

- Kim G, Lee H.S., Seok B., Kim B., Yang M.A. (2015); review for biological monitoring of manganese with exposure susceptibility, and response biomarkers. *J. Environ. Health Environ arcinog Ecotoxicol Rev.* 33(2): 229- 54.
- Meden F.(2016): Determination of Alcohol Content in Alcoholic Beverages Using 45 MHz Benchtop NMR Spectrometer. *International Journal of Spectroscopy* Volume 2016, Article ID 2526946, 8. <http://dx.doi.org/10.1155/2016/2526946>
- Maduabuchi, J.M.U., Nzegwu, C.N., Adigba, E.O., Aloke, R.U., Ezomike, C.N., Okocha C.E., Obi, E., and Orisakwe, O.E. (2008). Iron, Manganese and Nickel exposures from canned and non-canned beverages in Nigeria: A public health concern. *Journal of public heath Science*, 54(2)335-338.
- Salako S.G., Adekoyeni O.O., Adegbite A.A. and Hammed T.B. (2016): Determination of Metals Content of Alcohol and Non-alcoholic Canned Drinks Consumed at Idiroko Border Town Ogun State Nigeria. *British Journal of Applied Science & Technology* 12(6): 1-8, 2016, Article no.BJAST. 19163 ISSN: 2231-0843, NLM ID: 101664541 SCIENCE DOMAIN [internationalwww.sciencedomain.org](http://www.sciencedomain.org)
- Samuel Y. and Yohanna D. (2017): Organic Metabolites, Alcohol Content, and Microbial Contaminants in Sorghum-based Native Beers Consumed in Barkin Ladi Local Government Area, Nigeria *Journal of Scientific Research & Report* 17(4): 1-8, 2017; Article no.JSRR.38124 ISSN: 2320-0227.
- Singaravadiivel K., Alagusundaram K., Hariharan B. (2012): Physicochemical Properties of Fresh and Stored Coconut Palm Toddy. 1:397. doi:10.4172/scientificreports.397.
- WHO (1993): Micronutrient deficiency. Battling iron deficiency anaemia [online] Nutritional program. Geneva. vol. 16.

LEVEL OF COMPUTER LITERACY AMONG PRIMARY SCHOOL TEACHERS IN EBONYI STATE

Vivian Chioma Azubike, Maureen Ngozi Nwanze, Ph.D & Sunday Okechukwu Abonyi, Prof.

Abstract

The level of computer literacy among primary school teachers in Ebonyi State is a study that determines the skills possessed by the primary school teachers in Word-processing, Spreadsheet, PowerPoint, Graphics, Web-browser, Emailing, and skills possessed based on their subject specialization. Six research questions and hypotheses guided the study. The study is delimited to public primary schools in Ebonyi State. The study is a descriptive survey design. It was carried out in the three (3) educational zones in Ebonyi State: Abakaliki, Onueke, and Afikpo. The population of the study was eight thousand four hundred ninety-four (8,494) public primary school teachers from the three (3) education zones with a sample size of three hundred (300) purposively selected through a simple stratified sampling technique. The instrument used was an observation schedule titled; Level of Computer Literacy among Primary School Teachers (LCLAPST) in Ebonyi State. The instrument contained 20 items that cut across the study's six (6) purposes. It was developed to suit the level of knowledge an average primary school teacher is expected to have in computers. The instrument was face-validated by three experts from the measurement and evaluation, computer education, and computer science departments. The instrument's reliability was trial tested by observing and rating 5 primary school teachers in Enugu State outside the study area. They were subjected to an inter-rater reliability test using Kendal's Coefficient of Concordance (W), which yielded reliability indices of 0.93, 0.85, 0.92, 0.82, and 0.91, respectively. Data was collected using Twenty (20) research-hired assistants who observed and rated the teachers during the skill test exercise. The data was analysed using the mean value of 2.5 as a response mark and standard deviation. Above and below the response mark were high and low performances. One-way ANOVA tested the hypotheses at a 95% confidence level. The findings of the study are as follows: in word processing, it was revealed that the teachers' performance was high in identifying parts of a computer, using input devices, and using special function keys but low in formatting skills. In Spreadsheet Excel, the result revealed that teachers' performance was high in using icons and menus but low in formatting the cell and in using special function keys. In the PowerPoint presentation, the

result revealed that teachers' performances were high on the opening and closing of a presentation template and checking of spellings but low on the use of icons, menus,, and inter-process communication techniques for transferring data. In graphics, the result shows that the performance was poor in the entire given task. In web browsing and emailing, the performance was good in the entire given task. In subject specialization, the performance of the individual groups, based on their subject specialization, revealed that teachers from science-related disciplines performed better than teachers from other non-science-related disciplines. In hypothesis, the result of the findings revealed no significant difference in the mean response on the level of computer skills possessed by the primary school teachers based on their subject specialization. In conclusion, the study revealed that the different skill levelss of the teachers in the use of computer demand parameters such as needs assessment to be used for their retraining programs in a way that the training programs can fit towards meeting their specific skill needs. Based on the findings, the study therefore recommends the use of this as a guide for the in-service training, because this study provides a comprehensive needs assessment of the teachers. Some limitations of the study include difficulties in inviting teachers from different coverage areas for the exercise and selecting respondents. Some of the recommendations include periodic assessment of the performance of computer skills on the primary school graduates in Ebonyi State.

Keywords: *Computer education, literacy, skills.*

Introduction

Computers have greatly affected lives in a way that almost everything is either run or made by computers. Its impact can be seen in education, communication, business, entertainment, and health. Therefore, the knowledge and the ability to use computers becomes imperative that the Federal Government of Nigeria included computer studies in the Nigerian school curriculum starting from primary school; the inclusion aimed at providing the opportunity for everyone to be computer literate. Some researchers have conducted studies on the level of computer literacy at different levels of education. For example, Alarape and Suleiman (2014) conducted a study on: Computer literacy level among primary

school teachers in Bida: implications for E-Governance deployment. The main aim of the study was to investigate the computer literacy levels of primary school teachers in Bida to finding out their degree of acceptance of e-governance as a system. The major finding revealed that there is a high level of computer literacy among the teachers as well as revealing the highest percentage of respondents with positive feelings for e-products- a factor of acceptance of e-governance. In another study, Edoho and Bassey (2014) conducted a study on: school-based computer/ internet training needs for primary school teachers on skill acquisition in the Akwa-Ibom state of Nigeria. The main purpose of the study was to find out the school-based training needs of primary school teachers on computer/internet facilities usage for the attainment of educational goals in Akwa-Ibom state. The result showed that there is no significant difference in mathematics development/ achievement between pupils who are taught by teachers who receive training on the Internet but are denied post-training access to computer/Internet tools and pupils taught by teachers without Internet training. It was found that there is a significant relationship between the availability of Internet facilities in schools and teachers' effective utilization of the facilities. Furthermore, Nwanze (2014) conducted a study on strategies for improving computer studies in secondary schools in Oshimili and Aniocha Local Government Area of Delta State. The main purpose of the study was to determine, funding, infrastructure, methodologies strategies required for improving computer studies among principals, vice principals, and teachers in Delta State. The result showed that there is no significant difference among the responses of principals, vice principals and teachers on the strategies for improving the computer studies. Oladunjoye and Benwari (2014) also conducted a study on computer literacy among undergraduate students in Nigerian universities. The study shows that there is a significant difference between male and female undergraduate students in computer literacy. There is a significant difference

between students brought up in urban and rural settings in their exposure to and use of computers.

In line with the above, it can be asserted that the Government's efforts to enshrine computer studies in the school curriculum through the provision of computers and accessories and in-service training for the teachers to reposition them for effective instructional delivery are faced with some challenges. These provisions seem to be poorly utilized, and the education system produces school leavers who know little or nothing about computers. A lot of teacher-related factors were attributed to it without any verifiable claims. Among these are the background specialization and the qualification of the teacher. Omoniyi & Adebayo, (2013) argued that teachers with high educational qualifications and specialization in science-related subjects are expected to be more competent in computer skills than teachers with lesser educational qualifications or specialization in humanities.

However, efforts have not been made to ascertain these teachers' skills to fashion suitable retraining programs that address each teacher's specific computer skill needs. However, Parameters such as the "Needs Assessment" about the level of skill competencies among the teachers are lacking. The needs assessment entails assessing teacher computer competency skills to determine their skill level (Chao, 2015). If the assessment is done well, it can be used for their retraining programs in a way that the training programs are tailored towards meeting the specific skill needs of teachers. The importance of the assessment of the skill needs of teachers is to categorize them according to their specific skill levels through performance-based exploration. To base their in-service needs on quantifiable research evidence and design cost-effective remediation programs as the study's outcome may be informed. Based on the above, this study is carried out to determine the level of computer literacy among elementary school teachers in Ebonyi State.

Purpose of the study

The purpose of the study is to determine the level of computer literacy among primary school teachers in Ebonyi state. Specifically, the study seeks to determine the level of skills possessed by primary school teachers in;

1. Word Processing.
2. Spreadsheets excel.
3. PowerPoint presentation.
4. Graphics.
5. Use of the internet and email.
6. The level of skills possessed by primary school teachers based on their subject specialization.

Hypotheses

The null hypotheses were tested at a 95% confidence level:

H01: The level of computer skills possessed by the primary school teachers will not differ significantly based on their subject specialization.

Significance of the study

The findings of this research might undoubtedly be of immense significance to the Government, Ministry of Education, and other relevant institutions involved in training the teacher.

The findings of this study might provide a template for in-service training programs for teachers. This is because it will provide a comprehensive needs assessment of the teachers and guide training programs tailored to those needs. This will enhance the teachers' performance and professional development.

It is hoped that the findings of this research will be of benefit to pupils, the teachers because if the teachers are trained to have the required skills, the knowledge and the performance of the pupils will improve in terms of computer literacy. As pupils advance in their skills of computer, they can easily take their CBT entrance examination gain admission do computer-related courses in higher institutions of learning, and be employed with ease.

Scope of the Study

The scope of this study is delimited to the level of computer literacy among primary school teachers in Ebonyi state. The study is also delimited to skills possessed by the primary school teachers in word processing, spreadsheet, PowerPoint presentation, use of the internet and email, and skills possessed by the teachers with diverse disciplines (subject specialization).

Research Questions

The following research question guided the study:

1. What is the level of skills possessed by primary school teachers in Word Processing?
2. What is the level of skills possessed by primary school teachers in Spreadsheet applications?
3. What is the level of skills possessed by primary school teachers in PowerPoint Presentations?
4. What is the level of skills possessed by primary school teachers in Graphics?
5. What is the level of skills possessed by primary school teachers in the use of the Internet and email?
6. What is the level of skills possessed by primary school teachers based on their subject specialization?

Methodology

Design of the study

The researchers employed a descriptive survey design. It is a kind of survey design employed to describe the situation of things or facts as observed in the field while carrying out a study.

Area of the study

The study will be conducted in Ebonyi State. Ebonyi state is a state in the southeastern part of Nigeria, created in 1996. The state occupies about 5,932 square kilometers. It shares common boundaries with Benue to the North, Enugu State to the West, Imo State and Abia State to the south, and Cross River to the East. Ebonyi State is made up of thirteen (13) local government areas

which include: Izzi, Abakaliki, Afikpo South, Afikpo North, Ebonyi, Ezza South, Ezza North, Ikwo, Ishielu, Ohaukwu, Onicha, Ohaozara, and Ivo. The state has three (3) Education Zones which are Abakaliki, Onueke, and Afikpo. Ebonyi State was the defunct Abakaliki division of Enugu State and the old Afikpo of Abia State. Ebonyi State is suitable for this study because the state is still growing in education and industry.

Population of the Study

The population of this study is eight thousand, four hundred and ninety-four (8,494) public primary school teachers in Ebonyi State (Source: Ebonyi State Universal Basic Education Board).

Instrument for Data Collection

The instrument used for data collection was an Observation Schedule. The researchers developed the observation schedule titled: Level of Computer Literacy among Primary School Teachers (LCLAPST) in Ebonyi state. This schedule was developed to suit the level of knowledge an average primary school teacher expected to have on the computer. The schedule has five (5) sections, namely sections "A" to "E," with four (4) clusters. Section "A" was a performance test on basic operations and Word Processing Section "B" addressed the performance test on the spreadsheet Excel skill, and Section C addressed the performance test on the PowerPoint skill. Section D addresses performance tests on the graphics. Moreover, Section E addresses the performance test on emailing and the internet browser. The researchers are expected to observe and rate the teachers using Very High Level (4), High Level (3), Low Level (2), and Very Low Level (1) based on clearly specified indicators in the scoring guide provided by the researchers.

The instrument was face-validated by three experts. The instrument's reliability was trial tested in Enugu state, outside the study area, and was subjected to a test of inter-rater reliability using Kendal's Coefficient of Concordance (W). The inter-rater reliability was determined for each of the five clusters of the skill test. Clusters

A to E yielded reliability indices of 0.93, 0.85, 0.92, 0.82 and 0.91 respectively.

Data were collected using Twenty (20) research-hired assistants who observed and rated the teachers during the skill test exercise. Data were analysed using the mean value of 2.5 as a response mark and standard deviation, and the hypotheses were at a 95% confidence level using One-Way ANOVA.

3.5 - 4.00 – very high

2.5 – 3.40 – High

1.5 – 2.40 – low

0.1– 1.40 – very low

Results and Discussions

Research question 1:

What is the level of skills possessed by primary school teachers in Word Processing?

Data used in answering this question was from the performance of the different tasks given on Word Processing from the observation schedule (LCLAPST).

Table 1: *Mean achievement scores and standard deviation on word-processing*

S/N	TASK	X	Std.Dev	Decision
1.	Identify parts of a computer, log	3.1367	.8248	High
2.	on and off,The use of input devices (e.g. keyboarding and mouse).	2.9767	.9086	High
3.	The use of special function keys,	2.6267	.8503	High
4	to save, rename, and open a file. Formatting	2.3600	.8980	Low

The data analysis presented in this table revealed different performances in the given task to the selected teachers from the three education zones in Ebonyi State.

Research question 2:

What skills are possessed by the primary school teachers in Spreadsheet Excel application?

Data observed on the spreadsheet were used in answering this research question. The summary of results is shown in Table 2

Table 2: *Mean achievement scores and standard deviation on spreadsheet application*

s/n	Task	X	Std.Dev.	Decision
5.	Use of icons and menus	2.9933	.8808	High
6	Use of functions keys and	2.3033	.9421	Low
7.	keyboard shortcuts.	2.1467	.9099	Low
8.	Formatting the cell and data.	2.1967	.9701	Low
	Use of special keys			

The data analysis presented in Table 2 revealed different performances in the given task on the spreadsheet application.

Research question 3

What level of skills is possessed by the primary school teachers in PowerPoint presentation application?

Data observed on the PowerPoint schedule was used in answering this research question. The summary of the result is shown in Table 3.

Table 3: *Mean achievement scores and standard deviation on PowerPoint presentation application*

S/n	Task	X	STD.Dev	Decision
9.	Open and close a presentation	2.6567	1.0783	High
10.	template.	2.3500	1.1218	Low
11.	Use of icons and menus.	2.8867	.9292	High
12.	Checking of spellings	2.3333	1.0127	Low
	Inter-process communication			
	technique for transferring data			

The data analysis presented in table 3 revealed different performances in the given task on the PowerPoint application.

Research question 4:

What level of skills is possessed by primary school teachers in graphics application?

Table 4: *Mean achievement scores and standard deviation on the graphics application*

S/N	Task	X	Std.dev	Decision
13.	Identification of graphics icons and tools.	2.4433	1.2076	Low
14.	Use of the drawing tools	2.1400	.9575	Low
15.	Use various modes to organize ideas, such as picture-based, text-based	2.0900	.9824	Low
16	Saving a file	1.9833	1.2416	Low

The data analysis presented in this table revealed different performances in the given task on the graphics application. The table shows that the teachers performed poorly on the entire given tasks.

Research question 5:

What skills are possessed by primary school teachers in emailing and internet browsers?

Table 5: *Mean achievement scores and standard deviation on emailing and internet browser*

S/n	Task	X	Std.dev	Decision
17.	Identification and the launch of Internet Explorer.	3.1067	.7641	High
18	Mailing	2.9933	.8538	High
19	Spell checking	2.7600	.8275	High
20	Send a mail	2.8067	.9587	High

Table 5: The data analysis presented in this table revealed different performances in the given task on the emailing and internet browser. The table shows that the performance was good on the entire tasks given.

Research question 6:

What skill levels are possessed by primary school teachers based on their subject specialization?

Data used in answering this question was from the mean performance of the individual groups based on their subject specialization.

Table 6: *Groups’ specializations mean achievement scores and standard deviation.*

s/n	Task	Specialization Groups	Mean	Std. Dev	Cases	Decision
1	Identify computer parts, log on and off	Mathematics /Computer studies	3.9118	.2879	34	V. High
		Languages & Creative/Cultural arts	2.6500	.5796	40	High
		Core Science & Health Sc.	3.3731	.4873	67	v. High
		Social Sciences & Religion	2.1892	.5695	37	Low
		Educational Foundation	2.3462	.5196	52	Low
		Technology & Vocational Ed	3.9000	.3022	70	V. High
2	Use of input device (eg keyboarding and mouse)	Mathematics /Computer studies	3.7941	.4104	34	V. High
		Languages & Creative/Cultural Arts	1.9500	.5038	40	Low
		Core Science & Health Sc.	3.4627	.5024	67	High
		Social Sciences & Religion	2.2432	.4350	37	Low
		Educational Foundation	2.1154	.5479	52	Low
		Technology & Vocational Ed	3.7286	.4479	70	V. High
3	Use of special function keys, save, rename, and open	Mathematics /Computer Studies	3.7647	.4306	34	V. High
		Languages & Creative/Cultural Arts	1.5000	.5064	40	Low
		Core Science & Health Sc.	2.7910	.4779	67	High
		Social Sciences & Religion	2.2162	.5341	37	Low
		Educational Foundation	1.9808	.4196	52	Low
		Technology & Vocational Ed	3.2571	.4402	70	High
4	Formatting	Mathematics /Computer Studies	3.1471	.3595	34	High
		Languages & Creative/ Cultural Arts	1.2000	.4051	40	Low
		Core Science & Health Sc.	2.9104	.4167	67	High

5	Use of icons, menus, and selection of cells in a spreadsheet app	Social Sciences & Religion	1.4054	.4977	37	Low
		Educational Foundation	1.7500	.5192	52	Low
		Technology & Vocational Ed	3.0714	.4281	70	High
		Mathematics /Computer Studies	3.1471	.3595	34	High
		Languages & Creative/ Cultural Arts	1.2000	.4051	40	V. Low
		Core Science & Health Sc.	2.9104	.4167	67	High
		Social Sciences & Religion	1.4054	.4977	37	V. Low
6	Use of function keys and keyboarding shortcuts in SP	Educational Foundation	1.7500	.5192	52	Low
		Technology & Vocational Ed	3.0714	.4281	70	High
		Mathematics /Computer Studies	3.1176	.4093	34	High
		Languages & Creative/ Cultural Arts	1.6750	.5723	40	Low
		Core Science & Health Sc.	2.3582	.4831	67	High
		Social Sciences & Religion	1.5405	.5052	37	Low
		Educational Foundation	1.2885	.4985	52	V. Low
7	Format the cell and data in SP Excel	Technology & Vocational Ed	3.3714	.4867	70	High
		Mathematics /Computer Studies	2.5294	.5066	34	High
		Languages & Creative/ Cultural Arts	1.1750	.3848	40	V. Low
		Core Science & Health Sc.	2.3731	.4873	67	Low
		Social sciences & Religion	1.3243	.4746	37	V. Low
		Educational Foundation	1.4808	.5770	52	V. Low
		Technology & Vocational Ed	3.2286	.4867	70	High
8	Use of special keys in SP Excel	Mathematics /Computer Studies	2.9706	.4596	34	High

9	Open and close the PowerPoint presentation template	Languages & Creative/Cultural Arts	1.1250	.3349	40	V. Low
		Core Science & Health Sc.	2.7313	.4466	67	High
		Social Sciences & Religion	1.2162	.4173	37	V. Low
		Educational Foundation	1.2500	.4372	52	V. Low
		Technology & Vocational Ed	3.1429	.3914	70	High
10	Use of icons and menus in the presentation template	Mathematics /Computer Studies	3.8235	.3870	34	V. High
		Languages & Creative/Cultural Arts	1.9750	.3572	40	Low
		Core Science & Health Sc.	3.2836	.4864	67	High
		Social Sciences & Religion	1.2973	.4634	37	V. Low
		Educational Foundation	1.5385	.7531	52	Low
11	Checking of spelling	Technology & Vocational Ed	3.4286	.5267	70	High
		Mathematics /Computer Studies	3.3824	.6520	34	High
		Languages & Creative/Cultural Arts	1.2500	.4385	40	V. Low
		Core Science & Health Sc.	2.8060	.3984	67	High
		Social Sciences & Religion	1.1892	.3971	37	V. Low
12	Inter-process communication technique for transferring data	Educational Foundation	1.2500	.4372	52	V. Low
		Technology & Vocational Ed	3.4714	.6532	70	High
		Mathematics /Computer Studies	3.8529	.3595	34	V. High
		Languages & Creative/Cultural Arts	2.0750	.2667	40	Low
		Core Science & Health Sc.	3.2090	.4779	67	High
		Social Sciences & Religion	1.9459	.4046	37	Low
		Educational Foundation	1.9231	.5547	52	Low
		Technology & Vocational Ed	3.7857	.4133	70	High
		Mathematics /Computer Studies	2.7059	.4625	34	High

13	Identification of graphics icons and tools	Languages & Creative/ Cultural Arts	1.1000	.3038	40	V. Low
		Core Science & Health Sc.	2.7761	.4200	67	High
		Social Sciences & Religion	1.4324	.5022	37	V. Low
		Educational Foundation	1.5000	.5049	52	Low
		Technology & Vocational Ed	3.5286	.5028	70	V. High
		Mathematics /Computer Studies	3.8824	.3270	34	V. High
14	Use of drawing tools	Languages & Creative/ Cultural Arts	1.1250	.3349	40	V. Low
		Core Science & Health Sc.	2.7313	.4793	67	High
		Social Sciences & Religion	1.1622	.3737	37	V. Low
		Educational Foundation	1.3462	.4804	52	V. Low
		Technology & Vocational Ed	3.7143	.4550	70	V. High
		Mathematics /Computer Studies	2.8529	.3595	34	High
15	Use various modes to organize ideas.	Languages & Creative/ Cultural Arts	1.2250	.4229	40	V. Low
		Core Science & Health Sc.	2.7612	.4296	67	High
		Social Sciences & Religion	1.0811	.2767	37	V. Low
		Educational Foundation	1.1346	.3446	52	V. Low
		Technology & Vocational Ed	3.0286	.4807	70	v.High
		Mathematics /Computer Studies	2.8235	.3870	34	High
16	Saving a file in graphics application	Languages & Creative/ Cultural Arts	1.0500	.2207	40	V. Low
		Core Science & Health Sc.	2.4478	.5010	67	High
		Social Sciences & Religion	1.1622	.3737	37	V. Low
		Educational Foundation	1.1346	.3446	52	Low
		Technology & Vocational Ed	3.1857	.5462	70	High
		Mathematics /Computer Studies	3.0000	.3482	34	High

17	Identification and the lunch of internet explorer	Languages & Creative/ Cultural Arts	.8500	.6622	40	Low
		Core science & Health Sc.	2.5970	.4942	67	High
		Social sciences & Religion	.4865	.6507	37	V. Low
		Educational Foundation	.8269	.6484	52	V. Low
		Technology & Vocational Ed	3.2000	.5275	70	High
		Mathematics /Computer Studies	3.7059	.4625	34	V. High
18	Mailing	Languages & Creative/ Cultural Arts	2.7250	.4522	40	Low
		Core Science & Health Sc.	2.9701	.6506	67	Low
		Social Sciences & Religion	2.5135	.5067	37	Low
		Educational Foundation	2.4423	.5015	52	Low
		Technology & Vocational Ed	3.9714	.1678	70	V. High
		Mathematics /Computer Studies	3.8824	.3270	34	V. High
19	Spell checking	Languages & Creative/ Cultural Arts	2.3000	.4641	40	Low
		Core Science & Health Sc.	3.2090	.5376	67	High
		Social Sciences & Religion	2.1622	.3737	37	Low
		Educational Foundation	2.0962	.2977	52	Low
		Technology & Vocational Ed	3.8571	.3525	70	V. High
		Mathematics /Computer Studies	3.4706	.5066	34	High
20	Send a mail	Languages & Creative/ Cultural Arts	2.0000	.3203	40	Low
		Core Science & Health Sc.	3.0896	.3363	67	High
		Social Sciences & Religion	1.7568	.5965	37	Low
		Educational Foundation	2.1346	.3446	52	Low
		Technology & Vocational Ed	3.5286	.5308	70	V. High
		Mathematics /Computer Studies	3.8235	.3870	34	V. High
		Languages & Creative/ Cultural Arts	2.0000	.3922	40	Low
		Core Science & Health Sc.	3.2985	.4611	67	High
		Social Sciences & Religion	1.9459	.3288	37	Low
		Educational Foundation	1.7115	.5718	52	Low
		Technology & Vocational Ed	3.5714	.5536	70	V. High

The result in Table 6 revealed, the level of the given task. The table shows the 20 task items and the different group specializations that took the text. Data were analysed using mean and standard deviation in response to the twenty (20) tasks given in the observation schedule developed from the research questions. The study revealed the different mean achievement scores of skills possessed by the specialized groups and it revealed that teachers from science-related disciplines performed better than teachers from other non-science-related disciplines.

Hypotheses

HO₁: The level of computer skills possessed by the primary school teachers will not differ significantly based on their subject specialization.

Table 7: *The test of significant differences in the mean achievement scores, and level of computer skills possessed by the primary school teachers based on their subject specialization.*

S/N	Task	Sources	D.F	SS	MSS	F	F.Prob	Decision
1	Identify parts of a computer, log on and off	BG	5	183.6808	36.7362	188.0325	.0000	Reject
		WG	294	57.4392	.1954			
2	Use of input device (mouse)	BG	5	178.7598	35.7520	154.4000	.0000	Reject
		WG	294	68.0769	.2316			
3	Use of special function keys	BG	5	152.3719	30.4744	140.3981	.0000	Reject
		WG	294	63.8147	.2171			
4	Formatting	BG	5	183.6808	36.7362	188.0325	.0000	Reject
		WG	294	57.4392	.1954			
5	Use of icons, menus, and cell selection	BG	5	172.3781	34.4756	170.0398	.0000	Reject
		WG	294	59.6086	.2028			
6	Use of function keys and keyboard shortcut	BG	5	193.4841	38.6968	158.2043	.0000	Reject
		WG	294	71.9,125	.2446			
7	Formatting the cell and data	BG	5	176.1977	35.2395	145.2078	.0000	Reject

8	Use of special keys	WG	294	71.3490	.2427		
		BG	5	230.2952	46.0590	264.9896	.0000 Reject
9	Open and close of presentation template	WG	294	51.1015	.1738		
		BG	5	266.3129	53.2626	192.5537	.0000 Reject
10	Use of icons and menus	WG	294	81.3238	.2766		
		BG	5	299.3744	59.8749	228.9833	.0000 Reject
11	Checking of spellings	WG	294	76.8756	.2615		
		BG	5	202.6624	40.5325	214.7736	.0000 Reject
12	Inter-process communication technique for transferring data	WG	294	55.4842	.2887		
		BG	5	244.8421	48.9684	232.8641	.0000 Reject
13.	Identification of graphic icons and tools	WG	294	61.8246	.2103		
		BG	5	381.8861	76.3772	414.6753	.0000 Reject
14.	The use of drawing tools	WG	294	54.1506	.1842		
		BG	5	225.9439	45.1888	275.7694	.0000 Reject
15	Use of various modes to organize ideas	WG	294	48.1761	.1639		
		BG	5	233.4912	46.6982	249.2663	.0000 Reject
16	Saving a file	WG	294	55.0788	.1873		
		BG	5	367.8117	73.5623	232.2898	.0000 Reject
17	Identification and launch of Internet Explorer	WG	294	93.1050	.3167		
		BG	5	107.5995	21.5199		.0000 Reject
18	Mailing	WG	294	66.9871	.2278		
		BG	5	168.8649	33.7730	202.1358	.0000 Reject
		WG	294	49.1217	.1671		

19	Spell checking of the written text	BG	5	146.4754	29.2951	147.8720	.0000	Reject
		WG	294	58.2446	.1981			
20	Sending a mail	BG	5	208.1078	41.6216	183.5175	.0000	Reject
		WG	294	66.6789	.2268			
							182.0803	.0000 Reject

The data analysis presented in Table 3 revealed no significant difference in the mean response on the Level of computer skills possessed by the primary school teachers based on their subject specialization. This is because all the items in the table obtained an f-probability value of (0.0000), less than f-cal (0.05). Therefore, based on the decision rule, the researchers reject the null hypothesis and support the hypothesis that the Level of computer skills possessed by primary school teachers will not differ significantly based on their subject specialization.

Conclusion: The study was done in three (3) educational zones in Ebonyi state. During the study, it was identified that primary school teachers were given training at intervals on acquiring computer skills by SUBEB to equip them with the skills needed to use computers that were provided to the schools. It was also known that the computers were locked up and laid to waste without fair use. The study also revealed the different skill levels of the teachers in the use of computers, demanding for parameters such as needs assessment to be used for their retraining programs in a way that the training programs can fit towards meeting specific skill needs of teachers. Based on the findings, the study therefore recommends the use of this as a guide for the in-service training, because this study provides a comprehensive needs assessment of the teachers. Some limitations of the study include difficulties in inviting teachers from different coverage areas for the exercise and selecting respondents. Some of the recommendations include periodic assessment of the performance of computer skills on the primary school graduates in Ebonyi State.

References

- Alarape M. A., &Suleiman M. A., (2004). Computer literacy level among primary school teacher in BIDA: Implications for e-governance deployment. *International Journal of Applied Information System (IJAIS)* ISSN-2249-0868 Foundation of Computer Science FCS, New York, USA.Vol. 6 No 8.www.ijais.org.http://citeseerx.1st.psu.edu/view/doc/download?doi=10.1.1.429.157&rep=rep1&type=pdf
- Edoho and Bassey (2014). School-based computer/internet training needs for primary school teachers on skill acquisition in Akwa-Ibom state of Nigeria. *Journal of education and practice*. Academic Informa. Online ISSN: 2222-288x. Print ISSN: 2222-1735. pp 62171 138-142.
- Chao, G. M., (2015).Impact of teacher training on information communication technology integration in public secondary schools in Mombasa country *Human Resource Mgt. Research* 5(4). Pp.77-94. Doi:10.5923/j.hrmr.20150504.01.
- Nwanze, M. N. (2014). Strategies for improving computer studies in secondary schools in Oshimili and Aniocha local Government Area of Delta State. Published MSC. (Ed) project.
- Omoniyi T & Adebayo, T.Q. (2013). Perceived competence of Nigerian secondary schools teachers in the use of information and communication technology (ICT).*Journal of education and practice*. ISSN 2222-1735(paper) 2222-288X(online) 4(10).