

## RELATIONSHIP BETWEEN TEACHERS SELF-EFFICACY APPLICATION PACKAGE AND CLASSROOM PRACTICE AMONG SENIOR SECONDARY SCHOOLS IN ZARIA METROPOLIS, KADUNA STATE NIGERIA

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### **Abstract**

*This study focused on the relationship between teachers self-efficacy application package in Microsoft Word and classroom practices in senior secondary school in Zaria zone, Kaduna state. Four objective, research question and hypothesis were formulated to guide the study. Descriptive Survey research design was employed. The participants of the study consist of 293 male and 203 female (494) senior secondary schools teachers' in Zaria zone. 214 teachers were randomly sampled using Kreejie and Morgan sampling procedure. Instrument for data collection was validated by four experts from three Departments in ABU, Zaria. Thereafter, instrument was pilot tested at Government Girls Day Senior Secondary School Samaru Zaria, a reliability coefficient of 0.720 was established using Cronbatch Alpha. Questionnaire was administered and data collected thereafter were analyzed using descriptive statistics of frequency and simple percentage for analyzing demographic data, while mean and standard deviation were used to answer the research questions. Hypothesis was tested using Pearson Product Moment Correlation (PPMC). The findings revealed that there is a positive relationship between teachers' computer application package self-efficacy in Microsoft Word, Microsoft Excel, PowerPoint and Internet and classroom practice. It also indicates that if the teachers' self-efficacy increases, classroom practice will also increase. Moreover, the research found that those teachers with high levels of computer application package self-efficacy do not necessarily teach using computers. Based on these findings it is recommended that teachers should be given in-service professional development training on the use of computer application package to improve their classroom practice*

### **Introduction**

Education is one of the most important single instruments of change in any society, and the main instrument of delivering such education in the school. The school has been recognized as an enduring human institution. Changes in schools, in most cases have been on physical structure rather than the condition of teachers and their students.

Olowo and Onasanga (2007) define education as the instruction or training by which people learn to develop and use their mental, moral and opportunity to acquire knowledge, skills as well as status that will enable him to escape from dull unpleasant life. According to Oxford English Dictionary (2006), education is a process of teaching, training and learning, especially in schools or colleges to improve knowledge and develop skills. However it is regarded as that which is given to an individual to make him or her socially, morally sound in the community in which he/she finds himself. Therefore, technology offers teachers the ability to transform the quality of instruction in order to achieve their aims and objectives. Computer application packages such as Microsoft Word is a highly effective skill which can aid learning, teachers can communicate to their students' by sending information regarded to the goal of education. Passey (1999) stated or proves that students who used educational technology felt more successful in school, they are motivated to learn more and have increased self-confidence and self-esteem. But if not used carefully, it may disengage students and actually hinder learning.

Smith (2001) however reported that an individual's computer experience based on computer usage determines the level of belief in their skills and confidence about using computers to accomplish tasks. Microsoft word is one of the most popular word processing programs in use, which allows teachers to create wide variety of text documents including essays and class projects to brochures and greeting cards, teacher's guide's learner on how to practice writing skills, editing process easier with tools like copy and paste, word count, spell check and grammar check. It also serves as a visible alternative to writing traditional, handwritten notes and assignment. However, both teachers and learners could use it to update and keep track of homework, exam dates. In the process of teaching and learning is a kind of skills which can be used for creating and editing work, creating out lines, fixing spelling and sentence structure.

Globally, education has been accepted as the most viable tool for effecting any desired change in the human society. Base on the importance associated with education in modern times. In recent years, there have been calls for the changes in educational curriculum in other to improve the quality of education to a sufficiently train teachers (Braathen & Robles, 2000; Brown, 2000). The process of teaching and learning ought to be logical and systematic as recommended by scholars (Johnson, 2005; Igbaria & Chakrabarti, 1990). This implies that the process of impacting knowledge ought to be characterized by diverse organized teaching methods which can lead to actualization of specific learning objectives.

Therefore, technology offers teachers the ability to transform the quality of instruction in other to achieve their aims and objectives. Teachers are currently asked to become computer literate and integrating emerging computer technology into their teaching process. Thus, computers are seen as new phenomenon in education, it is important for educators to understand what level of impact teachers degrees of computer self-efficacy have on their teaching.

The use of computers in education has opened a new area of knowledge and offers skill that has the potential to change some of the existing educational methods. Therefore, teachers' are the key to any effective exploitation of this resource in the educational system. As the use of computer continues to increase in the society, teachers' can also prepare for the use of computers within their classroom. In a nutshell, it has become the responsibility of higher education to prepare teachers that are capable of using technology in effective and efficient ways to positively influence student achievement.

Tschannen-Moran, Woolfolk Hoy and Hoy (2000) stated that, the efficacy beliefs of teachers are related to their instructional practices and students achievement. For instance, research has shown that teachers' attitudes towards modern technologies considerably influence the effective use of these technologies at school. Therefore, technology can foster a shift in the teacher role from a traditional one to that of facilitator in the classroom. In additionally, technology can also impact students to become more active learners during the learning process (Ota, 2009). It is expected that teachers should possess a wide range of computer skills for teaching excellence.

Ololube (2005) stated that the quality of teachers is known in virtually all countries to be a key predictor of student learning. In a report by software and information industry association (2000), which sums up research into educational technology over the last 20years, it is mentioned that teachers are more effective after receiving extensive training for integrating technology into school curriculum. In the same publication, it is also reported that teachers who have successfully used communication technologies such as e-mail, newsgroups and mailing lists in order to exchange ideas on educational matters, demonstrate greater progress in self-efficacy and confidence in their teaching abilities compared to teachers lacking access to such tool.

Within this context, computer self-efficacy is a specific type of self-efficacy referring to a belief of one's capability to use the computer (Compeau & Higgins, 1995). A strong sense of computer self-efficacy of school teachers can affect the extent as well as the way technology can be used in everyday instructional practice, significantly changing both the teacher's and the student's roles.

However, lessons and activities could be explored through the internet. Therefore, teacher computer self-efficacy might determine to a considerable extent the ability to develop such technologies which is an important educational skill. It is a highly effective skill which can aid learners; teachers can communicate to their students' by sending information regarded to the goal of education. But if not used carefully, it may disengage students and actually hinder learning.

Adesine (1987) recognized teachers as the heart of Nigeria's educational system at all levels. Teachers continue to be the major determinants of quality education, be it at the primary, secondary or tertiary level. Similarly, National Curriculum Association Conference that was held in 1969, described teachers as the key in the entire educational Programed. Ogoni, (2003) suggests that teachers need skills that can assist them to carry out their duties efficiently. For instance, teacher's computer self- efficacy is measure by the performance of students in the classrooms. Moreover, it increased student sensitivity to the costs of seeking and giving help to teachers (Bandura, 1999).

In the previous years, classrooms were a cycle of memorization, repetition and note copying, but now, the world is increasingly shaped by ICT which is having radical re-organization of entire educational sector from olden days practice. Right from childhood, most privileged children are exposed to modern means of learning and information sharing such as television, computer game; smart phones cartoons, and other ICT related resources. Zhiwen and Jietian (1986) pointed out that student who interactively with the computers' had more favorable attitude toward learning than those who never had such opportunity.

Therefore, schools are challenged not only to equip the learner with basic knowledge of concepts as far as the curriculum is concerned, such knowledge should characterizes their way of life. In the height at above discussion, this study investigate the relationship between computer application packages self-efficacy and classroom practice among senior secondary school teachers in Zaria.

### **Statement of the Problem**

The problem of integrating computer into teaching and learning in Nigeria schools include: lack of adequate computers in schools and poor knowledge of computer skills by teachers' etc. In teachers' competence, teachers in Nigeria secondary schools are not competent in basic computer operation and in the use of generic software could be a major challenge.

### **Objectives of the Study**

The relationship between computer self-efficacy and classroom practice among senior secondary schools teacher in Zaria, Kaduna State.

- (i) Assess the relationship between teachers' self-efficacy in Microsoft Word and classroom practice in teaching at senior secondary schools in Zaria.
- (ii) Find out the relationship between teachers' self-efficacy in Microsoft Excel and classroom practice in teaching at senior secondary schools in Zaria.
- (iii) Determine the relationship between teachers' self-efficacy in PowerPoint and classroom practice in teaching at senior secondary schools in Zaria.
- (iv) Find out the relationship between teachers' self-efficacy in Internet and classroom practice in teaching at senior secondary schools in Zaria.

### Research Questions

The research question is formulated to guide this study.

- (i) What is the relationship between teachers' self-efficacy in use of Microsoft Word application and their classroom practice in Senior Secondary Schools in Zaria?
- (ii) What is the relationship between teachers' self-efficacy in the use of Microsoft Excel application and their classroom practice in Senior Secondary schools in Zaria?
- (iii) What is the relationship between teachers' self-efficacy in the use of Microsoft PowerPoint application and their classroom practice in Senior Secondary schools in Zaria?
- (vi) What is the relationship between teachers' self-efficacy in the use of Internet application and their classroom practice in Senior Secondary schools in Zaria?

### Research Hypotheses

The following hypotheses were postulate for this study:

H<sub>01</sub>: There is no significant relationship between teachers' self-efficacy in Microsoft Word and classroom practice at Senior Secondary Schools in Zaria.

### Methodology

**Design:** This study adopted a descriptive survey design method using a well- structured questionnaire. This design is appropriate because of the nature and scope of the problem being investigated and it help the researcher to achieve the main purpose of the stated objectives for the study.

**Population:** The study comprises of all the senior secondary schools teachers in Zaria educational zone in Kaduna State. The target population for this study is four hundred and ninety six (496) including male and female teachers.

**Sample Size and Sampling Techniques:** The sample size for this study was determined by using stratified random sampling technique which was used to select 214 from the target population.

**Table 1: Distribution of Responses by Schools**

S/N	Sample Schools	No. Teachers
1	Alhudahuda College Zaria	23
2	Government Girls SCH PADA Senior Zaria	19
3	Government Girls Secondary School KofanGayan	11
4	Government Girls Secondary School Zaria	15
5	Government Secondary School Bogari	10
6	Government Secondary School Dakace	13
7	Government Secondary School Gyallesu Zaria	12
8	Government Secondary School KofarKuyambana Zaria	12
9	Government Secondary School Kugu	3
10	Government Secondary School Magajiya (Senior)	14
11	Barewa College Zaria	28
12	Government Secondary School TudunJukun	14
13	GSS Zaria (SNR)	21
14	GSSS Kaura (SNR)	10
15	Sheik Ibrahim Arab Special Secondary School Karau-KarauB	14
	<b>Total</b>	<b>214</b>

**Research Instrument:** The research instrument for this study is questionnaire which consists of two sections: Items in part one focus on computers application package such as computers self-efficacy such as Microsoft word, Microsoft Excel, PowerPoint and Internet skills processed by teachers. Five point likertscale was used which include: Moreover, certain statements in the questionnaires indicated as No skill, highly skilled, Undecided, Low skilled and Moderate Skill respectively. Part two concentrated on classroom practice with the option of Always Use, Intermittently Use, Rarely Use and Undecided. Therefore, the instrument has 10 items each.

The questionnaire was validated both in face and content by four professional experts in Ahmadu Bello University Zaria, but from different departments, one of the lecture is from instructional technology section, one from department of English and two lectures from curriculum section. They all made observations, such as clarity, simplicity of the language used, grammatical errors such as spelling errors and the suitability of the instrument, after that it was accepted for the purpose which it was meant for. The instrument, questionnaire was administered to 30 randomly selected Senior Secondary School teachers in Government Girls Secondary Schools Samaru Zaria which is not part of the population. The reliability of computer self-efficacy and classroom practice (CSECP) was established through the analysis of the data that was obtained from the administration of the 20 items in each part of the items in the questionnaire. Thus, the instrument was found highly reliable through Cronbach Alpha which gave a reliability of coefficient of 0.72.

The data obtained from administration of the questionnaire were subjected to data analysis using frequency count and percentage to analyze the demographic data. Descriptive statistics (mean and standard deviation) were also used to analyze the data obtained from the respondents and describe the variables. Pearson Product Moment correlation was used to test the hypotheses at 0.05 alpha level. The correlation analysis included computation of correlation coefficient and significance of relationship. The nonparametric correlation analysis method (Spearman rank-order) was used to determine the relationship. The value of correlation coefficients ranges from +1 to -1. The value of correlation coefficient closure to +1 showed significant positive relationship and its value closure to -1 showed significant negative relationship. If there was no relationship between the variable of interest, then the value of correlation coefficient would be near zero.

### Research Question One

What is the relationship between teachers' self-efficacy application package on Microsoft word and classroom practice in Senior Secondary schools in Zaria?

To determine the relationship between teachers' self-efficacy application package on Microsoft Word and classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question one as presented in Table 1a and 1b.

**Table 2: Teachers' Self-efficacy on the use of Microsoft Word Application Package**

S/N	Items	Mean	SD	Decision
1.	Types, edit, copy and paste a block of text or selected object	3.22	0.881	Agree
2.	Use undo/redo function	3.11	0.857	Agree
3.	Save print and preview	3.38	0.812	Agree
4.	Use spell check grammar and thesaurus to edit and review document	3.13	0.892	Agree
5.	Create and use table functions (boarder, merge/split cell)	3.02	1.043	Agree
6.	Select and change font size and type	3.21	0.855	Agree
7.	Select and change styles e.g boldface italics, underlining	3.13	0.955	Agree
8.	Set line spacing e.g single space double spacing	3.13	1.012	Agree



9.	Set paragraph alignment e.g left right centre justification	2.95	1.062	Agree
10.	Insert and remove	2.98	1.048	Agree
<b>Aggregate mean score</b>		<b>3.13</b>	<b>0.756</b>	<b>Agree</b>

From the cumulative mean score of 3.13 for the table, the teachers could be said to have adequate knowledge on the use of the Micro-Soft Word processing package for effective teaching of the application in the Senior Secondary Schools. This is based on the fact that the mean score is higher than the midpoint average of 2.5 and from the level of the responses, it could be said that most teachers were of the view that they were efficient in the use of the package and therefore could effectively teach is utilization to the Senior Secondary School students. The actual practice of the teachers of this acclaimed self-efficacy in the use of the Software is shown in Table 1b.

**Table3: Teachers' Self-Efficacy Application on the Use of Microsoft Word in Classroom Practice**

S/N	Items	Mean	SD	Decision
1.	I can open Microsoft word from my computer and use it Effectively in my class	2.97	1.044	Agree
2.	Ask students to submit their typed work in soft copy	2.64	1.078	Agree
3.	Request the students to typed work	2.99	1.024	Agree
4	Inform the students to produce their timetable using MS word	2.89	.966	Agree
5	Type the students list using insert menu	2.89	.959	Agree
6	Teach students how to select different clip arts	2.76	.998	Agree
7	Teach students how to edit typed document	2.83	.978	Agree
8	Teach students how to use formatting tools to format the typed document	2.80	.959	Agree
9	Request students to copy a typed work and paste it in another document	2.82	.956	Agree
10	I typed my students result using MS Word	2.96	1.025	Agree
<b>Aggregate mean scores</b>		<b>2.86</b>	<b>0.820</b>	<b>Agree</b>

The cumulative mean score of 2.86 for the table shows that the teachers were of the view that they put their knowledge of the software into practice for teaching and learning in the classroom situation in the secondary schools involved in the study. The aggregate mean score is however lower than the score for their knowledge of the use of the software as obtained in Table 1. The actual level of significance of the relationship between the two variables is tested in the related hypothesis of the study.

### Research Question Two

What is the relationship between teachers' self-efficacy on the use of Microsoft Excel application package and their classroom practice in Senior Secondary schools in Zaria?

To determine the teachers' self-efficacy application package on Microsoft Excel and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question two as presented in Table 4.3.2a and 4.3.2b.

**Table 4: Teachers' Self-efficacy on the use of Microsoft Excel Application Package**

S/N	Items	Mean	SD	Decision
1	Create a new word book	2.90	1.110	Agree
2	Opening creating and saving a word book	2.88	1.039	Agree
3	Enter and edit data	2.90	0.978	Agree
4	Edit and format cells rows and columns	2.88	0.993	Agree
5	Insert a picture clip and shapes and smart art	2.90	0.014	Agree
6	Preview and print workbook/worksheet	2.82	1.074	Agree
7	Creating and modifying charts	2.98	1.182	Agree
8	Importing and exporting data	2.79	1.147	Agree
9	Apply simple formulae such as SUM, Average and STDEV (Standard deviation)	2.73	1.159	Agree
10	Insert header and footer, wordart, Symbol, etc	2.63	0.997	Agree
	<b>Aggregate mean score</b>	<b>2.80</b>	<b>0.923</b>	<b>Agree</b>

The table revealed that the teachers could be said to have adequate knowledge of the Microsoft Excel spread sheet. This is indicated with the cumulative mean score of 2.80 for the table which is higher than the midpoint average of 2.5. The actual practices of this acquired knowledge in terms of practices in the teaching and learning of the software application in a classroom situation in the senior secondary schools is shown in Table 4.3.2b.

**Table 5: Teachers' Self-efficacy Application on the Use of Microsoft Excel in Classroom Practice**

S/N	Items	Mean	SD	Decision
1	I calculate my students CA and assignment using MS Excel	2.88	1.029	Agree
2	I use MS Excel to arrange my students name in ascending or descending order	2.83	1.074	Agree
3	I teach my students how to creates charts using MS Excel	2.74	1.087	Agree
4	I teach my students how to use MS Excel for basic calculation	2.59	1.051	Agree
5	I teach my students how to use MS Excel to insert symbol into their work	2.64	1.060	Agree
6	I teach my students how to use MS Excel to produce the list of their group members	2.76	1.039	Agree
7	I teach my students how to preview and print work book/worksheet from MS Excel	2.70	1.018	Agree
8	I teach my students how to edit and format cells, rows and columns in MS Excel different	2.77	1.091	Agree
9	I teach my students how to create presentation using wizards design template or blank layouts	2.74	1.048	Agree
10	I teach my students how to use standard layout and designing for their presentation	2.69	1.142	Agree
	<b>Aggregate mean score</b>	<b>2.70</b>	<b>0.942</b>	<b>Agree</b>

The cumulative mean score for the table is 2.70 and it is higher than the midpoint average of 2.5 for agreement on the practices of the self-efficacy of the software in the actual classroom situation. It could therefore be said that the teachers actually put their knowledge into practice in the teaching and learning of the software utilization in the senior secondary schools. The level of the relationship between the two variables is tested in the related hypothesis of the study.

### 4.3.3 Research Question Three

What is the relationship between teachers' self-efficacy application packages on the use of PowerPoint and their classroom practice in Senior Secondary schools in Zaria?

To determine the teachers' self-efficacy application package on Microsoft PowerPoint and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question three as presented in Table 4.3.3a

**Table 6: Teachers' Self-efficacy on Microsoft PowerPoint Application Package**

S/N	Items	Mean	SD	Decision
1	Create presentation using wizards, design templates or blank layouts	2.66	1.159	Agree
2	Modify standard layouts and design	2.71	.997	Agree
3	Use slide master to create consistent presentations	2.68	1.015	Agree
4	Edit, insert slides from other presentation and reorganize slides	2.63	1.003	Agree
5	Change text fonts and bullets or numbers to slide contents	2.65	1.050	Agree
6	Add objects (clip arts, pictures, video clips, sound to your presentations)	2.68	1.023	Agree
7	Add animations and transitions to slides	2.73	1.093	Agree
8	Include table and charts in presentation	2.76	1.051	Agree
9	Navigate between slides and switch between different views (slide outline, notes)	2.70	1.027	Agree
10	Use navigation buttons, sound, dissolve, graphics and text fields	2.63	1.117	Agree
	<b>Aggregate mean score</b>	<b>2.69</b>	<b>0.938</b>	<b>Agree</b>

The cumulative mean score on self-efficacy of the teachers in the knowledge of the PowerPoint as indicated in the table which is higher than the midpoint average score of 2.5. This is therefore a clear indication that the teachers considered themselves adequately knowledgeable in the use of the software. Their practices of the acquired knowledge for teaching and learning of the software in the classroom is scored in mean and standard deviation in Table 4.3.3b.

**Table 7: Teachers' Self-efficacy on the Use of Microsoft PowerPoint Application Packages for Classroom Practice**

S/N	Items	Mean	SD	Decision
1	Teach my students how to create presentation	2.41	1.289	Disagree
2	Teach my students how to use standard layout and designing their power point presentation	2.36	1.320	Disagree
3	My student present their assignment using PowerPoint presentation	2.28	1.361	Disagree
4	I teach my student how to change Text fonts	2.29	1.292	Disagree
5	How to insert clip arts pictures Symbols	2.43	1.283	Disagree
6	I add animation and transition To my slides while teaching	2.38	1.238	Disagree
7	teach my students how to create Tables and charts in presentation	2.36	1.232	Disagree



8	Teach my students how to link Their presentation with internet	2.47	1.232	Disagree
9	Teach my students how to use appropriate use navigation buttons graphics and text field in their presentation	2.44	1.240	Disagree
10	Teach my students how to use Internet	2.48	1.327	Disagree
	<b>Aggregate mean score</b>	<b>2.39</b>	<b>1.164</b>	<b>Disagree</b>

In term of practices in teaching and learning with the software, the cumulative mean score of 2.39 did not support agreement with adequate practice. The cumulative mean score (2.39) is lower than the midpoint average for agreement with adequacy of practices of the software for teaching and learning in the classroom among the Senior Secondary Schools. This would imply that Power Point Software was not adequate used by the teachers in their teaching in the Senior Secondary School. The test of significance between the two variables is carried out in the related hypothesis.

#### 4.3.4 Research Question Four

What is the relationship between teachers' self-efficacy on the use of Internet application and their classroom practice in Senior Secondary schools in Zaria?

To determine the relationship between teachers' self-efficacy on Internet application packages and their classroom practices in Senior Secondary Schools in Zaria, descriptive statistics of mean and standard deviations were used to answer the question four as presented in Table 4.3.4a.

**Table 8: Teachers' Self-efficacy Opinion on Internet Application Package**

S/N	Items	Mean	SD	Decision
1	Use the browser e.g internet explorer basic commands to surf the interest	2.64	1.185	Agree
2	Send and Receive mails via yahoo. Gmail etc	2.79	1.034	Agree
3	Download research materials to the hard drives (flash, disc, CD)	3.27	.889	Agree
4	Clear my browser cache/history	3.11	1.005	Agree
5	Send document paper through e-mail attachment file	3.10	1.043	Agree
6	Download and install a plug-in (eg real player, adobe acrobat)	3.07	1.016	Agree
7	Participate an international conference through teleconferencing/video conferencing	2.94	1.075	Agree
8	View source code and modify them for my use	2.93	1.004	Agree
9	Use internet to chart	2.55	1.115	Agree
10	Can evaluate the design of existing web pages	2.52	1.145	Agree
	<b>Aggregate mean scores</b>	<b>2.89</b>	<b>1.051</b>	<b>Agree</b>

From the cumulative mean score of 2.89 which is higher than the midpoint average of 2.5, it could be concluded that the teachers were of the view that they were proficient in the use of Internet. This is based on the midpoint average of 2.5 for deciding the level of response to the items in the table which were measured on the four point interval scale. Table 4.3.8 shows the opinions of the teachers on the practices of the Internet browsing skills in a classroom situation for teaching and learning in the Senior Secondary Schools involved in the study.

**Table 9: Teachers' Self-efficacy on the Use of Internet Application for Classroom Practice**

S/N	Items	Mean	SD	Decision
1	I teach my students how to use the internet	2.69	1.245	Agree
2	I send and receive mails from my students	2.70	1.247	Agree
3	I download teaching materials from the internet	2.71	1.261	Agree
4	I teach my students how to get additional Information from the internet	2.59	1.266	Agree
5	I receive class assignments through Email attachment file	2.36	1.262	Disagree
6	I teach my students how to download relevant materials from the internet	2.44	1.257	Disagree
7	I support my teaching with the use of Tube video	2.29	1.270	Disagree
8	I teach my students how to chat with their colleagues via the internet	2.48	1.295	Disagree
9	I chat with my students via Facebook, 2go etc	2.52	1.359	Agree
10	I teach my students how to use different search machine	2.47	1.848	Disagree
<b>Aggregate mean score</b>		<b>2.53</b>	<b>1.331</b>	<b>Agree</b>

The Table shows that the teachers were of the view that they actually put into practices their acquired Internet skills in their classroom teaching and learning in the senior secondary schools. The cumulative mean score is equivalent to the set midpoint average of 2.5. It could therefore be concluded that the teachers put into practices their acquired skill in Internet usage in their practices in classrooms of the Senior Secondary Schools. The relationship between the variables is tested for significance in the related hypothesis.

### Testing of hypotheses

**Ho:1** There is no significant relationship between teachers' self-efficacy in Microsoft Word computer application package and classroom practice at Senior Secondary Schools in Zaria. To test this hypothesis, Pearson Product Moment Correlation (PPM) was used as shown in Table 3

**Table 10: Correlation between Teachers' Self-efficacy in Microsoft Word Software and Classroom Practice in Senior Secondary Schools**

Variables	N	Mean	S.D	df	r	p-value
Self-efficacy in Microsoft Word	214	3.13	0.756	212	0.500	0.000*
Classroom practice	214	2.86	0.820			

\*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation  $r=0.5$  between teachers' self-efficacy in Microsoft Word computer application package and Microsoft Word computer application classroom practices in the Senior Secondary Schools in Zaria. This indicates an observed correlation coefficient of 0.500 obtained at 212 degree of freedom. The observed probability level of significance for the test is 0.000 ( $P < 0.05$ ). With these observations there is sufficient evidence to reject the hypothesis. The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft Word computer application package and classroom practice in Senior Secondary Schools in Zaria is therefore rejected.

**Ho:2** There is no significant relationship between teachers' self-efficacy in Microsoft Excel computer application and classroom practice at Senior Secondary Schools in Zaria.

**Table 11: Correlation between Teachers' Self-efficacy in Microsoft Excel and Classroom Practice in the Senior Secondary Schools**

Variable	N	Mean	SD	df	R	p-value
Self-efficacy in Excel	214	28.00	9.233	212	0.620	0.000*
Classroom Practice	214	26.97	9.416			

\*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation  $r = .6$  between teachers' self-efficacy in Microsoft Excel computer application package and Microsoft Excel computer application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.620 at 212 degree of freedom is significance at 0.000 ( $P < 0.05$ ). The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft Excel computer application package and classroom practice in Senior Secondary Schools in Zaria is therefore the hypothesis is rejected.

**Ho:3** There is no significant relationship between teachers' self-efficacy in Microsoft PowerPoint computer application and classroom practice at Senior Secondary Schools in Zaria.

**Table 12: Correlation between Teachers' Self-efficacy in PowerPoint Presentation and Classroom Practice in Senior Secondary Schools**

Variable	N	Mean	SD	df	r	p-value
Self-efficacy in PowerPoint	214	2.69	0.938	212	0.513	0.000*
Classroom practice	214	2.39	1.164			

\*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation  $r = .5$  between teachers' self-efficacy in Microsoft PowerPoint computer application package and Microsoft PowerPoint computer application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.513 at 212 degree of freedom is significance at 0.000 ( $P < 0.05$ ). The hypothesis that there is no significant relationship between teachers' self-efficacy in Microsoft PowerPoint computer application and classroom practice in Senior Secondary Schools in Zaria is therefore rejected.

**Ho:4** There is no significant relationship between teachers' self-efficacy in Internet application and classroom practice at Senior Secondary Schools in Zaria.

**Table 13: Correlation between Teachers' Self-efficacy on Internet Usage and Classroom Practice in the Senior Secondary Schools**

Variables	N	Mean	SD	df	r	p-value
Self-efficacy in Internet Usage	214	2.89	1.051	212	.468	0.000*
Classroom practice	214	2.53	1.331			

\*: Correlation is significant at 0.05 alpha level

The result indicate a significant positive Pearson correlation  $r = .4$  between teachers' self-efficacy in Internet application and Internet application classroom practices in the Senior Secondary Schools in Zaria. The observed Pearson correlation coefficient of 0.468 at 212 degree of freedom is significance at 0.000 ( $P < 0.05$ ). The hypothesis that there is no significant relationship between teachers' self-efficacy in Internet application and classroom practice in Zaria Secondary Schools is therefore rejected.

### Discussion of the Findings

The study examined the relationship between computer application packages in self-efficacy and classroom practice among Senior Secondary schools teachers in Zaria, Kaduna state. The result of hypothesis revealed that there was significant positive relationship between teachers' self-efficacy in Microsoft Word computer application package and classroom practice at Senior Secondary Schools in Zaria. This finding agrees with Kazan and ELDaou (2016) who explored the relationship of the perceived teacher's self-efficacy related to ICT usefulness and attitudes after training and the students' science education performance results. The findings revealed that teachers' self-efficacy in the level of technology use, and attitudes have significant effects on the grades and interaction of students with special needs.

Korumaz, and Karabiyik (2014) who investigated the effects of teachers' self-efficacy level on their perceptions of computer assisted teaching and found that there is a significant and positive relationship between perception of teachers' who study in different branch of science and teachers' computer use level. It also agrees with that of Tschannen-Moran and Woolfolk Hoy (2001) who reported that teachers with strong sense of self-efficacy are more open to new ideas and more willing to experience with new method. This finding is in line with Lim and Khine (2006) who reported that teachers' self-efficacy contributes to the failure or success of integrating computers in teaching and learning. In a report by software and information industry association (2000), which sums up research into educational technology over the last 20 years, it is mentioned that teachers are more effective after receiving extensive training for integrating technology into the school curriculum. For teachers, this means that they must be aware of the vast array of technology available and they must be able to identify when it is suitable to use which technology in their classes. The results of hypothesis two revealed a significant positive relationship between the teachers' self-efficacy in Microsoft Excel computer application package and their classroom practice in Senior Secondary Schools. Downey and Kher (2015) who conducted a longitudinal examination of the effects of computer self-efficacy growth on performance during technology training and found that the relationship between anxiety and self-efficacy decreases over time during training, becoming non-significant. It also agrees with that of Hong, Chai, Tan, Hasbee, and Ting (2014) who carried out a study on ESL teachers' computer self-efficacy, attitudes toward computer and classroom at university of Malaysia and reported that the ESL teachers have moderate level of computer self-efficacy and attitudes towards computer use.

The finding of this study is in agreement with that of Ellis (2014) who investigated the relationship between the teachers' computer self-efficacy and use of BYOT and found that the teachers in the district had high computer self-efficacy, but its relationship to successful integration of technology was unclear. The results of this study also share common boundaries with Hoffman, Kalsbeek and Novak (1999) cited in Hunley, Evans, Delgado-Hackey, Krise, Rich and Schell (2005) who found strong relationship between computer use and higher educational aspiration. The finding agrees with the reports of Topkaya (2010), Cassidy and Eachus (2002) who respectively reported that levels of computer self-efficacy corresponded to increased performance in computer courses. Hypothesis three revealed that the teachers' self-efficacy in Microsoft PowerPoint computer application package was significantly positive correlation with their classroom practices of teaching and learning of the application in the Senior Secondary Schools. This finding agrees with similar result reported by Sandholtz and

Ringstaff (2014) who conducted a longitudinal study that examined the extent to which teachers' participation in a 3-year professional development program enhanced their self-efficacy and prompted changes in science instruction in the early elementary grades, and found significant increases in teachers' overall self-efficacy in teaching science, personal efficacy, and outcome expectancy efficacy during the 3 years. From the study, gains in self-efficacy were correlated with changes in reported instructional practices, particularly student participation activities. However, changes in self-efficacy tended not to be correlated with changes in instructional time. Skoretz and Childress (2013) conducted an evaluation study to determine the impact of a school-based, job-embedded professional development program on elementary and middle school teacher efficacy for technology integration and found no relationship between efficacy for technology integration for the experimental group and technology integration in classroom practice was not statistically significant. Furthermore, the finding is in agreement with earlier study conducted by Delcourt and Kinzie (1993), Maitland (1996) Oliver and Shapiro (1993) who respectively establish significant relationship between acquired knowledge of teachers and their teaching skills in the classroom. In a similar study by Potosky, (2002), Ozeellic and Hurt, (2007) it was reported that a high level of computer self-efficacy will enable teachers to approach difficult tasks rather than avoid them.

Hypothesis four revealed a positive significant relationship between the teachers' self-efficacy in Internet application and classroom practices among Senior Secondary Schools in Zaria. The result this study supports the findings of Southall (2012) who found that an increase in technology skills corresponded with an increase in self-efficacy ( $r = 0.684$ ,  $p = 0.001$ ) among native pre-service teachers. The finding also agree with that of Uzuna, Özk and Aysan (2010) conducted a study to analyze the teacher self-efficacy beliefs of the teacher candidates and found weak relationship between teacher self-efficacy perception of teacher candidates and their general academic achievement. Also there was a high positive relationship between teacher self-efficacy perception and educational software development self-efficacy. It also agrees with that of Magliaro and Ezeife (2007) who investigated pre-service teachers' preparedness to integrate computer technology into the curriculum and found with higher scores were more ready to integrate computers into their lessons than those with lower scores. It also agrees with that of Hakverdi, Gücüm and Korkmaz (2007) who examined the factors influencing pre-service teachers' perceptions of computers' self-efficacy and found that level of computer use and educational use of computers are closely related to the outcome measure of pre-service science teachers' personal self-efficacy in teaching with computers. Furthermore, the study also agrees with that of Jegede (2007) and Topkaya (2010) who found that a significant and positive relationship existed between teachers' self-efficacy in Internet and their practices of classroom teaching.

## **Conclusion**

From the analysis of the data and test of the hypotheses, Teachers self-efficacy in computer subjects is very important to their practices in the classroom situation in Senior Secondary Schools. Among others, a high and positives significant relationship exist between teachers self-efficacy in Microsoft Word Processing Package and classroom practices. Teachers' Self-efficacy in Microsoft Excel computer application package has significant impact on their classroom practices in the Senior Secondary Schools. Significant relationship was found between teachers' self-efficacy in PowerPoint computer application Package and classroom practices but in actual practice, from the obtained mean scores, the teachers' skills were not adequately translated into practices in the classroom situation. This could be attributable to factors outside the scope of this study. Teachers' self-efficacy on Internet application was found to have significant impact on their classroom practices.



## Recommendations

Based on the findings of this study, the following recommendations were made:

- i. Teachers should be trained and re-trained through workshop, seminars and conferences to acquire more skills in Computer applications.
- ii. Teachers should be encouraged to use computer packages in classroom practices.
- iii. Government at all levels especially states and local government should invest more in education by providing ICT facilities to schools.

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