

Original
ArticleEducational
Research

Pedagogical Appraisal of Internet and Computer Usage among Secondary School Teachers and Students in Southwestern Part of Nigeria

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ABSTRACT [ENGLISH/ANGLAIS]

This survey investigated and appraised the use of internet and computer among secondary school teachers and students in Southwest Nigeria. Pre-tested structured questionnaires were administered to 450 and 3000 randomly selected teachers and students respectively. Almost all the survey instruments were appropriately filled and were used for analysis. Data were analyzed using descriptive statistics. The studies revealed that majority of the respondents are female. 41.1% and 55% of the teachers had access to internet and computer respectively, while 51% and 46.9% of the students had access to internet and computer respectively. In addition, majority of teachers surfed the net via school cybercafé while that of students were via internet enabled mobile phone. However, 38.7% and 64.5% of the respondents, (teachers and students), that had access to computer used their school computer laboratory accordingly. Very low indexes were recorded for variables that contributed to teaching and learning processes in the school. The rating results derived from summation of weighted values (SWV) all attested to this claim. The study concluded that the using of internet and computer had contributed to personal cognitive interests rather than enhancing the teaching and learning activities in secondary schools in southwest of Nigeria.

Keywords: Receptive, size, multilinguals

RÉSUMÉ [FRANÇAIS/FRENCH]

Ce sondage d'une enquête et évalué l'utilisation de l'Internet et l'ordinateur chez les enseignants du secondaire et étudiants du Sud-Ouest du Nigeria. Pré-testée questionnaires structurés ont été administrés à 450 et 3000 enseignants et des élèves choisis au hasard, respectivement. Presque tous les instruments d'enquête ont été convenablement remplis et ont été utilisés pour l'analyse. Les données ont été analysées en utilisant des statistiques descriptives. Les études ont révélé que la majorité des répondants sont des femmes. 41,1% et 55% des enseignants avaient accès à Internet et l'ordinateur, respectivement, tandis que 51% et 46,9% des étudiants avaient accès à Internet et l'ordinateur, respectivement. De plus, la majorité des enseignants surfé sur le net via cybercafé scolaires alors que celle des étudiants ont été via Internet mobile activé. Cependant, 38,7% et 64,5% des répondants, (enseignants et étudiants), qui avaient accès à l'ordinateur utilisé leur laboratoire informatique de l'école en conséquence. Index très faibles ont été enregistrées pour les variables qui ont contribué à l'enseignement et l'apprentissage à l'école. Les résultats issus de notation somme des valeurs pondérées (SWV) tous attestée à cette réclamation. L'étude a conclu que l'utilisation d'Internet et l'ordinateur a contribué à des intérêts personnels cognitives plutôt que d'accroître l'enseignement et l'apprentissage des activités dans les écoles secondaires du sud-ouest du Nigeria.

Mots-clés: Passif, taille, multilingues

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Accepted/Accepté: October, 2011

Full Citation: Aboderin OS, Fadare OG, Kumuyi GJ, Lawal OO. Pedagogical Appraisal of Internet and Computer Usage among Secondary School Teachers and Students in Southwest Part of Nigeria. World Journal of Young Researchers 2011;1(4):54-9

INTRODUCTION

Modern educational technologies have made it possible for students to develop learning skills that will enable them to think critically, analyse information, communicate and solve problem faster. Onasanya and

Asuqua [1] emphasized the relevance of technologies such as computer and internet to education particularly as regards to teaching and learning processes in secondary school. The invention of internet has led to the development of virtual library, other services in all facets

of life, institutions and all human endeavours. Students can learn where computers are used essentially as tutors to increase students' basic skills and knowledge. They can also learn with computers where technology is applied to a variety of goals in the learning process, and is construed as a resource to help develop higher order thinking, creativity and research skills [2, 3]. Poole [4] has indicated that computer illiteracy is now regarded as the new illiteracy. It is believed that the introduction of computer into our classrooms will assist in solving educational problems and enhance students' achievement. Since the year 2005, the use of computer as a teaching and learning tool has become a burning issue in schools in South-west part of Nigeria. This study aims to find out the secondary school teachers and students assessment in line with the following criteria; their gender distribution in southwest Nigeria ,their level status and qualification, their accessibility to internet and computer usage ,their level of exposure to internet and computer usage, the channels use to surf the internet and computer usage, and to ascertain their aims and objectives for surfing the internet and using of computer as educational technology tools in teaching and learning processes.

MATERIALS AND METHODS

Fifteen public secondary schools, five each from the 3 geographical spread areas in Ondo-state, Nigeria were used. A total of 450 teachers and 3000 students took part in the survey. However, out of the 3000 respondents as students, 2756 filled their questionnaires appropriately. Similarly, out of 450 teachers as respondents, only 418 teachers filled their questionnaires appropriately. Only the appropriately filled questionnaires were used further. Measurement items in the structured questionnaires are adapted from Ogunrewo et al. [5] and Onasanya and Asuquaet [1] with modifications to fit the aims and objectives of the study. Quantitative information on gender, level-status and qualification, access to internet and computer usage, year of exposure to internet and computer, aims and purpose of internet and computer usage, among many other as measurement items, were collected the whole respondents. Data collected were edited, coded and analysed using descriptive statistics of SPSS. The study listed some perceived purposes and reasons in Table 7 to Table 10 and respondents reacted to them. The results were then analyzed using the statistical method of summation of weighted values (SWV). Five ratings were used. They were namely 'strongly agreed',

'agree', 'just agree', 'disagree' and 'strongly disagree' corresponding to scales of preferences of 5, 4, 3, 2, and 1 respectively. The preference index was obtained by dividing the SWV for each attribute or reason by the total number of respondents analyzed. The research instrument items were subjected to face and content validity by the experts in computer curriculum and Test and Measurement experts. Their suggestions and modifications were reflected in the final draft of the instrument to ensure validity of the instrument. Pearson moment correlation was used to determine the reliability of the questionnaire. To ascertain the reliability of the instrument after modification, it was administered on the teachers and students which were not part of the sample using test-retest method, the reliability correlation yielded $r=0.82$ and $r=0.76$ respectively.

RESULTS

As shown in Table 1, the sampled population contained more of female than male. More than half of the respondents are female; 57.2% of the teachers are female and 51.1 % of the students are female.

Table 1: This table shows the Gender of Respondents

Gender	Teacher		Student	
	N	%	N	%
Male	179	42.8	1348	48.9
Female	239	57.2	1408	51.1
TOTAL	418	100	2756	100

Table 2 shows the distribution of teachers by status and qualification. It could be deduced that highest percentage (45.5%) of the teachers were between level eight to twelve while the least percentage (5.0%) could be observed between level fifteen to sixteen. This showed that more teachers were employed in the last ten years since government promotes teacher every three years. On the other hand, 85.2% of the teachers were professional teachers and this observation had enhanced quality education in the southwest part of Nigeria. One of the factors that could have responsible for this claim is that government is paying extra 27.5% of basic salary to all professional teachers. This had increased teachers' morale and encouraged them in the profession.

Table 3 shows the distribution of teachers by their access to internet and computer usage. The study revealed that 41.1% and 55.0% of the teachers had access to internet and computer respectively. This findings show that teachers have access to computer than internet, and they

were more computer-inclined than internet. On the other hand, students had access to internet than computer, 53.1% and 49.0% respectively. This assessment is supported by Lei and Zhao [6] and Traxler [7].

Table 2: This table shows the Distribution of Teachers by Level and Qualification

	Level		Qualification			
			Professional		Non-Professional	
	N	%	N	%	N	%
15-16	21	5.0	16	76.2	5	23.8
12-14	126	30.1	97	77.0	29	23.0
8-10	190	45.5	162	85.3	28	14.7
7	81	19.4	81	100	0	0.0
Total	418	100	356	85.2	62	14.8

Table 3: This table shows the Distribution of Respondents by their Access to Internet and Computer Usage

	Teacher				Student			
	Yes	%	No	%	Yes	%	No	%
DIN	172	41.1	246	58.9	1405	51.0	1351	49.0
DCO	230	55.0	188	45.0	1293	46.9	1463	53.1

*Din means Do you have access to internet?
Dco means Do you have access to computer?*

Table 4: This table shows the Distribution of Respondents by their years of exposure to internet and computer usage

Years	Internet				Computer			
	Teacher		Student		Teacher		Student	
	N	%	N	%	N	%	N	%
<1	30	17.4	628	44.7	9	3.9	8961	69.3
1-2	50	29.1	475	33.8	89	38.7	346	26.8
3-4	28	16.3	291	20.7	124	53.9	35	2.7
>5	64	37.2	11	0.8	8	3.5	16	1.2
Total	172	100	1405	100	230	100	1293	100

Table 4 indicated that 62.87% of the teachers that have access to internet had less than five years of exposure to the internet or had been using internet for less than 5 years. 98.8% of the students had been using internet for less than 5 years. Implication of this finding is that students are more internet-inclined than their teachers. This claim is in consistence with finding acclaimed from

Table 3 and further supported by Traxler [7] and Banks [8].

Table 5 showed that highest percentage of 43.0% among the teachers that have access to internet, indicated the using of school cybercafé/school computer laboratory as channel to surf the internet. While 65.0% of the students that have access to internet indicated the using of internet enabled mobile-phone to surf the net. This implies that the proliferation of internet enabled mobile phone had contributed greatly to the medium through students surf the net. This claim is in consistence with finding acclaimed from Table 3 and further supported by Onasanya and Asuqua [1], Traxler [7] and Banks [8].

Table 5: This table shows the Distribution of by the Mode of Browsing used to browse the internet

Mode of Browsing the Internet	Teacher		Student	
	N	%	N	%
Personal Modem	28	16.3	35	2.5
Internet Enabled Mobile Phone	56	32.6	912	65.0
Sch. Cybercafé/Sch. Computer Lab	74	43.0	302	21.5
Other Cybercafé	14	8.1	156	11.0
Total	172	100	1405	100

Table 6 showed that highest percentage of 40.0% among the teachers that have access to computer, indicated the using of outside school computer-center as medium to use computer. While 64.5% of the students that had access to computer indicated computer-laboratory in the schools as channels via which they have access to computer. There were many reasons for the using of internet by the teachers that had access to the internet. Table 8 revealed that ‘just to increase personal knowledge’ was given the highest priority as the reason for surfing the internet among the teachers with an index of 3.55. This was followed by ‘information gathering’ with an index of 3.36. ‘Download resource came third in the rating with an index of 3.16 while an index rating of 2.98 represented teachers who claimed that it helped in communication. The fifth position in the rating with an index of 2.76 went to ‘distance learning’ as the reason for surfing the net while the next position with an index of 2.73 went to the claimed that internet was useful for ‘preparing lessons’. The least position went to “to teach in the class”. Implication of this finding is that internet

users among the teachers never used internet for learning process in the secondary school.

There were many reasons for the use of internet by the student-respondents that had access to the internet. Table 8 revealed that 'download & surfing sites' was given the highest priority as the reason for surfing the internet among the students with an index of 3.56. This was followed by an index rating of 3.37 represented students who claimed that it also helped in communication. Next in the rating was an index of 3.21 for information gathering as the reason for surfing the net. The fourth position in the rating with an index of 2.92 went to 'just to increase personal knowledge' as the reason for surfing the net while the least position with an index of 2.92 went to the claimed that internet was useful for 'school work'. Implication of this finding is that internet users among

the students never used it for teaching and learning process in the secondary school, rather they used for downloading and communication. Table 9 revealed that 'just to be computer literate' was given the highest

Table 6: This table shows the Distribution of Teachers by Level and Qualification

Channel of Using Computer	Teacher		Student	
	N	%	N	%
PC/Laptop	49	21.3	147	11.4
School Computer Lab	89	38.7	834	64.5
Other Computer Centers	92	40.0	312	24.1
Total	230		1293	

Table 7: This table shows the Distribution of Teachers by Selected Reasons and Purpose for using the Internet and their rating

Variables	Strongly Agreed	Agree	Weakly Agree	Disagree	Strongly Disagree	Total	Index
	5	4	3	2	1		
Information Gathering	230	168	105	52	23	578	3.36
Download Resources	210	152	96	50	35	543	3.16
Communication	190	144	87	46	46	513	2.98
Prepare Lessons	180	136	81	38	34	469	2.73
Distance Learning	170	132	75	36	62	475	2.76
School Work	160	124	72	34	68	458	2.66
Just to Increase Personal Knowledge	255	180	111	50	14	610	3.55
Teach in the Class	150	116	69	34	73	442	2.57

The values shown in the table were obtained by multiplying the preference scale (1-5) by the number of respondents at each level, e.g 46 respondents × 5 = 230, 42 respondents × 4 = 168 etc.

Table 8: This table shows the Distribution of Students by Selected Reasons and Purpose for using the Internet and their Rating

Variables	Strongly Agreed	Agree	Weakly Agree	Disagree	Strongly Disagree	Total	Index
	5	4	3	2	1		
Information Gathering	1755	1312	768	400	270	4505	3.21
Downloading Files and Surfing Sites	2050	1520	888	420	109	4987	3.56
Communication	1890	1400	840	416	189	4735	3.37
School Work	1475	1156	711	358	405	4105	2.92
Just to Increase Personal Knowledge	1520	1200	720	368	377	4185	2.98

The values shown in the table were obtained by multiplying the preference scale (1-5) by the number of respondents at each level, e.g 351 respondents × 5 = 1755; 328 respondents × 4 = 1312 etc.

Table 9: This table shows the Distribution of Teachers by Selected Reasons and Purpose for Using Computer and their Rating

Variables	Strongly Agreed 5	Agree 4	Weakly Agree 3	Disagree 2	Strongly Disagree 1	Total	Index
Just to Increase Personal Knowledge	260	156	144	72	55	687	2.99
To Teach in the Class	220	168	117	68	71	644	2.80
Just to Communicate	235	180	126	86	53	680	2.96
Just to be Computer Literate	300	216	144	68	34	762	3.31

The values shown in the table were obtained by multiplying the preference scale (1-5) by the number of respondents at each level, e.g 52 respondents × 5 =260, 39 respondents × 4 = 156 etc.

Table 10: This table shows the Distribution of Students by Selected Reasons and Purpose for using Computer and their Rating

Variables	Strongly Agreed 5	Agree 4	Weakly Agree 3	Disagree 2	Strongly Disagree 1	Total	Index
Just to Increase Personal Knowledge	1155	856	528	270	537	3346	2.59
Checking for Information	1560	1000	801	400	264	4025	3.11
Just to Communicate	1600	1156	810	500	164	4230	3.27
Just to be Computer Literate	1435	1104	735	416	277	3967	3.07

Note: The values shown in the table were obtained by multiplying the preference scale (1-5) by the number of respondents at each level, e.g 231 respondents × 5 =1155, 214 respondents × 4 = 856 etc.

priority as the reason for using the computer with an index of 3.31 by the teacher-respondents that had access to the computer. This was followed by ‘just to increase personal knowledge’ with an index of 2.99.

‘Just to communicate’ came third in the rating with an index of 2.99 while an index of 2.96 went to the claimed that internet was useful for communication purpose. Implication of this finding is that computer users among the teachers never used computer for learning process in the secondary school, rather they used it to be computer literate. Table 10 revealed that ‘just to communication’ was given the highest priority as the reason for using the computer with an index of 3.27 by the student-respondents that had access to the computer. This was followed by ‘checking for information’ with an index of 3.11. ‘Just to be computer literate’ came third in the rating with an index of 3.07 while an index of 2.56 went to the claimed that computer was useful for personal knowledge increment. Implication of this finding is that computer users among the students used computer for communication processes in the secondary school. This claim is in consistence with Okebukola [9].

CONCLUSION

This study concluded that students surfed the net via their internet enabled mobile phone than their teachers. Therefore, they do have access to internet resources than their teachers but never use this internet for learning purpose in their classrooms. On the other hand teachers used internet for their personal reasons and this had adversely affected learning processes in Southwest part of Nigeria. There is no doubt that teachers and students in secondary schools in Nigeria will have incredible resources available if they have access to the Internet and the computer. By integrating information and communication technology such as internet and computer into secondary school curriculum, a fundamental shift in the way teachers teach and students learn will be evolved. Also, individuals can easily learn at his own pace with the aid computer so as provide solution problems of shortage of teachers. It is also hoped that computers and internet can change current pedagogical practices in secondary schools in southwest part of Nigeria, which depended heavily on the traditional lecture method. It is universally accepted that computers allow more independent exploration, more

personally tailored activities, more teamwork, and less didactic instruction. However, this study has proved that these hopes and aspiration on the paths of government, teachers and students have not been met. In addition, there are only few internet service providers in Nigeria. Furthermore, the few reputable companies, which render reliable services, charge high fees, thus, limiting access to the use of the Internet. One of the greatest technological challenges in Nigeria is how to establish reliable cost effective Internet connectivity. Secondary schools in southwest part of Nigeria are not given adequate funds to procure high-tech equipment (computers) and Internet connectivity. Again, due to the lack of adequate electricity supply, especially in rural areas in Nigeria, secondary schools located in those areas have no access to the Internet and are perpetually isolated from the world's information resources. Teachers need to be re-oriented of the need to use internet and computer for teaching and learning processes in the school. Additionally, government should as a matter of urgency incorporate internet enabled mobile phone in the teaching and learning processes in Southwest part of Nigeria that will pace way into electronic and mobile leanings among the students.

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ACKNOWLEDGEMENT / SOURCE OF SUPPORT

Nil

CONFLICT OF INTEREST

No conflict of interest was declared by authors

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