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## Research for Improved Teaching in Kogi State, Nigeria

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### Abstract

In this paper, the issue of whether or not the involvement of the teacher in researching could improve his/her teaching and the subsequent student learning in Kogi State was addressed. In doing this, the State was clustered into three zones in tandem with the existing senatorial district of Kogi East, Kogi Central and Kogi West, while five schools were randomly selected from each zone as well as twenty-five teachers were randomly selected from each of the schools for the descriptive survey part of the study and another two sets of sample of thirty teachers each were again randomly chosen the pre-test – post-test experimental/control design. Three sets of instrument were used to gather the data. Data from the exercise were variously analysed using percentages, means, standard deviation, and t-test. The results show that though researching make the teacher to do his teaching job better, yet only a few teachers are conversant with research and yet fewer teachers apply the results of research to teaching, it was also discovered that researching improves teaching and learning, funding, lack of training in research, and lack of encouragement had inhibited teacher researching among others. Recommendations included adequate research funding for teachers, provision of training in research for teachers and encouraging teachers to do research on a consistent and continuous basis for all teachers.

### Introduction

It is common knowledge that research is a major tool for development in every segment of the society; hence there is often a research and development unit in most enterprises. We must also, as matter of necessity, note that an *unresearching teacher* is most likely to become an obsolete teacher who sooner than latter becomes a laughing stock not only among his colleagues

but also before his ever inquisitive students who often visit web sites, and thus acquire knowledge and skills without much ado. Studies abound to prove that researches have led to the development or the discovery of how existing teaching strategies or other relevant issues or concepts could result in improved learning by the learner (Odinko, 2001; Onuka, 2005; Umoinyang and Okpala, 2001). In other sphere of national and international life, the need for research for development cannot be over-emphasised. If research is not carried out, there would be no meaningful development anywhere in the world (Onuka, 2004). Onuka (2005) states that development of information and communication technology that has reduced the world to a global village was as a result of research findings.

It is only through the application of research findings that teachers can become more competent in the discharge of their duties since quite a number of factors outside the classroom also make meaningful contributions to effective learning. However, the teachers who conduct researches by themselves would be able to apply the findings of other researchers better because they are in the business of research. For instance, Anderman and Maehr (1994) found that there appeared to be correlation between motivation and schooling in the middle grades, Onuka and Oludipe (2005) also discovered that feedback mechanism could serve as a remediation for poor student performance; whereas Odetokun (2005) reveals that proper utilization of both human and material resources do result in students' learning outcomes in Chemistry. While Udo and Ekpo (2005) brought out very clearly that teacher's self - evaluation is a way of improving science process skills in learners.

These studies and others like them have proved beyond any reasonable doubt that research findings can definitely lead not only to effective teaching but also effective learning. Through research findings, teaching-learning methods that facilitated learning more appropriately had been discovered. For example, with the discovery of mastery learning strategy and its use, it became obvious that all persons can learn any subject matter but at differential rates and styles (Block and Anderson, 1975; Bloom, 1971; Bloom, Madaus and Hastings, (1981); and Ezenwu, (1982). According to Sharp and Howard (1996: 7), people do not appear to appreciate the total import of research when they state thus:



*Most people associate the 'research' with activities substantially removed from day to day life and which are pursued by outstandingly gifted persons with an unusual level of commitment. ...*

They, however, conclude that:

*the pursuit of research is not restricted to this type of person and indeed can prove to be a stimulating and satisfying experience for many people with a trained and enquiring mind.*

Therefore research is for those who are committed to making contributions to the body of knowledge that already exists.

They then define research as:

*seeking through methodical processes to add to one's own body of knowledge and, hopefully, to that of others, by the discovery of non-trivial facts and insights.*

Research, therefore, is not just increasing the student's or the researcher's knowledge, but it is really making concrete contributions to the existing body of knowledge and by extension to the advancement and the development of his world.

To Cohen, Manion and Morrison (2000), it might be regarded as a scientific method for searching for or making enquiry about truth or making a discovery. However, Kerlinger (1973) summarises his perception of research as '*a systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among natural phenomena*'. This definition portends the fact that scientific research is ordered to enable investigators have critical confidence in the product of the research effort, while research's empiricism implies that the scientist puts his assumption or beliefs to test or proof. Gay and Airasian (2000) define research as '*the systematic application of a family of methods that are employed to provide trustworthy information about problems*.' They, nevertheless, see educational research as undertaking inquiry to gain understanding of an issue or topic not fully understood hitherto. Research can thus be viewed as the systematic inquiry to discovering solution to an unsolved educational or developmental problem with a view to mitigating

the problem, and thereby making substantial contributions and by extension adding to the existing body of knowledge.

Onasanya (1991) submits that more than 90% of students in a particular course can attain mastery of any subject matter provided that *'instruction and evaluation techniques are approached sensitively and systematically in order to aid learners when and where they have learning difficulties'*. The essence of teaching for mastery is to provide for the differences in ability, interests, and learning styles of the taught. It is obvious that the quality of instruction is a major influence on students' level of achievement, attitude toward a particular subject and even his involvement in a learning exercise. It is also a common knowledge that most learning activities are motivated by teaching; and good teaching often results from research and thereby culminates in quality learning. Hence, Owolabi (1996) discovers that the use of critical thinking and questioning techniques in teaching engender effective learning by the student. In this vein, Falaye (1995) concludes that immediate feedback in teaching does significantly improved students' achievement which of course is a result of learning which, in turn, is a product of teaching.

Apara (2005) investigates the effect of programmed instruction and peer-tutoring on students' learning. Both strategies were discovered to have had positive effect on students' learning in Kogi State of Nigeria. He found out that when the two strategies were combined, they resulted in very significant improvement in learning. In fact all aspects of education or schooling have been research into, in order to ensure that learning outcomes are realized. For instance, Reinnihan, (1984), Austin (1979), and Caldwell and Misko (1984) all carried out research on the criteria for school effectiveness and arrived at some factors that could enhance school effectiveness including good school governance.

The question that the inquiring minds may at this point seek an answer to is: what exactly do we mean by research? To answer this question, we have to examine how some experts define or explain *research*. Ghosh (2002) explain that research is a study that is undertaken to discover answers to questions through the application of scientific method. He thus defined *research* as a *'careful critical enquiry or examination in seeking facts or principles; diligent investigation in order to ascertain something'*. The purpose of research, therefore, is to unravel the truth by systematic method. Babbie (1992) defines social



research as 'the systematic observation of social life for the purpose of finding and understanding patterns among what is observed'. To Fawole, Egbokhare, Itiola, Odejide and Olayinka (2005) research is process built on three important features which could be summarised as follows:

- Well articulated research questions to be addressed with clearly defined but related objectives that will enable the questions to be explored for answers.
- The specifications of a research context for the questions, with a rationale stating why it is important to answer these questions.
- Specification of appropriate research methods for addressing and answering the research questions, and the rationale for using them.

They went on to state that research as possessing the following characteristics: being systematic, being able to obtain knowledge, and producing verifiable results.

This perception of research can thus be put as follows: *Research is a systematic method of obtaining knowledge or adding to the body of existing knowledge, whose outcomes are a product of theory, which are equally verifiable through careful observation.*

There are various types, among which are:

1. Pure and basic variants of research which is an experimental or theoretical inquiry aimed at acquiring new knowledge with any form of application;
2. Strategic basic research is an experimental or theoretical investigation undertaken to gain new knowledge not for any specific application in mind;
3. Applied research which is an original work designed to obtain new knowledge with the aim of specifically to applying it gainfully and;
4. Experimental / developmental research, which is conceived to facilitate technological advancement (Fawole, Egbokhare, Itiola, Odejide, & Olayinka; 2005).

Other types of research include: 5. Quasi- experimental, 6. quasi- social research, 7. historical, and 8. evaluation research (Ghosh, 2002; Umoru- Onuka, 1996). The researcher can thus employ whichever type that suits the purpose for which he carrying out the particular inquiry.

However, for the teacher, his type of research should be applied or experimental or historical or developmental or such relevant kind of research with the objective of obtaining new and profitable knowledge or making a discovery that would be useful

to him in performing his assignment both more efficiently and effectively. The researching teacher cannot afford a type of research that would not be result – oriented, in other words, his investigation must culminate in the acquisition of knowledge or skills that would facilitate his effectiveness and efficiency in the discharge of his duties as a facilitator of effective learning by the taught (the educand).

The pertinent questions at this juncture are:

- If teaching could be improved as a result of research, are teachers aware of this fact?
- If they are, do they themselves carry out routine research in order to improve themselves and the resultant effect of their teaching?
- Or how much knowledge of research do they possess?
- Or how much of it, are they involved in?

Unless the answers to these questions are positive, much would be left to be desired. Therefore something urgent should be done to ameliorate the situation. Adebayo (2005) states that research in the Nigerian university system has declined in terms of quality, this is as a result of the combination of dwindling funding of the system and erosion of academic autonomy that created the enabling environment for such. Yet research is not just an academic exercise but much more an impetus for development in all its ramifications. If at the university level whose one of the twin primary duty is to research, is said to have been incapacitated in researching, then what is the level of research in the secondary education system in Nigeria?

Teacher is the facilitator of learning no matter the method and instrument used in effecting learning in the learner. Ayodele and Adegbile (2003) state that the level of mastering of a subject matter by a learner depends to a very large extent on the type and capability of the teacher assigned to him (the learner). They also posit that the interest of learner in a subject is dependent on the calibre of the teacher that handled the subject during the particular learner's sojourn in school. Thus, the necessity for the teacher to ensure that he or she does a lot of researching in order to position himself/herself for the task before him/her in this era of information superhighway when in some cases the learner may have more access to information and communication technology facilities than his teacher. The importance of the teacher as facilitator should necessitate a study of, this sort, to ascertain the level of teachers' involvement in research; and to assist them with findings, where necessary,



to make them engage in research to engender better teaching and learning. Thus, it became imperative to ascertain how much knowledge of research and its use is known at that level of education in Nigeria and its component parts and the extent to which its results are to improve teaching and learning.

### **Purpose of study**

The import of this investigation was to ascertain the level to which teachers in Nigeria know that research can greatly engender quality teaching and the resultant learning by the students, and the extent to which they are engaged in research in order to improve their teaching as well as the inhibitors they encounter. It was also intended to proffer some ways by which the teachers could be assisted to do research and use it to assist them to engage in better instruction.

### **Research questions**

1. Do teachers in Kogi State possess the knowledge to engage in research?
2. How much of research are teachers in Kogi State engaged in?
3. What are the inhibitors to teachers' research effort in Kogi State?
4. Can research enhance/improve teaching?
5. What can be done to facilitate effective researching by teachers in Kogi State?

### **Hypothesis**

There is no significant difference in teacher performance between those teachers who engage in some research works and those who do not.

### **Scope**

The scope of this study is Kogi State of Nigeria. Subjects of the study are teachers in secondary schools in the state.

## **Method**

The study was mainly descriptive survey inquiry. However, the pre-test - post-test quasi - experiment design was also employed.

## **Sampling and sample**

The state was stratified into three along the current three senatorial zones in the state as in other states in Nigeria. The simple random sampling procedure was then used to select five schools from each zone while 20 teachers were randomly chosen from each of the 5 schools in each zone. Thus a total of 15 schools and a total of 300 teachers were sampled. Another set of two samples of 30 each were systematically chosen after administering a test on elements of research to facilitate assigning subjects to quasi-experimental and control groups. The test was used to determine those who are knowledgeable in research and those who do not.

## **Instrumentation**

A 27 - item questionnaire with a free - response general question to provide answers to the four questions posed for the study was constructed and validated by the researcher and his three research assistants. The questionnaire initially consisted of 29 items which were reduced to 27 items after the validation exercise. The test -retest method was used to find the reliability which yielded a coefficient of 0.75 using the product moment correlation analytical method, having administered the instrument twice on the same 60 subjects. The validity was obtained by administering the test again on the same number of, but similar and different subjects used the pilot study; this gave validity co-efficient of 0.69 using cronbach alpha. A 12-item test on elements of research was constructed and was validated by expert opinion. Another 12 - item test by a panel of five experts on teaching effectiveness was constructed and administered as both pre- and post-tests on two groups used in the study. This instrument examined the teacher's knowledge on note of lesson preparation, content of the note and delivery of instruction, effective evaluation prompt feedback and the ability to teach with understanding among others and using direct observation of two groups in their classes by trained observers with the researcher supervising.

### Administration of the instruments/collection of data

The instrument was administered in each of the zone on the subjects by the researcher and his assistants personally who appealed for cooperation which they got by having a 100 percent return of the administered instrument, based on the understanding that the result would assist them to improve their teaching. The quasi - experiment was carried out by giving research assignment to those who were assigned to the quasi - experimental because they possess knowledge of research, only those who 60 scored and above were included in the experimental group, while the control group consisted of those with a score below 25. The two groups were both, however, given pretest. After three months of the assignment the two groups were again given post test on elements of effective teaching.

### Analysis of data

The data collected from the exercise was collated and the analyzed using the following relevant statistics: frequencies and percentages as well as t-test statistic.

### Findings and discussion

**Table 1: The teacher research knowledge and application responses in percentages, means and standard deviation:**

| Means/SD          | Indicators                            | V/much    | Much       | Fair        |             |             |
|-------------------|---------------------------------------|-----------|------------|-------------|-------------|-------------|
| Little            | Nothing/None                          |           |            |             |             |             |
| *182.2<br>**135.3 | My knowledge of research is           | 39 (13%)  | 41 (13.7%) | 127 (42.3%) | 93 (31%)    |             |
| *134.6<br>**93.6  | My involvement in research is         | 17 (5.7%) | 13 (4.3%)  | 97 (32.3%)  | 73 (24%)    | 100(33.3%)  |
| *124.<br>**97     | My involvement in basic research is   | 8 (2.7%)  | 9 (3%)     | 68 (22.7%)  | 125 (41.7%) | 90 (30%)    |
| *123.8<br>55.     | My involvement in applied research is | 11 (3.7%) | 48 (16%)   | 34 (11.3%)  | 73 (24.3%)  | 135 (45%)   |
| *144.8<br>**44    | My knowledge of research methodology  | 19 (6.3%) | 51 (17%)   | 56 (18%)    | 74 (24.7%)  | 100 (33.3%) |



|                  |  |            |            |            |             |             |
|------------------|--|------------|------------|------------|-------------|-------------|
|                  | is   |            |            |            |             |             |
| *142.6<br>**57.4 | My knowledge of literature review is                         | 30 (10%)   | 40 (13.3%) | 30 (10%)   | 113 (37.7%) | 87 (29%)    |
| *162.6<br>**67.2 | My knowledge of stating problem is                           | 41 (13.7%) | 39 (13%)   | 82 (27.3%) | 68 (22.7%)  | 70 (23.3%)  |
| *140.2<br>*76.2  | My ability to identify research problem is                   | 33 (11%)   | 57 (19%)   | 10 (3.3%)  | 88 (29.3%)  | 102 (34%)   |
| *150.2<br>**44.1 | My ability to identify relevant variables is                 | 35 (11.7%) | 35 (11.7%) | 70 (23.3%) | 66 (22%)    | 94 (31.3%)  |
| *139.8<br>**43.9 | My ability to identify subjects is                           | 30 (10%)   | 38 (12.7%) | 32 (10.7%) | 101 (33.7%) | 99 (33%)    |
| *144.6<br>**47.3 | My ability to construct relevant instruments is              | 32 (10.7%) | 48 (16%)   | 30 (10%)   | 91 (30.3%)  | 99 (33%)    |
| *177<br>**25.6   | My ability to adopt appropriate sampling procedure is        | 39 (13%)   | 41 (13.7%) | 68 (22.7%) | 70 (23.3%)  | 82 (27.3%)  |
| *146<br>**47.1   | My ability to validate instruments is                        | 33 (11%)   | 50 (16.7%) | 31 (10.3%) | 86 (28.7%)  | 100 (33.3%) |
| *165.2<br>**66.1 | My ability to collect data effectively is                    | 50 (16.7%) | 52 (17.3%) | 52 (17.3%) | 66 (22%)    | 80 (26.7%)  |
| *138.8<br>**39.2 | My ability to employ the appropriate analytical tools is     | 30 (10%)   | 36 (12%)   | 34 (11.3%) | 98 (32.7%)  | 102 (34%)   |
| *134<br>**93.6   | My ability to interpret results is                           | 13 (4.3%)  | 17 (5.7%)  | 97 (32.3%) | 73 (24.3%)  | 100 (33.3%) |
| *153.6<br>**77.4 | My ability to discussion of results is                       | 33 (11%)   | 27 (9%)    | 65 (21.7)  | 125 (41.6%) | 50 (16.7%)  |
| *135.2<br>**52   | My ability to draw conclusions from discussion of results is | 34 (11.3%) | 49 (16.3%) | 27 (9%)    | 98 (32.7%)  | 82 (27.3%)  |
| *162<br>**67.2   | My ability to summarise                                      | 30 (10%)   | 50 (16.7%) | 80 (26.7%) | 80 (26.6%)  | 60 (20%)    |



|                  |   |               |             |             |                |          |
|------------------|---|---------------|-------------|-------------|----------------|----------|
|                  | findings is                                   |               |             |             |                |          |
| *144.6<br>**43.2 | My ability to make appropriate suggestions is | 35<br>(11.7%) | 33<br>(11%) | 42<br>(14%) | 100<br>(33.3%) | 90 (30%) |

|                  |  |          |           |            |           |          |
|------------------|--|----------|-----------|------------|-----------|----------|
| *139<br>**74.3   | My ability to reference appropriately is   | 27(9)    | 33(11)    | 65(21.7)   | 125(41.1) | 50(16.7) |
| *218<br>**169.6  | Research improved my teaching effectiveness  | 80(26.7) | 100(33.3) | 50(16.7)   | 42(14)    | 28(9.3)  |
| *149.4<br>**90.1 | My ability to apply the above mentioned tools of research... depended on my regular practice | 33(11)   | 27(9)     | 100(33.33) | 42(14)    | 90(30)   |
| *160.4<br>**74.9 | I practise research  | 35(11.7) | 33(11)    | 65(21.7)   | 125(41.1) | 50(16.7) |
| *216<br>**171.1  | I apply the knowledge gained from research in teaching                                       | 80(26.7) | 100(33.3) | 50(16.7)   | 42(14)    | 50(16.7) |
| *216<br>**191.9  | Research has greatly enhanced our classroom teaching and learning                            | 80(26.7) | 110(36.7) | 50(16.7)   | 30(9.9)   | 30(9.9)  |

**Legend:** very much (5) = at least four times of engaging in research or rigorous partial research like literature review. Much (4) = two to three times a year, f/much (3) = once a year (2). Little is an attempt or partial effort or once in two years (1) but not completed. Nothing /none = zero time.\*Means, \*\*Standard Deviation.

This table is further summarized in tables 4 and 5 where the two distinctive parts are brought together. It provides the percentage of teachers in the sample engaged in research or possess some of research. While an average of not more than 35% possesses some appreciable knowledge of research, barely 29% are actually in any form of some degree of research. The reason for this can easily be deciphered from the fact all those in

the sample believed they are encouraged by policy makers to do so. With means between 123.8 and 218, standard deviation ranging from 25.6 to 191.9 it can be inferred that the subjects and indeed teachers in Kogi State possess varying levels of knowledge of what research is and how to do it as well as engaging in it in varying degrees; in both cases of knowledge and application of research results. These degrees range from little or no knowledge and thus no application at all to having much knowledge and quite a lot of engagement in, as well as application of research results in their teaching which they claimed culminate in improved teaching, thus by extension in improved learning as exemplary in positive change in the attitudes, behaviours (and skills they acquire). These findings confirm the findings of some researchers in various aspects of teaching-learning process that application of new methods which result from continuing research culminate in improved teaching and the subsequent learning (Falaye, 1995; Aparo, 2005; Reinnihan, 1984 and Caldwell and Misko; 1984).

Up to 62% agreed that research greatly enhances teaching, as nearly the same figure (60%) agreed that they knowledge gained from research to teaching in the classroom, thereby answering question 4 as to whether or not research improves teaching, thus corroborating the finding of Omekwu (2001) that research is the foundation for development and the findings of Reinnihan, (1984), Austin (1979), and Caldwell and Misko (1984) that research on the criteria for school effectiveness produced some teacher and student factors that could enhance school effectiveness.

Item 26: Any inhibitors to practice research? If any, list them. Each of the 300 respondents listed at least one problem or the other as shown in table 3 below:

**Table 2: Depicts percentage distribution of perceived inhibitors to teachers' researching efforts by respondents:**

| S/No | Inhibitors                                | Percentage |
|------|---|------------|
| 1    | Domestic problems/engagements             | 49         |
| 2    | Managers/Policy makers are not interested | 83         |
| 3    | Lack of funds                             | 81         |
| 4    | Research facilities are not available     | 75         |
| 5    | Lack of incentives                        | 69         |
| 6    | Lack of proper training                   | 77         |
| 7    | Social engagements/responsibility         | 57         |
| 8    | Inadequate time                           | 76         |



Table 2 above is derived from item 26 of the instrument and it provides answer to question no. 3. It shows that teachers perceived that there are at least 8 inhibitors to research namely: domestic problems/engagements; lack of encouragement by school managers/policy makers; lack of funds; non – availability of research facilities; no incentives; lack of proper training in research; social engagements/responsibilities and inadequate time at their disposal. Item 27 provides answer to question 5 as to what can be done to improve effective researching in the State. All 300 participants indicated they needed help to effectively carry out research.

**Table 3: The types of assistance needed by the teachers in carrying out effective research in percentages:**

| S/No | Type of help                               | Frequency | %    |
|------|--|-----------|------|
| 1    | Basic training                             | 205       | 68.3 |
| 2    | Further training                           | 300       | 100  |
| 3    | Identifying appropriate problem            | 230       | 76.7 |
| 4    | Identifying relevant questions             | 222       | 74   |
| 5    | Identifying appropriate variables          | 285       | 95   |
| 6    | Identifying relevant subjects              | 137       | 45.7 |
| 7    | The relevant sampling technique            | 163       | 54.3 |
| 8    | Developing/choosing appropriate instrument | 211       | 70.3 |
| 9    | Analyzing the data                         | 221       | 73.7 |
| 10   | Drawing relevant conclusions               | 224       | 74.7 |
| 11   | Making relevant recommendations            | 233       | 77.7 |
| 12   | Referencing                                | 241       | 80.3 |
| 13   | Literature review                          | 179       | 59.7 |

Table 3 revealed that none of the 300 hundred teachers thought that he or she did not need training for effective researching. They listed 13 areas in research where they would need assistance. The table reveals that identifying is the area where they least need help (45%) while needing aid most in the area of further training in researching. Thus providing answer to question 5

**Table 4: Shows the mean and standard deviation of teacher research knowledge (Summary of items 1-4)**

| S/No | Very Much |      | Much  |      | Fairly Much |       | Little |       | Nothing/None |       |
|------|-----------|------|-------|------|-------------|-------|--------|-------|--------------|-------|
|      | Mean      | SD   | Mean  | SD   | Mean        | SD    | Mean   | SD    | Mean         | SD    |
| 1    | 32.25     | 8.69 | 42.75 | 4.82 | 73.75       | 11.82 | 87.00  | 17.62 | 64.25        | 12.59 |

Table 4 provides answer to question 1: concerning level of knowledge of research

Those with very much and much knowledge of research respectively had aggregate means of 32.25 and 42.75 of the various aspects of research as enunciated in the instrument used in the study respectively with respective standard deviations of 8.69 and 4.82

**Table 5: Shows the mean and standard deviation of teachers' research ability/involvement (Summary of items 5-25)**

| S/No | Very Much |       | Much  |       | Fairly Much |       | Little |       | Nothing/None |       |
|------|-----------|-------|-------|-------|-------------|-------|--------|-------|--------------|-------|
|      | Mean      | SD    | Mean  | SD    | Mean        | SD    | Mean   | SD    | Mean         | SD    |
| 1    | 36.27     | 19.72 | 45.73 | 26.09 | 55.32       | 24.04 | 82.68  | 27.89 | 80.14        | 26.65 |

This table shows the aggregate means of the components of involvement in or ability to research at very much and much as well as the f/much and little.

Tables 4 & 5 are derived from table one; table 4 shows that only a few teachers in Kogi really possess real knowledge of research in spite of the fact that are all graduates, which tells much of the level of research being taught in the nation's universities or the level seriousness attached to it if research method is taught. Therefore, it calls for curriculum review in that regard. Table 5 also shows that as a result of the above, the levels of application of results are hardly applied if they are known at all.



**Table 6: The t-test of significance of the difference between the performance of teachers with research experience and those without research experience**

| Group                                | Sample size | Pretest |     | Posttest |    | t-obs | t-crit |
|--------------------------------------|-------------|---------|-----|----------|----|-------|--------|
|                                      |             | Mean    | SD  | Mean     | SD |       |        |
| Teachers with research experience    | 30          | 48      | 6.9 | 56       | 7  | 12.71 | 2.66   |
| Teachers without research experience | 30          | 35      | 8   | 39.5     | 7  |       |        |

P= 0.01

df= 58

Table 6 above shows the result of t test of significance of difference between the performance of the teachers with substantive research knowledge and/or experience and those without. At  $p \leq 0.01$  level of significance the hypothesis of the study was rejected because the calculated t of 12.71 is greater than the critical at 58 degrees of difference. This implies that there is a significant difference between the two groups of teachers. The implication of the above findings as shown in the various tables above is mainly that an unresearching teacher is doomed to be a failure, just as it is popularly said in the Nigerian university system that *'if a teacher does not publish, he perishes'*. There is no doubting the fact that publication is the profit of researching. This confirms the views/findings of researchers across the globe (Adebayo, 2005; Omekwu, 2001; Reinihan, 1984; Caldwell and Misko, 1984; Block and Anderson, 1975; and Cohen, Manion and Morrison, 2003). The result of the study which reveals that the more teachers are engaged in research the greater the level of their teaching effectiveness and thus the state of learning by the taught (students) corroborates the findings of Onuka and Oludipe (2005) that effective and learning could take place through feedback mechanism which ensued from their research efforts. It portends, therefore, that the teachers who claimed that they are not being encouraged to engage in researching should, as a matter of urgency, be encouraged to do so without further delay. In fact the study has also revealed that the poor performances and malpractices being massively witnessed in almost parts of Nigeria could be attributed to poor

level of teaching which in turn arose from the poor level of funding of our educational system (Onuka, 2004a). This study also confirms the fact that except the country begin to spend more money effectively on education of which, substantial part must devoted to research, the education system will continue to take the dive for the worse (Onuka, 2004b). The investigation has also brought to the fore the stark reality that most of our teachers have little or no knowledge of research and have no relevant facilities to encourage them in carrying out research so as to improve themselves in terms of teaching methods or even try out new initiatives to further engender effective teaching and learning. It has equally revealed that if research is accorded its proper place in our educational system, teaching and learning will flourish well and the nation and its component states will be the better for it. If inhibitions such as unavailability of research facilities: effective library, computer and internet systems, improper funding, lack of adequate training for teachers in research and the lack of encouragement and inadequate incentives are removed teachers would be encouraged to do more research and the ensuing teaching becomes improved and thus the consequent learning. The necessary facilities and appropriate training will put our educational system on good footing and posterity will definitely, therefore, be happy with our generation for bequeathing them with the right legacy. As *learning* is basically *change* (Galindo, 2004), research becomes a necessity, since the basic motive for research is change, change for the better or the ultimate. The implications of these findings are research under-funding, lack of provision of research training and equipment for the teachers. Thus the need to address these issues cannot be over-emphasized.

### **Conclusion**

The foregoing findings and the subsequent discussion call attention to the fact that something urgent must be done concerning teachers engaging in research to engender improved teaching. The stark revelation that only an insignificant proportion of teachers are effectively engaged in Kogi State, implies that old methods and practices persist in teaching and by extension learning in that part of the Nigerian nation in spite of the exponential development in the sector on almost a per second per second basis, calls for an urgent remedy to be taken to correct the situation for posterity's sake. The study reveals



that only a few teachers in Kogi State, are engaged in research and even fewer are applying research findings in order to improve their teaching and hence the subsequent student learning. The call, therefore, is for the review of teacher preparation curriculum in Nigerian universities to include an expanded the scope of research teaching. Teachers need to engage themselves in reading and studying about new trends in teaching and learning and subsequently apply such to their work. However, teachers need to be provided with adequate research training and equipment as well as all stakeholders and the love of human development should be interested and contribute substantially to teacher researching.

### **Recommendations**

Consequent upon the foregoing, the following recommendations were hereby made to all stakeholders in the education industry in the Nigerian nation:

- Governments should formulate an educational research policy with an enabling Act of the National and State Assemblies to ensure strict adherence and observance of the policy. In fact there should a legislation to encourage or compel corporate bodies to compulsorily contribute a certain percentage of their net earnings to the education sector solely for research by teachers in all spectra of our education system.
- Corporate bodies on their own initiative should sponsor research in institutions as well as individual researches and organize exhibitions of the findings rather than engage in sponsoring gambling and distribute prizes in the name of sales promotion. Such promotion could be through sponsoring researches and exhibiting the findings to promote further knowledge and development.
- Both States and Federal government should set up research institutes for the various sub-sectors of education namely: Evaluation (examining, assessing and evaluating), paedagogical, primary, early childhood, management and administration among others to train teachers in the various aspects of education as well as to produce new ideas and inventions for the industry.
- Wealthy individuals across the nation and globe should be encouraged to set up research endowment funds or to

donate generously to such bodies and gain incentives such as tax exemption to the limit of their donations for such purposes.

- As a matter of policy, there should be a profession for the educational researchers, so that their major work will be educational research and dissemination of findings to the ultimate users (teachers) with the benefits accruing to the ultimate consumers (the students).
- Researches should be constantly initiated and funded by all tiers of government in the country as well as all school proprietors no matter the level of education they are involved in. For the latter it should be a matter of rule than otherwise.
- The teachers should also note that researching takes various forms which could take the form of internet search, literature search, testing various teaching methods, initiating and experimenting on an instructional strategy and the combination of all these segments. They could thus start to do research for improved from the rudimentary.
- Nigerian university teacher preparation programme should be reviewed to include teaching of research methods for at four semesters.
- Teachers should be exposed to modern research methodology and be provided with relevant training as well as the right equipment to conduct research on a regular and consistent basis

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