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COMPUTER AND INTERNET LITERACY LEVEL OF SECONDARY SCHOOL PHYSICAL EDUCATION TEACHERS IN LAGOS STATE

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ABSTRACT

The study delves into the literacy level of secondary school physical education teachers on computer and Internet technologies, and the extent to which they apply the knowledge and skills to the teaching of physical education. 87 physical education teachers participated in the study and self-developed questionnaire (r = 0.77) served as instrument for data collection. Data analyses were carried out using percentage, weighted mean score (WMS) and chi square. Findings revealed that the teachers have access to computer and internet, their literacy level is very low and this has resulted to low level of utilization of the technologies for teaching physical education. It is recommended therefore that computer and internet education should be intensified for Physical Education teachers in training, and workshop should be organized for teachers in service in order to facilitate their literacy levels in computer and internet.

INTRODUCTION

Education has been tremendously enriched in this millennium with new pattern ofcommunication, information and instruction courtesy the computer and internet. These communication technologies are continually gaining ground in many spheres of human endeavours; their growth and applicability make them essential for adoption in numerous disciplines. According to Banjoko (2002), nothing epitomizes modern life better than computer, as it has infiltrated every aspect of the society. Computer is a technology with many functions, one of which is to assist in classroom instruction (Landu, 2003 & Etukudo, 2003).

Landu (2003) and Enwereonye (2002) view computer as an object of instruction and vehicle for instruction, object of instruction when learning about computer itself, and vehicle for instruction

when it is used to deliver instruction in classroom either partially or totally. Delivery of instruction via computer, however, is in two categories:

(i) Computer Assisted Instruction (CAI) where the teacher is substituted with the computer and the learner interacts directly with the system; and

(ii) Computer-Managed Instruction (CMI) where the computer keeps records of the child's learning experiences and needs (Landu, 2003).

Olagunju (2003) opines that computer can be used to enrich existing curriculum through the adoption of various instructional programmes. Computerized instruction permits students to proceed at their own pace; following a path through the curriculum, as suited to their particular interest and talent.

Computer in the educational system has been found to increase the time learners devote to learning, enhances the speed ofayailability of data and information, provide immediate feedback, assist less qualified teachers and increase their efficiency and effectiveness (Chukwu, Ajere & Afolabi, 2003). These teaching resources with such great values must not be seen as a luxury resource in physical education, but must be perceived as one of the essential teaching and learning material.

For the internet, Pickersgill (2003) likens it to a giant growing library in which it is essential for the user to develop a clear search strategy, a strategy that will evolve with practice, and become more and more specific. Landu (2003) describes the internet as a global computer network that allows data to be transferred from one computer to another. Information is broken down into digital packets on the internet, and large amount can be accessed and distributed over large distances.

According to Kalu and Elcwueme (2003), internet contains a variety of education resources that can beaccessed for use by both teachers and students. The World Wide Web (www) can be used in locating and selecting appropriate education concepts, ideas and activities for solving a variety of assignments.

Computer and internet literacy have been associated with awareness of both systems (Chukwu, Ajere &Afolabi, 2003). This means being able to tell a computer (either connected to the internet or not) to do what you want it to do and understanding when that thing is being done. In physical education, computer and internet are distinct material resources for teaching and learning.

Computer could facilitate easy explanation and comprehension of various analyses of body parts and movements as well as functions of organs and systems in the body. There is the need for physical education teachers at secondary school level to be aware of possible and probable uses of the computer and internet as it will assist them to achieve their teaching goals quickly and better with little or no difficulty. This study investigates computer and internet literacy level of secondary school Physical Education teachers in Lagos State. It also delves into accessibility and utilization of these technologies for educational purposes.

METHODS

PARTICIPANTS

87 secondary school teachers of physical and health education in Lagos State participated in this study. 39 (44.8%) of them were males and 48 (55.2%) females. Only 7(8.1%) of the teachers were below the age of 25 years. 30 (34.5%) and 29 (33.3%) were within age ranges of 25 — 35 years and 36 — 45 years respectively; and 21 (24.1%) were above the age of 45 years. The educational qualification of 46 (52.9%) of the participants was Nigeria Certificate of Education (NCE). 33 (37.9%) have First Degree and 8 (9.2%) have above First Degree. 5 (5.8%) participants have below 5 years teaching experience, 23 (26.4%) of them have been teaching physical education for 6 to 10 years and 59 (67.8%) were above 10 years as physical education teachers. The participants were selected using purposive sampling technique.

INSTRUMENT

The instrument for data collection was a self-developed questionnaire of three sections. Section A dealt with the demographic data of participants. Section B was a modified four-point Likert scale that sought for information on computer and internet literacy and accessibility level ofphysical education teachers. Section C also on computer and internet utilization and literacy levels has four options of NA = Not at all, OC Occasionally, OF = Often and VOF = Very often.
The instrument was validated by three professional colleagues whose contribution and suggestions were considered in the final draft. Test-retest method was used to determine the

reliability level of the instrument and the result of Pearson's Product Moment Correlation Co-efficient gave the r value of 0.77.

DATA COLLECTION

Three research assistants assisted in data collection. Participants were visited in their various schools, and were given copies of the questionnaire for their responses. The entire administered copies of questionnaire were retrieved immediately to avoid loss of any copy.

DATA ANALYSIS

The data collected were coded and analyzed using simple percentage, weighted mean score (WMS) and Chi square statistical tools. The level of probability was 0.05.

RESULT

Table 1: Percentage and chi square analysis of data on computer and internet literacy levels of physical education teachers

VARIABLES	SA (%)	A (%)	D (%)	SD (%)	TOTAL	X^2-CAL	X^2-CRI
PHYSICAL EDUCATION TEACHERS ARE COMPUTER LITERATE	15.4 (17.7)	19.3 (22.2)	30.1 (34.6)	22.2 (25.5)	87	5.41	
PHYSICAL EDUCATION TEACHERS ARE INTERNET LITERATE	17.5 (20.1)	13.6 (15.6)	29.2 (33.6)	26.7 (30.7)	87	7.54	7.82

NOT SIGNIFICANT @0.05

Results in table 1 show that greater percentage of the responses (60.1% and 64.2%) indicate that physical education teachers in Lagos State are not computer and internet literate. Chi square

analysis ofthe data shows that the calculated values (5.41 and 7.54) were less than the critical value (7.82). This further indicates significantly that the teachers have low computer and internet literacy level.

Table 2: Percentage and chi square analyses of data on computer and interne accessibility level of physical education teachers

VARIABLES	SA (%)	A (%)	D (%)	SD (%)	TOTAL	X^2-CAL	X^2-CRI
PHYSICAL EDUCATION TEACHERS HAVE ACCESS TO COMPUTER	35.3 (40.6)	26.1 (30.0)	11.2 (12.9)	14.4 (16.5)	87	16.87*	7.82
PHYSICAL EDUCATION TEACHERS HAVE ACCESS TO INTERNET	28.9 (33.2)	37.6 (43.2)	7.7 (8.9)	12.8 (14.7)	7.82 87	26.60*	

Not significant @0.05

Results in table 2 show that greater responses (70.6% and 76.4%) indicate that secondary school physical education teachers in Lagos State have access to computer and internet. Chi square analysis of the data shows that the calculated values (16.87 and 26.60) were greater than the

critical value (7.82). The results significantly indicate that teachers have access to computer and internet.

Table 3: Percentage and chi-square analyses of data on computer and internet utilization for physical education teaching

VARIABLES	SA (%)	A (%)	D (%)	SD (%)	TOTAL	X^2-CAL	X^2-CRI
PHYSICAL EDUCATION TEACHERS US COMPUTER IN RELATION TO TEACHING	15.8 (18.2)	17.4 (20.0)	25.3 (29.1)	28.5 (32.7)	87	5.15	7.82
PHYSICAL EDUCATION TEACHERS USE INTERNET IN RELATION TO TEACHING	15.9 (18.3)	15.5 (17.8)	27.3 (31.4)	28.3 (32.5)	87	6.75	

Not significant @0.05

Results in table 3 show that greater responses of the participants (61.8% and 63.9%) indicate that physical education teachers in Lagos State do not use both computer and Internet in relation to teaching. Chi square analysis of the data shows that the calculated values (5.15 and 6.75) were less than the critical value (7.82). The results significantly indicate that teachers do not utilize computer and internet in relation to teaching physical education.

Table 4: Weighted mean scores (WMS) of knowledge and skill in computer programs, and utilization of computer and internet in relation to physical education

A	I have knowledge and skill in the following programs which I put into use:	**NA**	**OC**	**OF**	**VOF**	**WMS**
1	Microsoft Word	48	19	07	13	1.83
2	Microsoft Excel	53	17	13	04	1.63
3	PageMaker	57	07	17	06	1.68
4	CorelDRAW	69	–	11	07	1.49
5	Adobe Acrobat	61	11	10	05	1.53
6	Microsoft PowerPoint	63	08	14	02	1.48
7	Photoshop (scanning)	65	05	05	12	1.59
8	Microsoft WordPerfect	71	07	05	04	1.33
9	Microsoft Access	59	23	03	02	1.40
10	Microsoft Publisher	71	09	05	02	1.29
Average WMS = 1.53						
B	I use computer for the following:	**NA**	**OC**	**OF**	**VOF**	**WMS**
1	Preparation of lesson notes	66	17	04	–	1.29
2	Preparation of results	44	35	4	4	1.63
3	Preparation of exam/CA questions	31	44	9	3	1.82

4	Keeping records and storing information	43	25	16	3	1.76
5	Visualphysical education teaching resource	45	37	05	–	1.54
6	Audiovisual physical education teaching resources	51	28	08	–	1.51
Average WMS = 1.59						
C	I use the Internet for the following:	**NA**	**OC**	**OF**	**VOF**	**WMS**
1	Browsing for current Physical Education and Sports information	21	43	23	–	2.02
2	Sourcing for literature	27	29	31	–	2.05
3	Chatting	28	44	11	04	1.90
4	Exchange of mails	35	32	16	04	1.87
5	Purchase of physical education textbooks and teaching materials	71	13	03	–	1.22
Average WMS = 1.81						

Table 4 shows that the average weighted mean scores of 1.53 on knowledge and skill in computer programs, 1.59 of computer utilization and 1.81 on internet utilization in relation to teaching physical education are lower than the criteria weighted mean score of 2.50 set for high level of skill, knowledge and utilization ofcomputer and the internet.

The table shows further that the respondents have their highest weighted mean score on knowledge and skill in using Microsoft words computer programs (1.83) and lowest in Microsoft Publisher (1.29). The respondents recorded highest value on utilization of computer in relation to preparation of examination and continuous assessment questions (1.82) and lowest in preparation

of lesson notes (1.29). For utilization of internet in relation to teaching physical education, the highest value is in using the system to source for literature (2.05) and lowest in the purchase of textbooks and teaching materials (1.22).

DISCUSSION OF FINDINGS

There have been inconsistencies in previous reports on teachers' competence on computer and internet literacy. The finding of this study that secondary school physical education teachers do not have adequate computer and internet literacy however corroborates that of Olagunju (2003) who reports that less than 40% of teachers in 16 sampled federal schools have the experience of using computer, and less than 40% have acquired proficiency in the use of software, word processor, desktop publishing and database programming. In another study carried out on lecturers in colleges of education in Plateau State, Nigeria, only 36.4% lecturers in Physical and Health Education Department were computer literate (Chukwu, Ajere &Afolabi, 2003).

Contrary to these reports, Landu (2003) reports very high literacy levels on computers, electronic mails and World Wide Web (73.3%, 86.7% and 83.3% respectively) among science teachers in Kwali area of Abuja, Nigeria. Kalu and Ekwueme (2003) also report in their study that science teachers in Calabar, Nigeria are computer literate. Using computer and internet in teaching and learning processes develop learners' skills in handling information. These skills enable them to develop deeper into science (Ahiakuro, 2003). Knowledge and skill in using these technologies in relation to teaching is therefore very essential for a physical education teacher to be successful in his teaching profession.

The finding in this study that secondary school physical education teachers have access to computer and internet does not come as a surprise. Even if most teachers do not have their personal computers, there are business centres and cyber café at every nook and cranny of Lagos State for easy accessibility. The finding, however, agrees with the opinion ofDung, Mwanse and Dung (2003) that cultural compatibility and high cost of purchase and maintenance of computers in developing countries may make the demand for computers in classrooms seem a luxury at the moment but may not last for a very long period of time, The use of computer to facilitate learning within the formal teaching and learning situations will eventually enhance the

acceptance of this technology in the developing countries which are normally dominated by indigenous technologies.

Findings of this study further indicates poor utilization ofcomputer and internet in relation to teaching physical education among the teachers (see tables 3 and 4). This is in agreement with previous reports. Landu (2003) reports 43.3% computer utilization level, 16.7% internet and electronic mails and 10% World Wide Web among science teacher. Kalu and Ekwueme (2003) report that few science teachers (29.8%) use internet and very few (24%) use it for educational purposes. This low level ofcomputer and internets utilization for academic purpose among secondary school physical education teachers in the state calls for special attention of professionals in the field to keep pace with time.

CONCLUSION AND RECOMMENDATIONS

It is concluded in this study that though secondary school physical education teachers in Lagos State, have access to computer and internet, they do not acquire sufficient literacy level that will enable them use these technologies, especially for educational purposes. This therefore significantly accounted for their low level ofcomputer and internet utilization in relation to teaching physical education in schools.

The following are therefore recommended:

1. Computer and internet education should be intensified at the level ofphysical education teachers' preparation in our Universities and Colleges of Education. This will enable teachers in-training to acquire necessary skills and knowledge that will be needed for application ofcomputer and internet to teaching physical education and sports.

2. Science Teachers' Association of Nigeria (STAN)-PHE Panel should concentrate some workshops on computer and internet education for teachers to facilitate their literacy level.

3. School authorities and ministries of education should encourage teachers to go for in-service training on computer and internet education.

4. Governments should work towards provision ofcomputer and internet facilities in secondary schools for academic purposes.

5. Further studies should compare computer and internet literacy and utilization between pre-service and in-service physical education teachers.

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