in the equipment,
67 teacher education, and support services necessary for the effective delivery of an ICT-based curriculum should
68 rank high in any set of government priorities. The curriculum proposed takes account of these resource issues and
69 specifies minimum requirements for effective delivery in different circumstances ??UNESCO, 2004). Reasonable
70 computer studies are yet to start in Nigerian secondary schools, the computer-student ratio is small, funding by
71 government has not been encouraging, computer education syllabus is unpopular among students and parents and
72 thus hardly implemented, and teachers are inadequate to implement computer education ??Jegede & Adelodun,
73 2003). Teachers in Nigerian secondary schools cannot implement computer education because majority of the
74 teachers are not competent in basic computer operation and in the use of simple application software (Yusuf,
75 2005b).

76 Teachers require access to information and communication technology (ICT) infrastructure for a number of
77 reasons. These include their need to live as citizens in a world undergoing rapid and major transformations as
78 a result of increased use of ICT, their need to embed ICT use in their teaching and administrative duties and,
79 increasingly, their need to use ICT in their professional studies (Burnip, 2006).

80 One of the millennium development goals of the Nigerian nation in the education industry is that schools must
81 be Information and Communication Technology (ICT) compliant. In response to this goal, government procured
82 and distributed computers to schools. Those computers are now stored in principals' offices unused in our schools
83 nationwide. Mkpa (2007), has confirmed this in our secondary schools. In the wake of this, computer education
84 and ICT compliance cannot be achieved.

85 According to a study by Bukaliya and Mubika (2011), the qualifications of the majority of the teachers are
86 farfrom being satisfactory due to lack of exposure to college curriculum that does not cater for ICT training.
87 Theteachers have poor practical skills in ICT usage since the majority of them could not even use the basic
88 softwarein computers for the delivery of their lessons and indications are that the teachers lack the necessary
89 skills andknowledge of computers in basic software usage. Studies byYa'acob et al (??005) and so and Swatman
90 (2006) on teachers' readiness for ICT generally, suggest that there isstill a long way to go before schools can
91 embrace on modern technology. Due to the existing constraints in computer education implementation, remedial
92 action needs to be taken.

93 Lauand ??im (2008) propose the need to put in place measures to ensure that adequate access to technical
94 supportis provided. Lau and Sim (2008) established that teachers needed training which should be offered on a
95 continuous, ratherthan a one off basis so that their computer knowledge is upgraded over time.

96 2 II.

97 3 Statement of the Problem

98 Due to the fact that computer education has failed to take off in the majority of schools in Nigeria, fears are
99 that technological development may be a pipe dream for the country. Given this scenario, it is necessary for this
100 study to look into factors militating against the implementation of computer education in secondary schools. The

101 question to be answered by this current study is: What factors have impeded the implementation of computer
102 education in schools? III.

103 **4 Purpose of the Study**

104 This study is designed to investigate the factors militating against the implementation of computer education in
105 secondary schools.

106 Specifically, the study examined: ? Availability of computer resources in the schools ? Availability of trained
107 manpower in teaching computer education in school. ? The attitude of the school community towards the
108 teaching and learning of computers in schools ? Adequacy of time for computer lessons on the timetable. ?
109 Remedies to make sure computer education is fully implemented in schools.

110 IV.

111 **5 Research Questions**

112 The following research questions were raised to guide this study:

113 1. Are the computer resources available in the schools? 2. Do you have trained manpower to teach the subject
114 in the schools? 3. What is the attitude of the school community towards the teaching and learning of computers
115 in schools? 4. Is time adequate for the computer lessons to be incorporated on the timetable? 5. What remedies
116 can be put in place to make sure computer education is fully implemented in schools?

117 V.

118 **6 Methodology**

119 The descriptive survey design was used for this study. The population for the study consisted of all the teachers
120 and principals of the secondary schools in Ondo State. The sample for the study is made up of 500 teachers
121 and 50 principals randomly selected from 50 secondary schools in the state. A self-designed questionnaire tagged
122 "Computer Education for Secondary Schools (CESS)" was used to collect the data for the study. The instrument
123 was validated by research experts in educational technology, Computer Science and test and measurement. The
124 questionnaire was administered by the researchers with the help of research assistants in the state. Personal
125 contacts of the researchers with the respondents enhanced good and prompt response from the respondents.
126 Data collected were analysed using frequency counts and percentage scores VI.

127 **7 Results**

128 Research question1: Are the computer resources available in the schools? Table ?? showed that the majority
129 411(75%) acknowledged that there were no teachers to teach computers in the school. Only 139(25%) stated that
130 teachers were available. However, where the teachers were available, the majority of the respondents, 429(78%),
131 indicated that the teachers were not qualified to teach computer education with a minority of only 121(22%)
132 stating otherwise.

133 Teachers' lack of computer literacy as being an obstacle to their using computer education implementation
134 in schools. This obviously militated against the implementation of computer education in schools. A majority
135 of 450(82%) stated that teachers were not willing to teach the computer as a subject in their schools. Asked if
136 there were any in-service computer training programmes for teachers in the schools, 70 (13%) said yes against
137 a majority of 480 (87%) who indicated otherwise. Ya'acob et al ??2005) and so and Swatman (2006) concur by
138 remarking that teachers' readiness for ICT is a significant factor the attempt to embrace on modern technology
139 in the schools. In concurrence, Bukaliya and Mubika (2012) noted that the qualifications of the majority of the
140 teachers are far from being satisfactory due to lack of exposure to college curriculum that does not cater for ICT
141 training. The teachers have poor practical skills in ICT usage since the majority of them could not even use
142 the basic software in computers for the delivery of their lessons and indications are that the teachers lack the
143 necessary skills and knowledge of computers in basic software usage.

144 Research question 3: What is the attitude of the school community towards the teaching and learning of
145 computers in schools? Table 4 shows that computer education was timetabled at most of the schools that
146 offered the subject as anexaminable course at JSSCE level. Asked if computer education was accorded the same
147 number of hours per week as other subjects, a minority of 212(39%) said yes whereas 338(61%) thought otherwise.
148 121(22%) agreed that computer timetabling was given priority in the school as other subjects but the majority
149 of 429(78%) disagreed. Majority of the schools 387(70%) do not register for computer studies in an external
150 examinationat JSSCE leve while minority 163 (30%) register for it. Roszell (1995) as quoted by Bukaliya and
151 Mubika (2012) concurs by suggesting that the time factor surrounding theimplementation process is viewed by
152 teachers as being a major barrier in the implementation of computer education in schools.

153 Research question 5 : What remedies can be put in place to make sure computer education is fully implemented
154 in schools? A majority of 423(77%) thought that sourcing for funds and computers from well-wishers
155 would contribute significantly to the implementation of computer education in schools. Majority disagreed
156 that Government should charge levies for computer education while all the respondents 550(100%) suggested that
157 Government to provide funding to schools for computer procurement. Invigorating the training of manpower to
158 teach computers in schools was suggested by an overwhelming majority of 453 (82%). According to 389(71%),

11 RECOMMENDATIONS

159 teacher education institutions must incorporate computer education into their curriculum. Majority of the
160 respondents 512 (93%) indicated that Government should make it compulsory for schools to offer computer
161 education.

162 Majority of the respondents 398(72%) suggested that teacher support through in-service for computer
163 education teachers should be regularized. This is in agreement with the findings by Krysa (1998) who identifies
164 administrative support as enabling successful implementation of computer education in the school system. STEPS
165 (2007) concurs with the findings of the present study by remarking that the education policy should be tailor-
166 made to increase, improve and diversify teacher education and support and attempts should also be made to
167 build computer education into general educational policies.

168 8 VII.

169 9 Conclusion

170 The results obtained from the analyses of the data gathered in this research indicated that majority of the schools
171 do not have computer resources. This is because the computer facilities are not available for teacher and student
172 access. The IC Tresult showed that there is not trained manpower to teach Computer education as a subject in the
173 schools. The finding further revealed that teachers' lack of computer skills hinders the effective implementation
174 of Computer education in secondary schools. The study also shows that time factor is a major barrier in the
175 implementation of computer education in schools. School authority Source for funds and computers from well
176 wishers.

177 Effective implementation of ICT in secondary schools brings about effective teaching and learning and
178 contributes to the performance of the students. The finding of the study also revealed that few ICT components
179 especially computers supply to the schools are not sufficient to go round the students and this deny the students
180 of complete access to them.

181 10 VIII.

182 11 Recommendations



Figure 1:

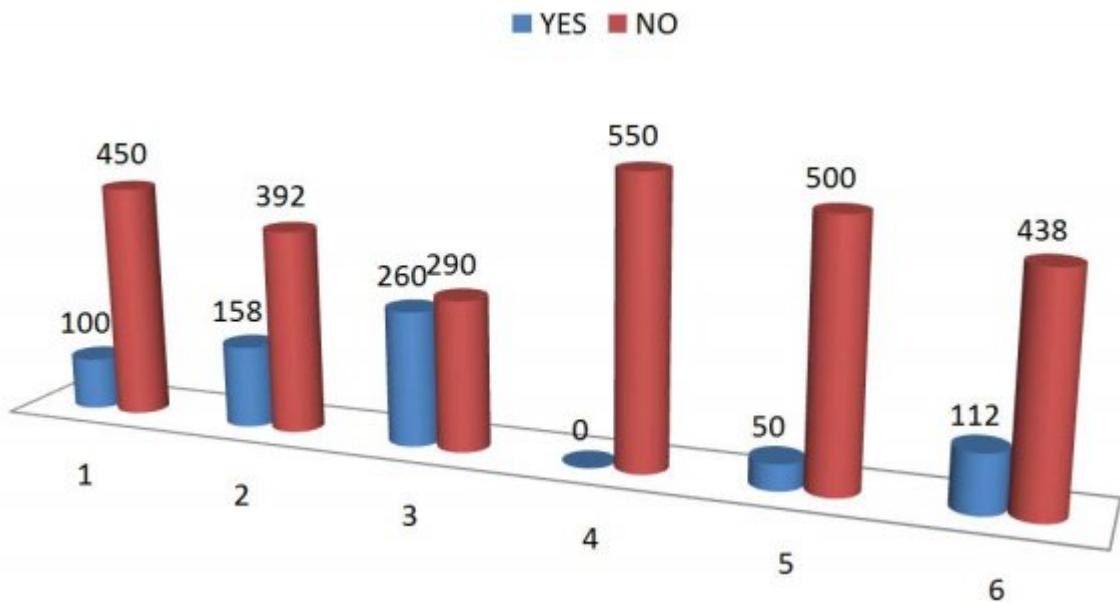


Figure 2:

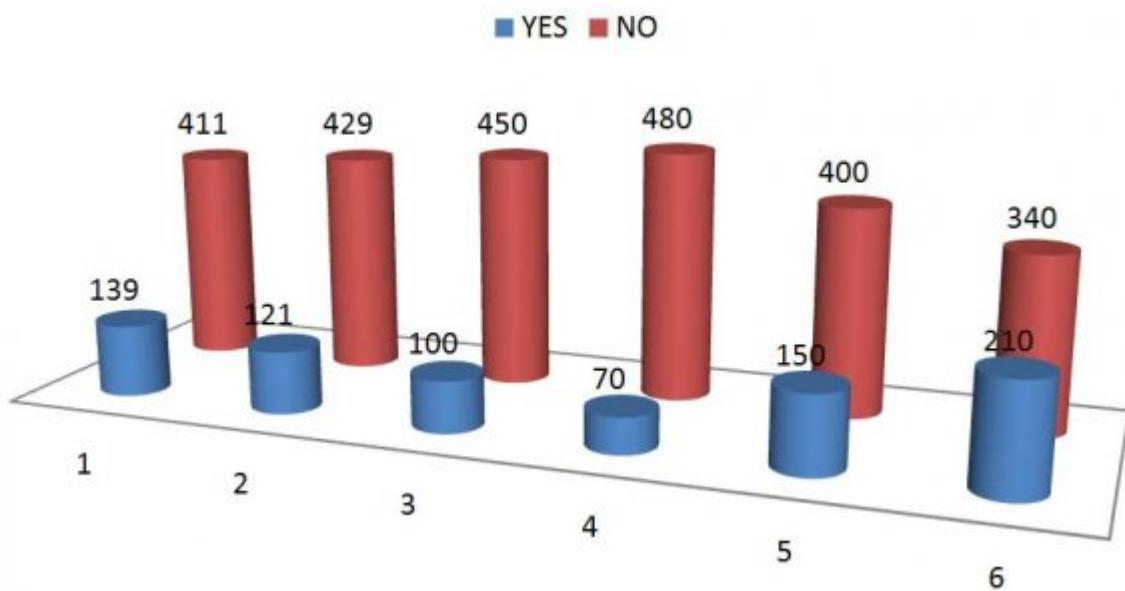


Figure 3:

11 RECOMMENDATIONS

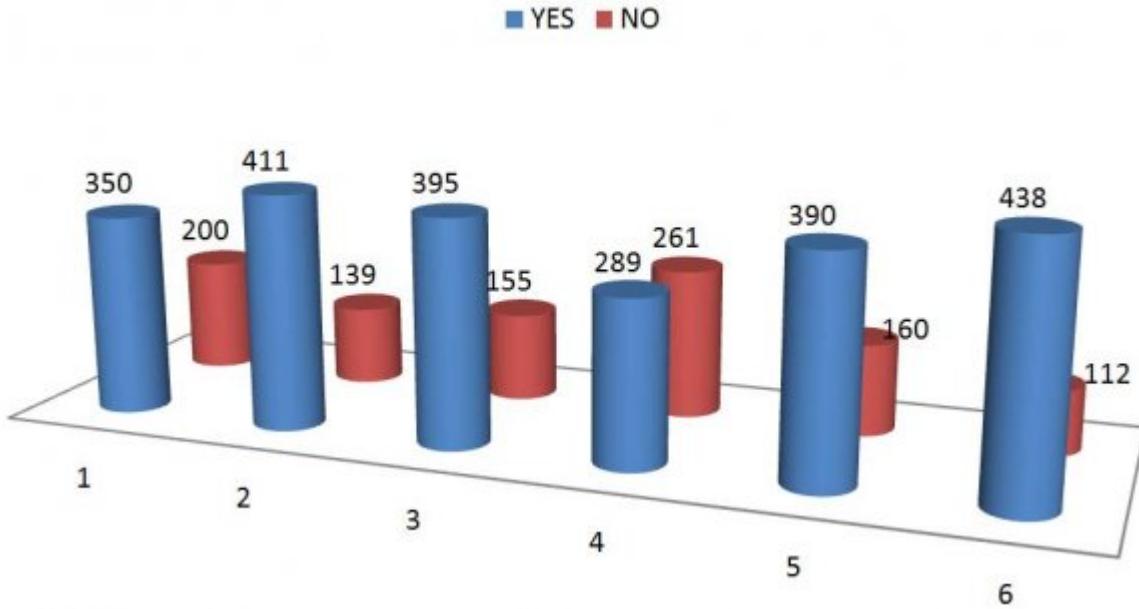


Figure 4:

Figure 5:

1

S/N	ITEMS	YES %	NO %
1	Do you have computer laboratory in your school	100	18 450 82
2	Computers are available in your laboratory	158	29 392 71
3	Computers in the laboratory are functioning well	260	47 290 53
4	Computers in the laboratory are adequate	0	0 550 100
5	There are enough computer accessories in your school laboratory	50	9 500 91
6	Computer textbooks are available in my school	112	20 438 80

Figure 6: Table 1 :

3

S/N	ITEMS
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[Note: 5 All the stakeholders are willing to have computer education succeed in the school system.]

Figure 7: Table 3 :

4

S/N	ITEMS
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Figure 8: Table 4 :

5

S/N Remedies

Figure 9: Table 5 :

Figure 10: ?

11 RECOMMENDATIONS

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