

# An Examination Of Professional And Non-Professional Teachers Classroom Methodological Competencies

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## ABSTRACT

This research paper examines professional and non-professional teachers' methodological competencies among secondary school teachers in Nigeria. The main focus of this study is to probe the impact of the professional and non-professional teachers' methodological competencies as a predictor of their teaching effectiveness, and see how it aligns with other existing research studies. While this exploration is a survey research, questionnaire was used for data gathering, and multiple statistical procedures were employed in the analysis. This study contributes both in terms of theory and practice. Theoretically, it provides an outline of school effectiveness and quality improvement that can be used as a basis for further research. The study identifies factors that create barriers to teachers' methodological competencies between the two categories of teachers used in this study. It also describes the present situation on ground in Nigerian secondary schools. At the practical level, the outline might guide school leaders, education planners and policy makers in their school effectiveness and quality improvement endeavors.

## INTRODUCTION

There are several methods of teaching with the intention of inculcating and giving students' insight during instructional processes (Harris & Muijs, 2005; Ololube, 2005b). A dictionary may define insight by including such words like 'the act of grasping the inward' or 'hidden nature of things', 'the ability to perceive clearly or deeply into a phenomenon.' According to an online teacher web pages, if insightfulness equals intelligence then we have to better look at how we teach and ask questions if we are leading our students with current knowledge from the more contemporary act of doing a sketch to the more traditional act of recitation, do our teaching methods engage the part of students' minds from which insight spring? (The New Curriculum, 2003). These are questions this study tends to examine, vis-à-vis evaluating common methods of teaching that help give students insights.

Also there are different levels of classroom competencies that teachers should possess in order to create quality in instruction (Creemers, 1994c, pp. 189-205). For example, teachers are expected not only to impart knowledge but also to foster adjustment of students; understand student's basic cognitive and social problems; match curricular offering to levels of mental development; translate curricular specifications into relevance; and provides smooth transition from home to school and from one level of education to another. The traditional stereotype of teachers as people who stand in front of the classroom and teach children has been at odds for many years now. Teaching in modern society involves the task of assisting students to make worthwhile and satisfying adjustments to school work, to social groups, and to their occupations. If these issues are not resolved, the individual child may not appreciate progress towards his or her learning. Since the main duty of teachers is to get the individual student to learn, it is their duty also to remove obstacles to learning. If proper adjustments are not made, friction and frustration will set in and successful learning will not take place (Stones 1966, p. 389). According to McDaniel, the essence of harmony, lack of friction, a smooth give-and-take, an interaction that is satisfying to cooperating parts of a social relationship, or in other words, the reduction of frustration is to make teaching and learning meaningful for the child to be interested in schooling (McDaniel in Amahala, 1979, p. 231). Therefore, it is expected that all classroom teachers should endeavor to discover what constitute appropriate experiences for their students through professional teacher training and studies.

## **Rationale for the Study**

Getting students education right has been a priority for most countries, thus, the current global reform in education, and I share in that intensity. The present development of events within the education sector in Nigeria shows that Nigeria is at the wrong side of getting our children's education right. In the past two decades, Nigeria has experienced a number of structural reforms in her educational system. However, it is frequently ignored that most of the reforms do not consider getting the education of our children right and policies designed to create school effectiveness and quality improvement *vis-à-vis* ensuring that policies are implemented as stipulated is been undermined by authorities. However, Nigeria cannot afford to be on the wrong side if we are to be recognized in the international committee of nations.

Secondary schools in Nigeria operate within the guidelines provided by the National Policy on Education (NPE) 1981 and revised 1989 (Federal Government of Nigeria, 1989). This document stipulates the objectives of secondary education, the caliber of teachers to teach in them and their qualifications, as well as the curriculum content and methodology to be employed. It is frightening, however, to mention that in spite of the provision in the National Policy on Education, there are lots of problems that hinder secondary school education development in Nigeria. These includes among others: acute shortage of the employability of professional qualified teachers and the recruitment of unqualified and untrained people into teaching.

Basically, two categories of teachers are employed in Nigeria. That is, teachers who are academically qualified and those that are professionally qualified to carry out instruction in the classroom. By academically qualified (non-professional) teachers, I mean teachers who have academic training without professional teacher training as a result of enrolment into institution of higher learning to obtain qualifications that can enable them gain lucrative employment. While professionally qualified teachers, are teachers who get professional teacher training that gives them professional knowledge, skills, techniques, aptitude as different from the general education. Hence, this study has sought to measure these two categories of teachers found in Nigerian secondary schools to determine their methodological competencies and their skill of teaching and its affect on student's academic achievement.

## **Research Hypothesis**

It was hypothesized that "there are no significant differences in the effectiveness between professional and non-professional teachers in their classroom methodological competencies."

## **Aims and Objectives**

The primary aim of this study is to explicitly learn from other research on teachers' methodological competencies and apply its lessons to policy on, for example, the dwindling secondary educational system in Nigeria, which objective is to identifying 'best practices' of academically and professionally qualified teachers, which are to form standards of emulation to enhance teachers' methodological competencies. Specifically, this study is designed to:

- Evaluate the extent to which teachers with academic qualification and those with professional teaching qualification use problem solving methods effectively.
- Assess the extent to which teachers with academic qualification and those with professional teaching qualification can effectively use individual teaching methods.
- Examine the degree to which teachers with academic qualification and those with professional teaching qualification dramatize and demonstrate teaching situation effectively.

## **LITERATURE REVIEW**

### **Methodological Competencies and the Art of Teaching**

Methodology refers to the processes of teaching and learning which brings the learner into relationship with the skills and knowledge that are specified and contained within the curriculum (Harris & Muijs, 2005). In the school according to Gutek (1988: 7), teaching methods are the means or procedures that teachers use to aid students

in having an experience, mastering a skill or process, or in acquiring an area of knowledge. If efficient and effective, the methods of instruction will achieve the desired end because teaching implies the use of a technique or method of instruction to secure desired objectives. Gutek further observed that educators at all levels of instruction are involved in methodological questions. That is why in programs of teacher education for instance, attention is given to courses on techniques and methods of teaching (e.g., mastering learning method, lecture method, demonstration method, dramatizing and discussion method, questioning method and problem-solving methods etc.) because it is through these methods of teaching that teachers can acquire the competencies needed to carry out instructional processes effectively.

Similarly, Colman (1967) described method as an ordered system by which a teacher puts educative agents to work on human to produce certain changes or result. However, he acknowledged five essential elements of instructional methodology:

- The specific objective or purpose of instruction
- An introduction that relates the particular lesson to previous learning or experience
- Content or that which is the substance or the subject of a lesson
- A summary to reinforce the particular learning or experience, and
- An evaluation that determines if learners have achieved particular aims (Colman, 1967, pp. 5-7).

In addition, the Oxford Advance dictionary defined methodology as a way of proceeding or doing something, especially a systematic or regular one. While the same source defines competence as the condition of being capable—having sufficient skill and knowledge. Consequently, methodological competencies could be defined as the procedures of doing something and having enough skill and knowledge to carry out the function. In addition, methodological competencies could further be characterized based on their functional elements: to adapt to effective work methods; to analyze the task to be performed; to begin the process; to perform the task and to analyze ones procedures (Ololube, 2004).

The problem of stimulating students to be thrilled with learning and gain a zest for education that will continue for life is an elaborate task (Ololube, 2005a). The teaching profession therefore is concerned fundamentally with the attainment of maximum beneficial learning for the individual. It is the teacher's task to ensure that learning is efficient and effective in order for students to discover their full potentials. Also, in order to carry out the teaching task effectively, teachers are guided by certain principles of teaching and learning, which have great implications for teaching (Gbamanja, 1989). These principles are learned from professional educational institutions established to train intending teachers through their teacher education programs (Ololube, 2005b). Some principles of teaching which will reinforce teaching are:

- Planned teaching results in more learning
- Students tend to achieve in ways they are tested: if students are tested only for facts, they tend only to memorize facts.
- Students learn more effectively if they know the objectives and are shown how to gain these ends. Therefore, teacher should spend time discussing the purposes of doing various activities, or experiment by inquiry and the processes used in solving problems.
- The teacher's function in the learning process is one of guidance: guiding individual students to reach objectives.
- Students learn from one another: working in groups while solving problems can enhance learning (Gnamanja, 1989, p. 81).

One of the most important methods of teaching is mastery learning because it accommodates the *natural* diversity of ability within any group of student. Beare *et al.* (1989, pp. 51-52) observed that to accomplish this goal with careful preparation and greater flexibility in instructional methods, individual students can be appropriately accommodated according to their respective levels of understanding and they can progress at their rate. That is the role of teacher changes from that of purveyor of all wisdom and become that of facilitator of the learning environment. The teacher ensures the availability of resources at the time they are needed and for the duration they are needed. The actual teaching Beare and colleagues say will be directed to individuals or to small groups of

students dealing with essentially the same problem solving or learning mode, rather than to the entire class of students. The teacher monitors more closely the progress of individual student and ensures that concepts and processes are understood before the student progresses to the next component. Likewise, Gbamanja (1989, p. 108) argued that this method of instruction has the advantages that could be used to provide remedial materials for individual students, encourages individual study and thus frees teachers from routine teaching, and the participation in the learning task is almost hundred percent.

Demonstration method of teaching involves the teacher showing students a process or procedure such as a science process, a cooking procedure or a computer procedure. Involving students in demonstrations allow this method to be less passive (O'Bannon, 2002). This method of teaching means teaching by displaying of the instruction situation with an audio-visual explanation of an idea, process or product. It involves showing, doing and telling the students the point of emphasis. It is mostly used as a technique within a method of teaching, and sometimes used as a method itself. In his methods of teaching, Gbamanja describes demonstration method of teaching as techniques within a method used in order to assist students discover the concept of metal. Teachers need to demonstrate the physical and chemical properties of several different metals (Gnamanja, 1989, p. 90). Also, in the laboratory for example, teachers need to demonstrate the use of a microscope to their classes before letting their students use it to discover things themselves. When a science teacher shows the action of carbon dioxide on a blue moist litmus paper, he or she is presenting a demonstration. Similarly, a teacher may demonstrate the dissection of a toad or of a rabbit to the students in the laboratory or classroom before students can do it themselves (Amahala, 1979). For science subjects, laboratory work is an essential ingredient of the course and some component of this is generally preserved, even though the amount may fall. In addition to the experience of laboratory work, students often derive a lot of their contact with teachers in the laboratory setting (Forster *et al.*, 1995).

Some people confuse the use of the words demonstration to experiment. Both concepts are different but closely related as a means of problem-solving learning experience in the classroom (Brown, *et al.* 1959, p. 283). A laboratory experiment is used as a means of verifying a science while a science demonstration is used as an exhibition lesson or to show parts of an object or show the correct use of some equipment (Gbamanja, 1989). Besides, it was argued that well-trained teachers tend to use this method effectively in order to aid students' easy understanding because the competence in teaching stems from the capacity to reach out to different category of students by creating a rich and multi-dimensional environment (Reid *et al.* 1978, p. 154). In addition, the demonstrator combines the showing, doing and telling of the materials or equipment with (1) examples of ways in which they are used or operated, (2) cautions to be observed in their use, (3) reasons why certain actions are taken and certain results obtained, and (4) the importance of each step involved. In this way, students are brought into close personal contact with the materials or equipment demonstrated (Brown *et al.*, 1959, p. 284).

Dramatizing and discussing are two related type of active learning experiences with wide applicability in modern day schooling. Many of the varied forms of both types have similar basic purposes and values in instructional situations. Indeed, there are occasions when either dramatizing or discussion methods may be chosen as a creative vehicle for achieving specific classroom goals (Brown *et al.*, 1959, p. 295). However, discussion is when two or more people interact verbally with each other. It could be adopted deliberately in learning situations. Though, it sometimes occurs spontaneously as a teacher uses another method of teaching. It could also be considered as a technique of teaching within a method, and sometimes it may occur at brief intervals during an informal lecture, it is also considered as student-cantered teaching (Gbamanja, 1989, p. 86).

Brown *et al.*, (1959) and Gbamanja (1989), see discussion method as naturally inspired or flow from dramatization. Often, too, both categories of activities are employed in association. The rewards of these methods of instruction according to them are:

- It assists students to develop a sense of confidence through participation and exchange of ideas.
- It encourages participation and involvement in what is going on in the learning environment. In this way students acquire knowledge.
- It develops positive interpersonal relationships, because the students interact with the teacher and with their colleagues on the basis of their desire to gain knowledge from one another.
- It develops critical and evaluative thinking and listening.
- It gives students opportunity to develop oral communication skills

Therefore, courses that can expose teachers to these methodological skills are courses in education that will enhance teacher's capacity to handle instructional processes in classroom, which are embedded in the teacher training process of various faculties of education, or other similar institutions charged with the responsibility to train teachers (Reid *et al.*, 1987). This is evidence where psychology of education, sociology of education, teaching method courses and curriculum development and evaluation play an essential role in teacher education programs in order to improve teachers' methodological competencies. Accordingly, Owens noted, "Today, psychology remains a predominant element in teacher education. Departments of educational psychology in schools of education commonly exert strong influences not only on the content of courses in teaching methods and curriculum but in such topics as test and measurements and statistics loom so large in the undergraduate and graduate studies of teachers." Generally speaking, educational psychology is a method of training and teaching and their effectiveness. In particular, it is the study of how to help people develop intellectually, especially school children who have learning problems to conquer their learning complexities (Owens, 2004: 19). Although, research has shown that teacher's own perception, beliefs, and values guide their interaction with students, the selection of curriculum materials, and organization within the classroom improves their performance (Highet, 1963; Stones, 1966).

### Classroom Competencies

***Student's cognitive and social problems:*** Parents, teachers and researchers know that students are different; this is what teachers see everyday, and what is perhaps most looming relevant to their work (Austin *et al.*, 2003, p. 29). Students' manifest cognitive and social problems in school; as a result, classroom teachers should be involved in assisting students in solving them. Also, due to lack of effective early stimulation, students may show weakness in some areas of their study. If such a situation arises, teachers need to throw in the towel to have full grasp of the situation and then embark on remedial to alter the effects of lack of stimulation. On the other hand, some children are problem behavior cases. Problem behavior is a behavior that is characterized by an inability of the child to meet the demands of the school environment. It may include inability of a child to get along with other children, inability to achieve self-reliance, and inability to adhere to the values prescribed by a system. Many students come to school having developed problem behavior because their parents allow their children to get what they want when they exhibit problem behavior such as temper outburst (Amahala, 1979, p. 232).

Similarly, when students come with specific emotional problem, it is impossible to go into much detail about the emotional problems, which individual students may have. But it is important that teachers realize that they exist and they should be able to identify them. Children who are of a nervous temperament, popularly described as 'highly strung', need sympathetic treatment from their teachers. The teacher's task should not be to reinforce their nervous behavior by giving them attention because of it, but rather to help them to acquire confidence. Such students will need more encouragement than the average students and will react more strongly to failure. Encouragement and success in their schoolwork, the sympathetic understanding of the teachers, and a friendly cooperative atmosphere in the classroom will help them to develop more confidence (Stones, 1966, p. 383). The question now is that what can teachers do to help?

To help students with this problem, Gibson opined that teachers should find out what the students *acceptable* interests and capabilities are, and then find a group of the same grade with similar interest for the student to meet socially. To do this is not part of the talk-and chalk work, but it has to be done to help the students in need of assistance, which in turn helps to give the child a factual knowledge (Gibson, in Amahala 1979). However, it is believed that teachers should recommend children to the guidance clinic when it is obvious that the problem is beyond their reach. The guidance clinic of a school is staffed with experts—professional educational psychologists, psychiatrists, and psychiatric social workers. Their duty is to diagnose the difficulties of children referred to them and recommend a course of action (Stones, 1966).

***Matching curricular offering with levels of mental development:*** If teacher's work is to bear any fruits, they have to be concerned with what they teach and the person they teach (Creemers, 1994c). This is because any knowledge has various levels of abstraction, which can be grasped by children whose mental development is in keeping with the level of knowledge given to them (Stones, 1966). Teachers should be concerned with the '*entering behavior*', which children have for the work at hand. This entering behavior is what Amahala viewed as the foundation upon which new knowledge is to be built. If, for example, teachers are to teach children how to run, they should be concerned with whether or not they have previously learned to sit erect, to crawl, and to walk. It is

only when they can walk unaided that running can be taught. Sitting erect, crawling, and walking constitute the entering behavior for acquiring the skill of running. Teaching running when children are at the state of crawling is useless. He further added that since any knowledge has various levels of abstraction, teachers should concern themselves with the level of mental development of the children they teach and gear their teaching to suit that level of development (Amahala, 1979, p. 233). Fostering of cognitive schemas based on an understanding of the logical connection between things is therefore a very important part of the work of teaching. Classroom teachers would do well to concentrate upon arranging the student's activities that they see the underlying logic based on their level. Teachers need to program their activities and ensure that children are adequately reinforced to maintain the levels of intelligence of their work so that it can provide feedback (Stones, 1966, p. 199).

***Curricular specifications and relevance:*** In the broadest sense, curriculum can be defined as the organizational experiences that a student has under the guidance and control of the school. In a more precise but restrictive sense, the curriculum is the systematic sequence of course or subject that forms the school's formal instructional program. These two major definitions of curriculum, as well as the variations that lie between them, are based upon particular conceptions of knowledge and value (Gutek, 1988). Therefore, when teachers make use of curriculum materials to meet the grouping procedures (e.g., mastering learning, basis of ability and cooperative learning) of students, it should be clear that the same goals, which they have in mind, are also part of the curriculum they are using (Creemers, 1994c). Very often, mostly among untrained teachers we find teachers who teach what they find because it is found in the syllabus. Finding a place in the syllabus *per se* does not qualify a topic to be taught. The right type of classroom teachers should be sufficiently knowledgeable about the current question and debate about designing a school curriculum (Amahala, 1979).

Classroom teachers should appraise the curriculum specification according to how they suit the students they are teaching. Classroom teachers should further be guided by the relevance of what they teach to the children (Stones, 1966). For example, most teachers just teach 'chemistry' or 'mathematics' without paying attention to its relevance. They therefore confuse their students who fail to understand why they are learning chemistry or mathematics. For this reason, classroom teachers do good job of teaching when they can think of the subject in terms of relevance to the students and to the society to which the student is a part (Amahala, 1979).

***Smooth transition from home to school:*** Research has shown that certain unnatural disruptions of intellectual life occur when children's environment changes drastically and their experiences are discontinuous. The transition from school to home is just such a disruption for most children. However, research has categorized these children in two—the first category consists of children whose disruptions are short-lived or non-existent because the two environments contain many important similarities. For those students found in this category, the kinds of things to which they are exposed to and the kinds of behaviors that are expected of them at home are generally the kinds of things to which they are exposed and the kinds of behaviors that are expected of them at school. These are the so-called middle-class children who constitute the focus of attention of most classroom teachers. The second category consist of children whose school situations may be so radically different from their previous home environments that they are totally unable to apply their past fused, dull or even 'unteachable.' Classroom teachers who allow these children to waste are no teachers in the real sense of the word (Amahala, 1979, p. 239). Students found in this category need the teachers more than those found in the first category (Parelius & Parelius, 1978; Ezewu, 1983).

It could be concluded that classroom instructional and methodological competencies when accompanied by clearly written instructional objectives and the application of adjustment of students; understand student's basic cognitive and social problems; match curricular offering to levels of mental development; translate curricular specifications into relevance; and provides smooth transition from home to school without-doubt provide the student the necessary guidance in learning and help the instructor in assessing the outcome and therefore aid in overall teaching, learning and assessment (Amahala, 1979). This is because teacher's instructional objectives provide an additional resource in associating the instructional activity with the intended outcomes. Thus, well-written instructional objectives also aid in peer-evaluation of instruction (Gronlund, 2000). On the whole, teachers should have a repertoire of capacities which enables them to structure instruction, methods to be used, order content adequately, ask questions, use tests, and give feedback to their students (Creemers, 1994c, p. 203). There is no gain saying the fact therefore that no matter how laudable an educational system may be; and no matter how well

equipped the educational system may be, not much could be achieved by way of manpower training in the absence of adequately trained and well motivated teaching cadre (Aiyepeku, 1989).

## **METHODOLOGY**

### **Research Instrument**

A suitable questionnaire was structured along a four-point likert-type scale (summated) of strongly agree (4), agree (3), disagree (2) and strongly disagree (1) to gather data for the study. It is a set of attitude items, all of which are considered of approximately equal “attitude value” and to each of which subjects respond with degree of agreement or disagreement (intensity) (Kerlinger, 1973, p. 496). Section “A” of the research questionnaire describes respondents’ background information. While section “B” comprises of possible methodological competencies. The questionnaire was made simple for a straightforward understanding because different categories of people were chosen as my respondents; as a result, the need to make the questionnaire as simple as possible was inevitable (Denscombe, 2003).

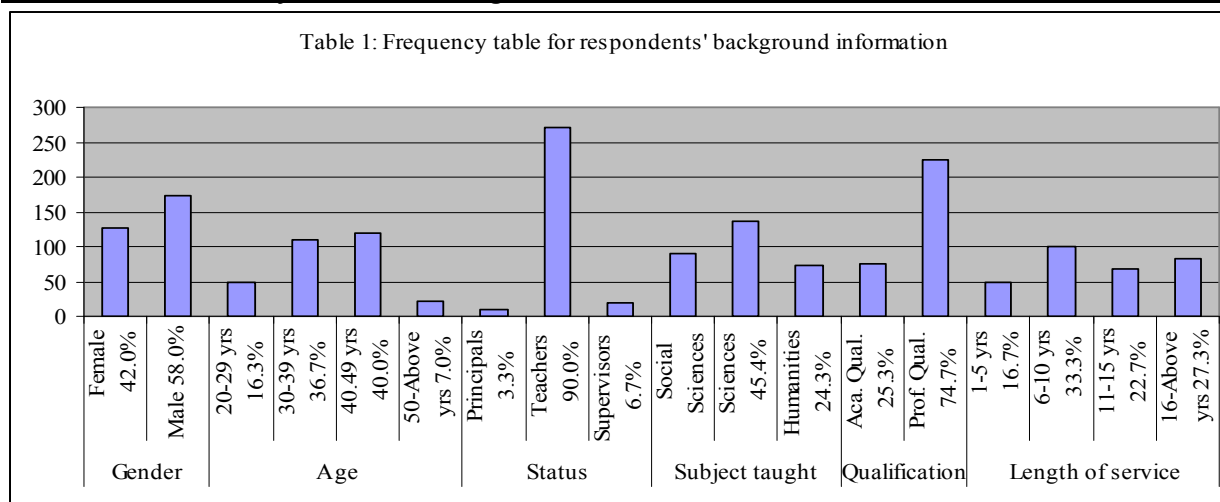
Nworgu’s characteristics of a good questionnaire were applied in designing the questionnaire. The characteristics are: relevance, consistency, usability, clarity, quantifiability and legibility (Nworgu, 1991, pp. 93-94). The questionnaire was also designed with the help of my faculty members to elicit information from the respondents that will help the researcher gather information on teacher’s methodological competencies aimed towards student’s educational achievements. It equally has face validity because the feedback from my faculty members helped in assessing that the measures apparently reflect the content of the concept in question (Bryman and Cramer, 1990, p. 72).

### **Analytical Framework and Procedures**

Simultaneously, to arrive at the intended comparative analyses, several sets of statistical analyses were conducted using SPSS version 13.0 of a computer program: Mean point value, Standard deviation, T-test of significance, ANOVA and Cross Tabulation (N=300). The T-test of significance was computed to test for statistical significant differences in the variables. It is a statistical significance set at  $p < 0.05$  to assess if the researcher’s level of confidence observed in the sample also exists in the population. One-way-analysis of variance (ANOVA) was employed to test the relationship between variables and respondents’ background information. Whereas, for a clear and trouble-free comprehension of the data analysis, cross tabulation was employed because it is one of the simplest and the most frequently used ways of demonstrating the presence or absence of a relationship (Bryman and Cramer, 1990, p. 151; 2001, p. 159; Saunders, *et al.*, 2000).

### **Population**

The research population for this study was drawn from Rivers State (accessible) of Nigeria (target). It is one of the States in the south-south geo-political zone of the country. The population comprises of principals, subject heads and teachers from ten (10) randomly selected secondary schools. Supervisors of education from the Ministry of Education and Post Primary Schools Board were also included because they periodically supervised teachers in schools to ascertain their effectiveness. Of the total number of respondents, 270 (90%) were subject heads and teachers, 10 (3.3%) were principal, as well as 20 (6.7%) supervisors. Meanwhile, 76 (25.3%) were academically qualified, while 224 (74.7%) were professionally qualified. Whereas, 126 (42%) were female while 174 (58%) were male. At the same time, 91 (30.3%) were social science subject teachers. 136 (45.4%) of respondents were science subject teachers and 73 (24.3%) were humanities subject teachers. See table 1 for further details



The ANOVA analysis conducted on the respondents background information showed no significant differences in their attitude towards teacher's methodological competencies ( $F = 1.71$ ,  $Df = 299$ ,  $p > 0.34$ ). Coherence and reliability scale was tested with Cronbach's alpha coefficient. A respectable coefficient of 0.983 was obtained. Thus, indicating a high inter-item consistency. (see table 2).

Table 2: Reliability Estimates of Tested Variables on Teachers Methodological Competencie

METHODOLOGICAL COMPETENCIES	Reliability Estimates
1. (a) Academically qualified teachers use problem-solving methods effectively. (b) Professionally qualified teachers use problem-solving methods effectively.	.95**
2. (a) Academically qualified teachers adopt the use of individual teaching method effectively. (b) Professionally qualified teachers adopt the use of individual teaching method effectively.	1.0**
3. (a) Academic qualification dramatize (Demonstrates) teaching situation effectively (b) Professionally qualified teachers dramatize (Demonstrates) teaching situation effectively.	1.0**
<b>Cumulative alpha</b>	<b>0.983**</b>

## RESULTS

The first set of the statistical analysis for this study began with an analysis of respondent's answers using mean and standard deviation. The bases of these measures are to reveal to what extent teachers' methodological competencies influence students academic achievement. The respondents answers showed that teachers with professional qualification demonstrate and use better problem solving methods effectively ( $M = 3.65$ ,  $SD = 0.54$ ) against ( $M = 2.07$ ,  $SD = 0.85$ ) for academically qualified teachers. On how to dramatize and demonstrate teaching situation effectively, the study uncovered that respondents accepted dramatization and demonstration of teaching situations to be better enhanced by teachers with professional teaching qualification. This is evident in their mean and standard deviation respectively ( $M = 3.47$ ,  $SD = 0.73$  /  $M = 1.84$ ,  $SD = 0.73$ ). On the adoption and use of

individual teaching methods effectively, it was equally obvious that professionally qualified teachers' mean and standard deviation ( $M = 3.56$ ,  $SD = 0.56$ ) were more than that of teachers with academic qualification ( $M = 1.75$ ,  $0.76$ ,  $0.75$ ), which confirmed that the effective adoption and use individual teaching methods are an essential part of professional teaching. (see table 3).

Table 3: Mean and standard deviation of differences between professionally trained and non-professionally trained teachers in the area of methodological competencies

Methodological Competencies (Variable Items)	Trained Teachers (Professionally Qualified)		Untrained Teachers (Academically Qualified)	
	Mean	SD	Mean	SD
Problem-solving Methods	3,65	,54	2,07	,85
Dramatization/Demonst. Methods	3,56	,56	1,75	,75
Individual teaching Methods	3,47	,73	1,84	,73
Total	3,56	0,61	1,89	0,78

The second set of statistical analysis was a t-test analysis of paired sample statistics of respondents' perception of teachers' methodological competencies. The purpose for this analysis was to further verify my analytical information; the t-test analysis was aimed at determining if there are significant differences between respondents' means. The result showed that there are significant differences in the methodological competencies between the academically qualified teachers and professionally qualified teachers in all the variables. SPSS version 11.5 displayed it as  $p < 0.000$  significant levels. This does not mean that the probability is 0. It is less than  $p < 0.0005$ . The highest t-value was  $-27.08$  and the lowest t-value was  $-35.69$ ,  $Df = 299$ ,  $p < 0.000$ . Therefore, the  $H_0$  was rejected (see, Nworgu, 1991, p. 155; Marija, 1997, p. 230; Bryman and Cramer, 2001, p. 108). (see, table 4).

Table 4: Two-tailed test of difference between paired means

Paired Variables	Paired Mean	SD.	Std. Error mean	T	Df	Significance (2-tailed)
Problem-solving Methods	-1.58	.99	.057	-27.48	299	.000
Dram. & Demon. Methods	-1.81	.88	.051	-35.69	299	.000
Individual Teach. Methods	-1.62	1.038	.060	-27.08	299	.000

The third set of analysis was the use of Cross Tabulation to demonstrate the presence or absence of a relationship. The data were tallied along agree and disagree. The set of pool question that compared the two categories of teachers based on the respondents' perceptions in the entire variable tested showed large differences. The empirical results revealed that as high as 83.3% compared to 16.7% agree that teachers with professional teaching qualification use problem-solving methods effectively. Concerning whether academically qualified teachers or professionally qualified teachers dramatize (demonstrate) teaching situations effectively. The result revealed that 72.7% against 27.3% agree to the fact that trained teachers have more propensities to effectively dramatize and demonstrate teaching situation than academically qualified teachers. Finally, turning to the adoption and use of individual teaching method, the information gathered revealed that 75% agree that trained teachers are more competent in the adoption and effective use of individual teaching methods, against 25% for untrained teachers. The overall cross tabulation result showed to advantage that professionally trained teachers are more result oriented than their counterparts who are academically trained. (see, table 5).

Table 5: Cross Tabulation analysis of respondents' answers to the variables

N = 300	% Problem Solving Methods.	% Dramatization and Demonstration Methods.	% Individual Teaching Methods
Untrained Teachers (76)	16.7	27.3	25
Trained Teachers (224)	83.3	72.7	75

Contrary to the research's expectations and the hypothesis, the result showed that there are significant differences in the effectiveness of professional and non-professional teachers' in their methodological competencies. The current findings depict that trained teachers take into account the individual differences that exist among students, this is so because of their knowledge of educational psychology, and as such involve themselves in many activities that might possibly help if one is found in a difficult situation. For instance, the problem with a child who lags behind in schoolwork is one of the most difficult situations that teachers have to face. It is a problem that can arise in almost every school. These deficiencies are built on the foundation of persistent failure on the part of some children to achieve what other children are achieving, or difficulty in reaching the academic standard set. Special interest on these students is seen as part of the professional teachers' job which is very unlikely for many non-professional teachers.

The findings likewise revealed practical evidences that professional teachers tend to apply correct teaching methods (e.g., problem solving methods, dramatisation and demonstration methods) in the teaching and learning processes. This lends support to Janneck and Bleek's argument that currently teaching practices in the education industry are characterized by a strong emphasis on quality, special knowledge or professional competencies (Janneck and Bleek, 2004) Therefore, methodological competencies gain importance just as professional competencies do. Obviously, these competencies cannot be learned individually in lectures or traditional seminars, but requires teaching practice and being engaged in real teaching contexts. This problem is addressed by offering educational projects to intended teachers with a didactic concept that focuses on authentic teaching practices. These cooperative projects allow intended teachers to acquire the aforementioned key competencies in an integrative manner.

In this study also, it was found that there are relationships between teaching practice and methodological competence. Methodological competence produces facts as input to instructional processes, and instructional processes establishes requirements to stimulate rational input in student's academic achievements. Teaching practices and method courses given to students at the faculty of education of a university or teacher education institutes equip student teachers in gaining relevant methodological skills that aid teaching and learning. A good example is the graduate teacher training registry program in the UK which provides initial teacher training for non-trained would be teachers (GTTR guide for application, 2005). The analysis also reveals the importance of measurement and evaluation, psychology of education, philosophy of education, sociology of education, educational management, educational planning and other education courses that exposes student teachers to the rudiments of being an effective teacher, because methodological competencies are very much associated with rigor. This also gives backing to Law and Clover (2000) study, when they wrote that with the current changing environment in the global arena of educational systems, professional competencies are required in promoting educational development.

From the preceding discussion, the findings have shown that there are multifaceted roles that professional teachers play in effecting quality in teaching. The information contained in the data demonstrated that there are differences in the way and approaches trained and untrained teachers go about their role in their instructional processes. Also, it could be suggested that a great deal importance should be attached to developing the untrained teachers in the processes of teacher training because quality teaching is scored high in the evaluation of an effective teacher. These gives lent support to the works of Cambell *et al.* (2004), Creemers (1994b, 1994c), Darling-Hammond (1986, 1987), Darling-Hammond *et al.* (1995), Leino (1996), and Ololube (2005b).

Undoubtedly, an effective method of teaching connotes the ability on the part of teachers to communicate, which is reflected in a lucid presentation and the transmission of an enthusiasm that is infectious. Communication here does not merely imply the passing back and forth of sounds, but the art of using the vehicle of sounds to sensitize internal reorganizations which issue in the rolling out of concepts and principles from the learners. This cannot happen if lucid and logical presentations backed by radiating and noticeable enthusiasm from the teacher are not in evidence. A good teacher is therefore a person who can communicate with genuine enthusiasm (Amhala, 1979, p. 230). However, the way or manner of teaching may be influenced is guided by the teacher's perception, attitude, beliefs and values, which in turn guides his or her interaction with students. It as well determines the teachers' selection of curriculum materials and organization within the classroom in relation to the following four teaching modes (didactic, heuristic, philetic and guristic) and their implication for various patterns of curriculum

organization and instruction (Gbamanja, 1989, pp. 62-83). Teacher effectiveness in comparison with their methodological competencies as used in this study is the impact that classroom factors, such as the use of classroom teaching methods, teacher expectations, classroom organization, and use of classroom resources, have on students' performance (Cambell *et al.*, 2004).

In general, the implication of this study could be seen that the influences of professional teachers on students are multi-leveled. And their classroom competencies have an exceptional effect on students learning. This research study also discussed considerable amount of literature on teacher effectiveness, and their various assessments. It covered a major issue of interest that appeared to be extremely important in guaranteeing school effectiveness and quality improvement. It is hoped that this piece of work will be an added input into academic literature on teacher effectiveness, school effectiveness and educational effectiveness in Nigeria and abroad. It is very essential to have an understanding of the role of teachers' methodological competencies which this research work has helped in explaining the meaning and significance of it from a Sub-Saharan African perspective.

The major limitations of this study is that the findings were based on self-reported data on the part of the teachers who served as respondents and are liable to distortions because they were directly focused. Apart from that this research was not conducted in an environment where the educational system is not well developed. Researchers are not independent of their normative considerations of a research problem, therefore, if any part of the analysis in this study bears the hallmarks of being one sided; they should be overlooked and considered as part of my personal transformation. Although I attempted to improve on the generalizability of the results by inferring from a multiple case study, because it would be very difficult to conclude from only ten schools, the Ministry of Education and the Post Primary Schools Board in Rivers State out of the thousands in Nigeria which may not represent the opinions of other teachers in other parts of the country. As this is the case, it will be inappropriate for one to assume that their opinions represented those of other teachers in Nigeria and outside. However, additional investigation on a wider scale in this direction will be in order. A new perspective on teachers' methodological competencies, which do not only take into consideration the unique characteristics of the variables used in this study, is thus recommended. In addition, teacher and school effectiveness researchers should give their attention to the ways in which both professional and non-professional teachers construct and apply their methodological competencies in schooling students such as their grouping procedures and behaviors.

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