



RESEARCH ARTICLE

TEACHER MOTIVATIONAL COMPETENCE AS CORRELATE OF PERCEIVED OUTCOME OF COMPUTER STUDIES INSTRUCTION IN SECONDARY SCHOOLS IN RIVERS STATE

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ABSTRACT

This study investigated the correlation between teacher motivational competence and perceived outcome of Computer Studies instruction in Secondary Schools in Rivers State. A correlational research design was adopted. The population for this study comprised 379 Computer Studies teachers and 222750 students of the government owned senior secondary schools in Rivers State. The purposive sampling techniques was adopted in this study in obtaining 379 Computer Studies teachers and 18950 students, making a total sample of 19329 respondents. The instrument used for data collection was a structured questionnaire. The reliability coefficient of the instrument was determined using Cronbach Alpha method with values 0.66 and 0.79 obtained. Two research questions and one research hypotheses guided this research. Mean (\bar{x}), Standard Deviation (SD) and Pearson Product Moment Correlation (PPMC) was used for answering research questions while simple regression analysis and t-statistics was used to test the hypotheses of no significant relationship at 0.5 level of significance. The findings of the study revealed that the respondents agreed that teacher's motivational competence have a notable relationship with outcome of Computer Studies instructions in Secondary Schools in Rivers State. The result of the hypotheses also indicated that there is a significant relationship between teacher motivational competence and outcome of Computer Studies instruction in Secondary Schools in Rivers State.

INTRODUCTION

According to Aloysius (2011) correlates is the process of comprising two set of variables in order to determine their relationship having corresponding characteristics. Correlate is also considered as a research process of measuring variables, understand and access the statistical relationship between them, Aloysius (2011). Correlation is the two variables or scores. The extent of relationship is approached through the distributions of scores that represent the two variables. Correlational research is a type of non-experimental research method, in which a researcher measures two variables, understands and assess the statistical relationship between them with no influence from any extraneous variable. The correlation between two variables is shown through correlation coefficient. A correlation coefficient is a statistical measure that calculates the strength of relationship between two variables. Teachers are responsible for operating educational system and they require adequate and efficient professional competencies, Selvi (2006). Teacher's need to improve knowledge and skills to enhance, improve and explore their teaching practices.

Bulajeva, (2007) stated that competence is knowledge, skills and abilities that an individual is required to possess in carrying out a task involving cognitive, affective and psychomotor domain. Competence is knowledge, skills and attitude a teacher must demonstrate for the process of teaching and learning. Some characteristics of competency are as follows:

- Competency consists of one or more skills whose mastery would enable attainment of a goal,
- Competency is linked to all three domains under which performance can be assessed: knowledge, skills and attitude.
- Possessing a performance dimension, competencies are observable and demonstrable.
- Competencies are measurable, Olga (1990).

The teacher occupies a central position with the responsibility of setting up learning opportunities, providing learning experiences and utilizing relevant teaching skills and appropriate teaching techniques and media to bring learners in a face to face encounter with learning. According to Okoh (2008), a teacher is an individual who possesses specialized knowledge in a certain discipline which he/she acquired through formal teacher education programme

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Instructional Competencies of a Teacher: This refers to the skills of the teacher in teaching and learning process as well as

the arrangement expertise. A professional computer science teacher is required to display many skills in teaching and learning activities, particularly in the classroom situation. Abie (2011) stated that the use of such skills also makes the teacher to be competent in his/her job performance, especially during teaching and learning process. The teacher should be competent in various teaching and learning activities, such as classroom management, human relationship within and outside the schools. Other teaching skills includes: preparation of lesson plan, motivation, communication, instructional resources development and utilization, questioning skills and humanity services. One of the major challenges of a teacher is in determining the objectives of lessons which must be spelt out in the lesson plan. This is due to the fact that, the teacher is required to critically examine the curriculum which was planned and prepared by different individuals. According to Abie (2011) the difficulty in determining the objective of the lesson stems from the fact that;

- The curriculum may be planned by some people among whom may not be the classroom teachers.
- The curriculum implementer is not a party to the plan for specific objectives;
- The classroom teacher is not a party to interpret and implement the curriculum in line with societal objectives which may not be stated in details;
- The students who are to be taught differ from one another; and
- The instructional objectives to be formulated are expected to cover and operate the cognitive, affective and psychomotor domains simultaneously, Abie(2011).

The teacher is required to show professional skills of resourcefulness in order to implement the curriculum. To this end, a professional teacher should possess the following as a guide:

- Should tactically solicit for the students input so as to make the objective of the lesson both teacher and learner-centred.
- The objective of the lesson must be clearly stated in specific terms to show the learning outcome or the expected change in students' behaviour after the session
- Must be skillful in such a way that the culture of the student, his individuality, personal freedom and general education are incorporated.

The success of teaching and learning process also depends on the ability of the teacher to utilize relevant instructional materials to support teaching and learning. These materials are very important for effective teaching and learning process because they help to enrich, visualize, amplify, transmit and facilitate the observation of the learner. Wordu (2006) in Okoroma (2010), stated that instructional resources are used to catch and sustain learners' attention, concretize abstract and iconic experiences, stimulate and motivate learners, reinforce verbal messages, create variety in presenting information, encourage active participation of learners, democratize and individualize learning.

Motivational Competence of a Computer Studies teacher: According to Okoroma (2010), human motivation is responsible for the development in all spheres of life.

Motivation has been identified as a prominent psychological characteristic of human. Motivation is primarily concerned with; what energizes human behavior, what directs or channels such behavior and how this behavior is maintained or sustained. Motivation is concerned with the needs or drives which influence human behaviour, due to the fact that such behavior is usually directed to the achievement of some set goals. Therefore, motivation is the inner force that propels the individual into action. Motivation is one of the major functions of the teacher. The teacher should appreciate the fact that motivation of the students will stimulate their interest in learning, as a highly motivated student will show a great enthusiasm in the teaching and learning process. According to Deeco and Crawford (1994), Idoko 2001 in Michael (2014), motivation refers to those factors which increase and decrease the vigor of individual activities. The teacher can motivate the learner by employing rewards and reinforcement; presenting a lesson, and ensuring learners' active participations.

Curriculum implementation stage of the education process is a very important stage in any educational programme, because the success of any educational programme is determined by its implementation process. Offorma (1994) describes curriculum implementation as the translation of the curriculum plan into practice, with the joint efforts of teacher, learner and school administrators. Curriculum implementation process entails interactions between the curriculum plan, teacher, learner and learning environment, (Agina,2003).According to Dike (1998) curriculum implementation is concerned with what happens in the classroom. Curriculum implementation is the process of putting the various decisions made in the field trial stage of curriculum development process into practice (Jeremiah, 2004).According to Mkpa (1987) in Michael (2014), curriculum implementation is the translation of the curriculum document into an operating curriculum by the combined efforts of the learner, teachers and other concerned bodies. It is execution of the curriculum document, which manage putting into action the curriculum document. Jeremiah and Alamina (2007) noted that after the curriculum objectives, content and learning experiences have been selected, organized and the evaluation procedure are determined, what follows next is the curriculum implementation process.

Instructional Method in Computer Studies Teaching: Instructional Techniques in Computer Studies teaching involves the various instructional strategies adopted by the computer studies teacher and authorities involved in the teaching and learning of computer studies in schools. Instructional Techniques is also considered as the effectiveness of teaching methods adopted the computer education teacher in implementing the computer education curriculum. Instructional Techniques takes a look on the effectiveness of the instructional techniques being adopted by the computer education teacher in the course of teaching. Instructional Techniques involve decision that are related to what will be taught, how it will be organized for learning and how learning will be assessed. For analytical purposes it is necessary to identify what students and teachers do within the instructional setting. General models and families of teaching methods are guides for designing educational activities, environments and experiences. Instructional Techniques or teaching method, depend on a number of factors such as the developmental level of students, goals, intent and objectives, teacher, content, and environment including time, physical setting and resources.

The Instructional Techniques to be considered in the research are;

- Traditional-Based Instructional Techniques (TBIT)
- Computer-Based Instructional Techniques (CBIT)

Outcome is also considered as instructional achievements. Instructional achievements should be considered to be a multifaceted construct that comprises different domains of learning. Instructional achievement covers a broad variety of educational outcomes; the definition of instructional achievement depends on the indicators used in measuring it. Among the many criteria that indicate instructional outcome, there are very general; indicators such as procedural and declarative knowledge acquired in an educational system, more curricular-based criteria such as grades or performance on an educational achievement test, and performance on an educational achievement test, and cumulative indicators of academic achievement such as educational degrees and certificates.

- In achieving outcome of computer studies teaching it is important to consider teacher's factor in the implementation process of the computer studies curriculum. The teacher's competence is of vital important in the implementation process. As the teachers competence has a significant influence toward achievement of outcome.
- Outcome in Computer Studies refers to the instructional performance of Computer Studies teaching. In order to achieve the stated objective there is need for an evaluation process. Evaluation refers to the measurement of the effectiveness of the programme in bringing about desired behaviour changes in the learner, which means questioning the merit of the programme. Evaluation system refers to the various evaluation techniques adopted by the evaluator in assessing the programme to ensure if objectives are achieved. Outcome also considers the overall programme, implementation process, which anchors on achievement (outcome). The Outcome is dependent of Teacher Competence and Instructional Techniques (IT). It is important to note the significance of Teacher and Instructional Techniques if objectives are to be achieved. The Nigerian educational system is faced with numerous challenges ranging from governance, lack of resources and resource personnel's, poor funding among others; (Michael, 2014).

Statement of the Problem: Most secondary schools in Nigeria that taught computer studies still has challenge of teachers competence towards implementation process. Further, computer studies programme in our secondary school system are not strictly evaluated to ascertain full implementation of the programme, this poses serious threat in the achievement of the objectives of computer studies curriculum. The researcher is not aware of any formal investigation embarked upon by the Rivers State Government and educational institutions that evaluate the computer studies programme and computer studies teacher competence in implementing the computer studies programme since its inception in the state. Teacher's competences are not always ascertained in the educational institutions. The non-evaluation of teachers' competencies in the implementation of the computer studies programme has poses a serious challenge in ascertaining the instructional outcome of the programme.

There are observed cases of high failure rate and low level knowledge and skills in some basic aspect of Computer Studies among Computer Studies students in tertiary institutions in Rivers State. Specifically, Computer studies teachers lack the required competencies to be used for effective implementation of computer studies curriculum and evaluation of computer studies programme in the schools. Establishing this empirically, was therefore the task of this research. The worry of this research is that the non-ascertainment of teacher competence and outcome in the implementation of computer studies curriculum in the state may negatively affects the achievement of the goals of computer studies programme in the state.

Purpose of the Study: This research investigates the correlation between teacher motivational competence and perceived outcome of Computer Studies instruction in Secondary Schools in Rivers State. Specifically, this research sought to:

- Determine the relationship between motivational competence of the Computer Studies teacher and outcome of Computer studies in Secondary Schools in Rivers State.
- Determine the instructional outcome of Computer Studies in Secondary Schools in Rivers State.

Research Questions

The following research questions guided the study:

- What is the relationship between motivational competence of the computer studies teacher and outcome of Computer State in Secondary School in Rivers State?
- What is the instructional outcome of computer studies in Secondary Schools in Rivers State?

Research Hypotheses

The following null hypotheses guided this research. The null hypotheses were tested at .05 level of significance:

H₀₁: There is no significant relationship between computer Studies teacher motivational competence and outcome of Computer Studies in Secondary Schools in Rivers State.

RESEARCH METHOD

The correlational research design was adopted in this research. The correlational research design was considered appropriate for this research following the description of correlational design by Aloysius (2011) as it measures the extent of relationship that exist between two variables. The present research involved collection of data with structured questionnaire from students and computer studies teachers of the selected senior secondary in Rivers State. This research covered the state-owned senior secondary schools in Rivers State. The population for this research comprised students and computer studies teachers of the state owned Senior Secondary Schools in Rivers State. The sample for the study consists of 19329 respondents (379 teachers and 18950 Computer Studies Students). The sample size was statistically determined using "purposive sampling techniques". A researcher designed structured questionnaire was used data collection in this research.

The data from the respondents were collected and Cronbach Alpha reliability test method was used with following reliability coefficient (r) values of 0.66 and 0.70 were obtained. The data collected through the questionnaires were analyzed using Mean (\bar{x}), Standard Deviation (SD), and Pearson Product Moment Correlation (PPMC) for the research questions. The hypotheses was tested using simple regression and t-statistics at 0.05 level of significance. The information generated from this study would be of immense educational value to the Rivers State Government, Ministry of Education, School Administrators, Teachers and Students.

RESULTS

Research Question One: What is the relationship between motivational competence of the computer studies teacher and outcome of computer studies in secondary schools in Rivers State?

Table 1 showed that the computer studies teachers are competent in their ability to reinforce students in computer studies (Mean=3.07, SD=0.88), arouse students' interest in learning computer studies (Mean=3.22, SD=0.82), display good passive virtue in teaching computer studies (Mean=3.10, SD=0.93), exhibit good human relationship with students in teaching computer studies (Mean=3.02, SD=0.99), engage the students in computer practical lessons (Mean=3.31, SD=0.86), use appropriate teaching method in presenting computer lesson (Mean=2.94, SD=0.94), use computer in presenting computer studies lesson (Mean=3.12, SD=0.91) and display good teaching moral such as friendliness and understanding in class (Mean=2.90, SD=0.87). However, computer studies teachers are incompetent in rewarding students' performance in computer studies (Mean=1.81, SD=0.90), awarding students' performance in computer studies (Mean=1.97, SD=0.65), exhibiting innovation and creative skills in teaching computer studies (Mean=2.34, SD=1.12), presenting real life specimen to computer studies lesson (Mean=1.94, SD=0.96).

Table 2 above showed the coefficient relationship between motivational competence of the computer studies teacher and outcome studies in secondary schools in Rivers State is 0.452 while the R-squared value is 0.205 indicating the motivational competencies of the computer science teachers relate positively with outcome studies of computer science in Secondary schools in Rivers State. The table also showed that the motivational competencies of the computer science teachers account for only 20.5% (0.205×100) relationship with outcome studies of computer science in Secondary schools in Rivers State.

HO₁: There is no significant relationship between motivational competence of the computer studies teacher and outcome of computer studies instruction in secondary schools in Rivers State.

Part A in table 3 the F-statistic shows that there was significant relationship between the motivational competencies of the computer studies teachers and outcome of computer studies in Secondary schools in Rivers State, $F_1, 18371=4725.697$, $p < .05$. Therefore, the null hypothesis three was rejected at 0.05 alpha level. The Part C showed the regression line between the motivational competencies of the computer science teachers and outcome studies in Secondary schools in Rivers State.

The regression equation $y=44.738+0.977x$ indicating that an increase in motivational competencies of the computer studies teachers will lead to an increase in outcome studies of computer studies in secondary schools in Rivers State.

Research Question Two: What is the outcome of Computer Studies instruction in secondary schools in Rivers State?

Table 13 showed that the computer studies students are competent in their ability to boot a computer system (Mean=2.85, SD=0.96), operate a computer effectively (Mean=3.41, SD=1.07), define word processing (Mean=2.85, SD=1.02), load and exit word processor (Mean=3.17, SD=0.92), create document in MS -Word (Mean=3.23, SD=0.92), create file in MS-Word (Mean=3.20, SD=0.95), save document in MS -Word (Mean=3.27, SD=0.85), explain graphic packages (Mean=2.94, SD=1.00), explain ICT (Mean=3.15, SD=0.81), use ICT gadgets (Mean=2.74, SD=0.95), internet (Mean=2.69, SD=1.14), state the various types of network (LAN, MAN, WAN) (Mean=2.73, SD=1.07), explain a Logic gate and circuit (Mean=2.96, SD=0.87), construct a Truth Table for OR, AND & NOT (Mean=2.98, SD=0.86), define a computer virus (Mean=2.86, SD=1.01) and student to state various sources of viruses (Mean=3.12, SD=0.96). However, the result showed that the computer studies students are incompetent in setting up (connect) a computer system (Mean=1.83, SD=0.92), classify computers (Mean=1.93, SD=1.03), use search engines (Mean=1.52, SD=0.96), retrieve files in MS-Word (Mean=1.88, SD=0.58), load and exit spreadsheet package (MS-Excel) (Mean=1.90, SD=0.76), create a workbook in MS-Excel (Mean=1.89, SD=0.87), create a worksheet in MS-Excel (Mean=2.10, SD=1.00), save a worksheet in MS-Excel (Mean=2.06, SD=1.00), edit a worksheet in MS-Excel (Mean=1.86, SD=0.81), example basic programming (Mean=2.14, SD=1.01), state simple basic statement (Mean=1.88, SD=0.96), explain a Logic gate and circuit (Mean=2.12, SD=0.96), construct a Truth Table for OR, AND and NOT (Mean=1.86, SD=1.01) and state various sources of viruses (Mean=2.01, SD=0.85).

Summary of Findings: There is positive relationship between motivational competence of the computer studies teacher and outcome studies in secondary schools in Rivers State. The relationship account for about 20.5%.

- There is a significant relationship between motivational competence of the computer studies teacher and outcome of computer studies in secondary schools in Rivers State.
- There is positive relationship between evaluation competence of the computer studies teacher and outcome of computer studies in secondary schools in Rivers State. The relationship account for about 35.8%.

DISCUSSION OF FINDING

Motivational Competence of the computer studies teacher implementing the computer studies curriculum in secondary schools in Rivers State. Research question one sought to determine the relationship between the motivational competence of the computer studies teacher and outcome of computer studies instruction in secondary schools in Rivers State. Finding of this research revealed that the respondents agreed that there are notable relationship between computer studies teacher motivational competence and outcome

Table 1. Descriptive Statistics of Mean (x) and Standard Deviation (SD) on the Computer studies teacher motivational competence

S/N	Computer studies teacher motivational competence	VC	C	I	VI	Mean	SD	Remark
1.	The ability of the computer studies teacher to reinforce students in computer studies	6552	7709	2905	1207	3.07	0.88	Competent
2.	The ability of the computer studies teacher to arouse students' interest in learning computer studies	8141	6755	2945	532	3.22	0.82	Competent
3.	The ability of the computer studies teacher to reward students' performance in computer studies	956	3083	5808	8526	1.81	0.90	Incompetent
4.	The ability of the computer studies teacher to display good passive virtue in teaching computer studies	7880	5678	3650	1165	3.10	0.93	Competent
5.	The ability of the computer studies teacher to exhibit good human relationship with students in teaching computer studies	7494	5423	3794	1662	3.02	0.99	Competent
6.	The ability of the computer studies teacher to award students' performance in computer studies	715	1448	12845	3365	1.97	0.65	Incompetent
7.	The ability of the computer studies teacher to exhibit innovation and creative skills in teaching computer studies	2922	6838	2159	6454	2.34	1.12	Incompetent
8.	The ability of the computer studies teacher to engage the students in computer practical lessons	9695	5484	2341	853	3.31	0.86	Competent
9.	The ability of the computer studies teacher to use appropriate teaching method in presenting computer lesson	6328	5746	5125	1174	2.94	0.94	Competent
10.	The ability of the computer studies teacher to present real life specimen to computer studies lesson	1529	3366	5930	7548	1.94	0.96	Incompetent
11.	The ability of the computer studies teacher to use computer in presenting computer studies lesson	7439	7018	2561	1355	3.12	0.91	Competent
12.	The ability of the computer studies teacher to display good teaching moral such as friendliness and understanding in class	4746	8433	3833	1356	2.90	0.87	Competent
	Grand Mean	53896	64397	66981	35197	2.73	0.90	Competent

Table 2. Summary of Pearson Product Moment Correlation (PPMC) on the relationship between motivational competence of the computer studies teacher and outcome of computer studies in secondary schools in Rivers State

Responses	X	Y	X ²	Y ²	XY
VC	53896	207990	2904778816	43259840100	6362702478
C	64397	58216	4146973609	3389102656	3748935752
I	66981	104210	4486454361	10859724100	6980090010
VI	35197	180774	1238828809	32679239076	6362702478
Total	220471	551190	12777035595	90187905932	28301557280
R	R Square	N	Sig.	Remark	
.452	.205	18373	0.000	significant	

Predictors: (Constant), Motivational Competence

Table 3. Summary of regression analysis on the relationship between motivational competence of the computer studies teacher and outcome studies in secondary schools in Rivers State

ANOVA ^a								
Model		Sum of Squares	df	Mean Square	F	Sig.		
1	Regression	235420.527	1	235420.527	4725.697	.000 ^b		
	Residual	915189.903	18371	49.817				
	Total	1150610.430	18372					
a. Dependent Variable: Computer Study Outcome								
b. Predictors: (Constant), Motivational Competence								
Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	44.738	.349		128.203	.000	44.054	45.422
	Motivational Competence	.977	.014	.452	68.744	.000	.949	1.005
a. Dependent Variable: Computer Study Outcome								

of computer studies in secondary school in Rivers State The findings of this research revealed that there was a significant relationship between the motivational competence of the computer studies teacher and outcome of computer studies in secondary schools in Rivers State. The study revealed that the use of motivational skills in lesson presentation have an influence on outcome of computer studies instruction.

Conclusion

Teacher competence is very important in the achievement of instructional outcome in computer studies in secondary schools in Rivers State.

The motivational competence of the computer studies teacher's influences outcome of computer studies in secondary schools in Rivers State. There exist a significant relationship between Computer Studies teacher competence and outcome of computer studies in secondary schools in Rivers State. An improvement in teacher's competence in the teaching of computer studies will as well aid enhancement of outcome of Computer Studies in secondary Schools in Rivers State. Consequently, it could be observed from the findings that teacher's competence is very vital in achievement of outcome of computer studies in secondary schools in Rivers State.

Table 4. Descriptive Statistics of Mean (x) and Standard Deviation (SD) on the Outcome of Computer Studies Instruction

S/N	ITEMS	VC	C	I	V	Mean	SD	Remark
1.	The students' ability to operate a computer effectively.	1206	2870	5801	8496	1.83	0.92	Incompetent
2.	Students' ability to setup (connect) a computer system.	1130	3505	5072	8666	1.84	0.94	Incompetent
3.	The students' ability to boot a computer system.	5201	7553	4229	1390	2.85	0.96	Competent
4.	The students' ability to classify computers.	1805	3757	4140	8671	1.93	1.03	Incompetent
5.	The students' ability to use search engines.	885	3443	14045	5669	1.52	0.96	Incompetent
6.	The students' ability to define word processing.	1205	2871	4915	9382	2.85	1.02	Competent
7.	The students ability to load and exit word processor	1876	5513	4465	6519	3.17	0.92	Competent
8.	The ability of the students to create document in MS-Word.	1206	2870	5801	8496	3.23	0.92	Competent
9.	The student ability to create file in MS-Word.	1059	2983	4993	9338	3.20	0.95	Competent
10.	The student ability to save document in MS-Word	1527	2332	5521	8993	3.27	0.85	Competent
11.	The student ability to retrieve files in MS-Word.	318	1100	12948	4007	1.88	0.58	Incompetent
12.	The student ability to load and exit spreadsheet package (MS-Excel)	567	2773	9257	5776	1.90	0.76	Incompetent
13.	The student ability to create a workbook in MS-Excel.	707	3893	6391	7382	1.89	0.87	Incompetent
14.	The student ability to create a worksheet in MS-Excel	2696	2054	7954	5669	2.10	1.00	Incompetent
15.	The student ability to save a worksheet in MS-Excel.	2309	2864	6814	6386	2.06	1.00	Incompetent
16.	The student ability to edit a worksheet in MS-Excel.	986	1939	8806	6642	1.85	0.81	Incompetent
17.	The student ability to explain computer programming.	567	2773	9257	5776	3.11	0.87	Competent
18.	The student ability to write BASIC computer programme	707	3893	6391	5669	1.50	1.00	Incompetent
19.	The student ability to explain BASIC programming	1876	5220	4824	6453	2.14	1.01	Incompetent
20.	The student ability to state simple basic statement	1450	3088	5595	8240	1.88	0.96	Incompetent
21.	The student ability to explain graphic packages.	564	3509	9768	4532	2.94	1.00	Competent
22.	The student's ability to explain ICT.	2309	2864	6814	6386	3.15	0.81	Competent
23.	The student ability to use ICT gadgets	986	1939	8806	6642	2.74	0.95	Competent
24.	The student ability to explain internet	2995	2413	9400	3565	2.69	1.14	Competent
25.	The ability of the student to state the various types of network (LAN, MAN, WAN).	3312	3752	5889	5420	2.73	1.07	Competent
26.	The ability of the students to explain a Logic gate and circuit.	6453	4824	5220	1876	2.86	1.01	Incompetent
27.	The ability of the student to construct a Truth Table for OR, AND and NOT.	8240	5595	3088	1450	3.12	0.96	Incompetent
28.	The ability of the student to define a computer virus	1876	5220	4824	6453	2.86	1.01	Competent
29.	The ability of the student to state various sources of viruses.	1099	3400	8481	5393	2.01	0.85	Incompetent
30.	The student the student to define an anti-virus.	1099	3400	8481	5393	2.99	0.85	Competent
	Grand Mean	58216	104210	207990	180774	2.52	0.93	Competent

The improvement on teacher's competence will positively affect the achievement of instructional outcome of computer studies in secondary school in Rivers State.

Recommendations

Based on the findings of this research, the researcher makes the following recommendations:

Computer studies teachers should be trained and retrained on the basic competencies required of their duty

- Seminar and workshops should be conducted by ministry of education to address issues ranging from the use of ICT, computers and other technological aids in teaching and learning of computer studies.
- Students should be made to know the benefits of computer studies and other computer career opportunities in the society.
- The Government through the state ministry of education should make provision for hardware, software facilities and computer laboratories to support teacher's competencies in teaching computer studies

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