

**Teacher Education, School
Effectiveness and Improvement**
**A Study of Academic and Professional
Qualification on Teachers' Job Effectiveness
in Nigerian Secondary Schools**

Nwachukwu Prince Ololube

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Schools

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*Supervisors: Professor
Matti Meri
University of Helsinki*

*Professor
Paul J. Ilesley
Northern Illinois University, USA*

*Pre-examiners: Professor
Marja-Liisa Julkunen
University of Joensuu*

*Emeritus Professor
Juhani Jussila
University of Helsinki*

*Custos: Professor
Matti Meri
University of Helsinki*

*Opponent: Professor
Kauko Hämäläinen
University of Helsinki*

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Abstract

This academic work begins with a compact presentation of the general background to the study, which also includes an autobiography for the interest in this research. The presentation provides readers who know little of the topic of this research and of the structure of the educational system as well as of the value given to education in Nigeria. It further concentrates on the dynamic interplay of the effect of academic and professional qualification and teachers, job effectiveness in secondary schools in Nigeria in particular, and in Africa in general. The aim of this study is to produce a systematic analysis and rich theoretical and empirical description of teachers, teaching competencies. The theoretical part comprises a comprehensive literature review that focuses on research conducted in the areas of academic and professional qualification and teachers' job effectiveness, teaching competencies, and the role of teacher education with particular emphasis on school effectiveness and improvement. This research benefits greatly from the functionalist conception of education, which is built upon two emphases: the application of the scientific method to the objective social world, and the use of an analogy between the individual 'organism' and 'society'. To this end, it offers us an opportunity to define terms systematically and to view problems as always being interrelated with other components of society. The empirical part involves describing and interpreting what educational objectives can be achieved with the help of teachers, teaching competencies in close connection to educational planning, teacher training and development, and achieving them without waste.

The data used in this study were collected between 2002 and 2003 from teachers, principals, supervisors of education from the Ministry of Education and Post Primary Schools Board in the Rivers State of Nigeria ($N=300$). The data were collected from interviews, documents, observation, and questionnaires and were analyzed using both qualitative and quantitative methods to strengthen the validity of the findings. The data collected were analyzed to answer the specific research questions and hypotheses posited in this study. The data analysis involved the use of multiple statistical procedures: Percentages Mean Point Value, T-test of Significance, One-Way Analysis of Variance (ANOVA), and Cross Tabulation. The results obtained from the data analysis show that teachers require professional knowledge and professional teaching skills, as well as a broad base of general knowledge (e.g., morality, service, cultural capital, institutional survey). Above all, in order to carry out instructional processes effectively, teachers should be both academically and professionally trained. This study revealed that

teachers are not however expected to have an extraordinary memory, but rather looked upon as persons capable of thinking in the right direction.

This study may provide a solution to the problem of teacher education and school effectiveness in Nigeria. For this reason, I offer this treatise to anyone seriously committed in improving schools in developing countries in general and in Nigeria in particular to improve the lives of all its citizens. In particular, I write this to encourage educational planners, education policy makers, curriculum developers, principals, teachers, and students of education interested in empirical information and methods to conceptualize the issue this study has raised and to provide them with useful suggestions to help them improve secondary schooling in Nigeria. Though, multiple audiences exist for any text. For this reason, I trust that the academic community will find this piece of work a useful addition to the existing literature on school effectiveness and school improvement. Through integrating concepts from a number of disciplines, I aim to describe as holistic a representation as space could allow of the components of school effectiveness and quality improvement.

A new perspective on teachers' professional competencies, which not only take into consideration the unique characteristics of the variables used in this study, but also recommend their environmental and cultural derivation. In addition, researchers should focus their attention on the ways in which both professional and non-professional teachers construct and apply their methodological competencies, such as their grouping procedures and behaviors to the schooling of students.

Keywords: Professional Training, Academic Training, Professionally Qualified, Academically Qualified, Professional Qualification, Academic Qualification, Job Effectiveness, Job Efficiency, Educational Planning, Teacher Training and Development, Nigeria.

Nwachukwu Prince Ololube

Opettajankoulutus ja koulun kehittäminen

Tutkimus opettajan akateemisen ja ammatillisen pätevyyden vaikuttavuudesta Nigerian yläkoulussa

Tiivistelmä

Tutkimusraportin alussa on tiivis kuvaus tutkimuksen taustasta, joka tuo esille tutkijan omaelämäkerrallisen kiinnostuksen tutkimusaiheeseen. Selvitys palvelee niitä lukijoita, joille itse tutkimusaihe, Nigerian koulutusjärjestelmän rakenne sekä koulutuksen merkitys Nigeriassa ovat tuntemattomia. Edelleen taustaselvityksessä keskitytään kuvaamaan vuorovaikutuksen dynaamista merkitystä akateemiseen ja ammatilliseen pätevyyteen sekä opettajien työn vaikuttavuuteen Afrikassa, mutta erityisesti Nigerian yläkoulussa. Tutkimuksen tavoitteena on tuottaa systemaattinen analyysi sekä teoreettinen ja empiirinen kuvaus opettajista ja heidän opetussellisesta osaamisestaan. Teoreettinen osa sisältää yleiskatsauksen aihealueeseen liittyvään tutkimuskirjallisuuteen, joka käsittelee akateemista ja ammatillista pätevyyttä, opettajantyön vaikuttavuutta, opetussellista osaamista sekä opettajankoulutusta koulun vaikuttajana ja kehittäjänä. Tutkimus tarkastelee koulutuksen käsitettä, joka rakentuu kahdelle periaatteelle: objektiivisen sosiaalisen maailman kuvaamiselle tieteellisten menetelmien avulla sekä analogialle yksikön ja yhteiskunnan välillä. Lisäksi se tarjoaa mahdollisuuden määrittellä käsitteet systemaattisesti ja nähdä koulutus aina suhteessa yhteiskunnan muihin osatekijöihin. Empiirinen osa sisältää kuvauksen ja tulkinnan siitä, mitkä kasvatukselliset tavoitteet voidaan saavuttaa tarkoituksenmukaisen koulutussuunnittelun, opettajien ja heidän opetussellisen osaamisen sekä opettajankoulutuksen ja sen kehittämisen avulla.

Tutkimusaineisto kerättiin vuosien 2002–2003 välisenä aikana opettajilta, rehtoreilta sekä tarkastajilta Nigerian opetusministeriössä ja Riversin osavaltion yläkouluvirastossa. Aineisto koostuu haastatteluista, asiakirjoista, havainnoista ja kyselyistä. Niiden analysointi suoritettiin sekä laadullisin että määrällisin menetelmin tulosten validiuden vahvistamiseksi. Aineiston analysoinnissa tuotettiin vastauksia tutkimuskysymyksiin ja tutkimukselle asetettuihin ennakkoletuksiin. Analysointimenetelminä käytettiin jakaumia, merkitsevyydestausta, yksisuuntaista varianssianalyysia ja ristiintaulukointia.

Tutkimusaineiston analysointi osoitti, että opettajat tarvitsevat ammatillista tietoa ja opettamisen taitoja. Tämän lisäksi heiltä edellytetään yleissivistystä, auttamishalua, kulttuuripääomaa sekä eettistä ja yhteiskunnallista orientaatiota. Akateeminen ja ammatillinen koulutus on erityisen tärkeää siksi, että he pystyvät ohjaamaan opetusprosesseja tehokkaasti. Tutkimus osoitti, ettei opettajilta ei odoteta muistitietoa, vaan kykyä käyttää ajattelua monipuolisesti.

Tutkimus voi tarjota ratkaisun opettajankoulutuksen ja opetuksen vaikuttavuuden ongelmaan Nigeriassa. Sen vuoksi tutkimus luo mahdollisuuksia koulujen kehittämiseen ja kansalaisten elämänlaadun parantamiseen kehitysmaissa ja Nigeriassa. Tutkimus tekee käyttökelpoisa

ehdotuksia yläkoulun kehittämiseen Nigeriassa ja sillä halutaan rohkaista koulutussuunnittelijoita, koulutuspolitiikan luoja, opetussuunnitelmien kehittäjiä, rehtoreita, opettajia ja kasvatustieteen opiskelijoita kyseiseen kehitykseen. Raportti hyödyntää akateemista yleisöä koulun vaikuttavuutta ja kehittämistä koskevan tiedon avulla. Tutkimus käyttää käsitteitä eri tieteenaloilta ja tavoitteena on ollut luoda mahdollisimman kokonaisvaltainen esitys koulun vaikuttavuuteen liittyvistä osatekijöistä ja laadun kehittämisestä.

Tutkimuksessa opettajien ammatillista pätevyyttä valottava uusi näkökulma tuo esille tarkasteltujen tekijöiden ominaisuuksia ja niiden välisiä suhteita sekä pyrkii myös huomioimaan ympäristön ja kulttuurin moni-ilmeisyyden. Jatkossa tutkijoiden tulisi keskittyä niihin tapoihin, joilla kaikenlaiset, sekä ammatilliset että ei-ammattilliset opettajat, rakentavat ja soveltavat heidän pedagogisia taitoja koulunpidossa.

Avainsanat: ammatillinen koulutus, akateeminen koulutus, ammatillinen ja akateeminen pätevyys, työn vaikuttavuus, koulutussuunnittelu, opettajankoulutus ja kehittäminen.

DEDICATION

IN MEMORY OF MY BELOVED MUM
LATE PRINCESS PHILOMENA OLOLUBE

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Helsinki, 1st of October 2006

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List of Acronyms

ACA	Chartered Accountant
ACCA	Association of Chartered Certified Accountant
APQTJE	Academic and Professional Qualification on Teachers' Job Effectiveness
ASUU	Academic Staff Union of Universities
B.Ed.	Bachelor of Education Degree
B.Sc.	Ed. Bachelor of Science Education Degree
B.Sc.	Bachelor of Science Degree
B.A.	Bachelor of Art Degree
B.A.Ed.	Bachelor of Art Education Degree

Ed. D	Doctor of Education Degree
HND.	Higher National Diploma
HR	Human Resources
HRM	Human Resource Management
HRP	Human Resources Planning
M.Ed.	Master of Education Degree
M.Sc.	Ed. Master of Science Education Degree
M.Sc.	Master of Science Degree
M.A.	Master of Art Degree
M.A.Ed	Master of Art Education Degree
MBA	Master of Business Administration
MDGs	Millennium Development Goals
MILR	Masters in Industrial and Labor Relation
NCE	Nigeria Certificate in Education
NIM	Nigeria Institute of Management
NPE	National Policy on Education
OECD	Organization for Economic Co-operation and Development
OND	Ordinary National Diploma
PGDE	Postgraduate Diploma Certificate in Education
Ph.D	Doctor of Philosophy
SPSS	Statistical Package for the Social Sciences
UBE	Universal Basic Education
UN	United Nations
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UPE	Universal Primary Education

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1 General Background to the Study

This chapter serves as the general background of the study and begins with a consideration of the background information concerning this study, including an autobiographical statement in which the enthusiasm for the topic is anchored. In addition, the chapter neatly fits the statement of problems, research questions, and hypotheses and presents the study's objectives and purpose by examining the reason for school effectiveness and improvement. Finally, this chapter further discusses the justification and significance of the study by examining teacher education programs as they affect teachers' academic and professional qualifications.

1.1 Background Information to the Study

The very first sketch of the content and possible research questions and hypotheses of this study evolved during the years 1995–2000 when I was running a Master of Education program (M.Ed.) in Educational Management and Planning and a Postgraduate Diploma (PGD) in Human Resources Management Technology. At the time, I was a part-time lecturer at the University of Calabar, Yenagoa Study Center, and the College of Health Technology Port Harcourt, in Nigeria. My experiences from that period provided the background and aroused my interest in pursuing a Doctor of Education degree in order to do research on school effectiveness and quality improvement in Nigeria with focus on Academic and Professional Qualification on Teachers Job Effectiveness (APQTJE), as limited academic materials concerning this area in Nigeria seem to exist. The doctoral degree is designed to prepare students for advanced professional practice directed mainly toward the application or transmission of existing knowledge. As a professional degree, it focuses on the utilization of research knowledge by those who aspire for leadership positions as administrators, policy analysts and curriculum designers. It also follows my exposure to the Finnish teacher education program that has given me a wealth of knowledge concerning the standards and values of teachers' effectiveness. As a result, this study came about mostly after a detailed examination of the right segment of the Nigerian economy that required quality improvement for the enhancement of developmental growth, which explains the title of this dissertation.

In a study conducted by the researcher in 1997, it was observed that educators in Nigeria have forgotten the important connection between teachers and students and how good teachers carry out their duties more effectively in meet-

ing the predetermined goals of education. In addition, it was observed that in Nigeria and in most developing nations the problem is not designing beautiful programs for national development but implementing them. According to Thomas Poetter, we overlook the treasure in our very own backyard: our students. Student perceptions are valuable to our practice because they are authentic sources of first-hand experiences in our classrooms. As teachers, we need to find ways to continually seek out these silent voices because they can teach us much about learning and learners (Poetter, 1997). Admittedly, there is more to teaching than feeling affection for children. Yet without love and an eagerness to serve schoolchildren well, teaching loses its heart. Moreover, when teachers forget that children come first, their students and society are in serious danger. Therefore, teachers in schools are both among the most powerful and the most stressed adults in the world. They are powerful because of their influence over young minds, and they are stressed because of the responsibilities that are often out of proportion to their authority (Clark, 1995). The reality is that schools will change and develop only if the teachers within the institutions are empowered to develop themselves (Bayne-Jardine, 1994; Doyle & Hartle, 1985).

Furthermore, realizing from the onset the importance of education, Lawal (2003) points out that "Education is a powerful instrument of social progress without which no individual can attain professional development." It then follows that the best way to enhance instruction is through teacher education programs, which are key to understanding both teaching and learning. Such programs are meant to help individual teachers grow and develop as teachers, provide them with the skills and professional abilities to motivate children to learn, and to assist them in acquiring the right understanding of the concepts, values, and attitudes needed, not only to manage classroom instruction but also to contribute to the society in which they are born, grow, and live. Thus, teacher education is designed to produce a highly motivated, sensitive, conscientious, and successful classroom teacher who will handle students effectively and professionally for better educational achievement. For this reason, teacher education is a part of the education process or training that deals with the art of acquiring teaching skills. It is an essential exercise that enhances the skills of learning and teaching.

In Nigeria, reasonable preparations are made to improve teachers' professional development through the establishment of colleges of education, both at the federal and state levels. Institutes of education and faculties of education in various universities are also established to provide effective and professional teacher education programs. In such institutions, students are trained to form habits that will help them become teachers capable of shouldering responsibilities, showing initiative and being good models for their future pupils.

Additionally, the National Policy on Education [NPE] (1989) Section 9, sub-section 65 states that at the National Certificate in Education (NCE) and

degree levels, teacher education programs will be expanded to cater to the requirements of vocational, technical, and commercial education. The sub-section also recognizes the problems with Nigeria's education system and the federal government's promises to implement the commission's recommendations by providing physical facilities and qualified staffs in schools. Sub-section 67 acknowledges the federal government's willingness to direct the universities to work out a program to make it possible for suitable qualified holders of the National Certificate in Education (NCE) to complete a degree in education at the university in two years instead of the present three years. Sub-section 73 states that teacher education will continue to recognize changes in methodology and curriculum, and with the promise that teachers will be regularly exposed to innovations in their profession, in-service training will be developed as an integral part of continuing teacher education. The NPE further argues in sub-section 74 that "No matter the efficiency of the pre-service training we give to teachers, there will necessarily be areas of inadequacies. In-service education for teachers will continue to fill these gaps. For instance, library service education, evaluation techniques, guidance and counseling, etc. will be systematically planned so that successful attendance at a number of such courses will attract incremental credit and/or count towards future advancement."

Even with all these statements and programs in place, little has been achieved. However, the goal for which these moderate preparations were made has had no meaning because we have always expected that the products of these institutions will be employed to handle the instructional processes in our schools for which they are trained, yet incompetent teachers are still employed to carry out teaching. Educators in Nigeria (e.g., Adigwe, 1992; Odor, 1995) have argued that the falling educational standards can be attributed to the use of teachers who are unqualified for instructional purposes, including those with general education (academic) qualifications such as BSc., BA., MSc., and MA. degrees etc. Those of us who care about education and how to best to improve its quality worry about this development in Nigeria.

It then follows that as Nigeria is in dire need of development, Nigerian teacher education programs are so important that all avenues should be explored in order to increase the soundness of the nation's education system at all levels. In order for a nation to develop, its education must be based on a solid foundation and all facilities needed for enhancing any educational program must be provided. These include the recruitment of professional and academically qualified teachers who are interested in the educational development of the nation. A country can only develop significantly and attain greater heights in the committee of nations through a comprehensive teacher education program (Ololube, 1997; 2004). Teacher education should assume a more active social role in producing research, in debates and in teaching as this will promote the development and general appreciation of the teaching profession. All

teacher education and training must include content that helps teacher trainees to interpret and influence current phenomena in society, the economy, culture and working life. Prospective teachers must also gain an awareness of the ethical responsibility intrinsic to the teaching profession not only in theory but also through experience. The models assimilated during teacher education constitute a crucial basis for future work. Arguing the need for an effective teacher education program, Lawal (2003) indicated that skilled and effective teaching and learning are expected from professionally trained teachers. They are expected to employ the use of teaching aids to supplement other methods and manage and control their classes for effective learning.

It is Yusuf's (2002) view that the main objectives of teacher education are to develop awareness, knowledge, attitudes, skills, evaluate ability and encourage full participation in the teaching and learning process. Again, Lawal (2003) argued that adequate training is the best possible way teachers in Africa can move forward in meeting the challenges of the 21st century. He quoted Fafunwa (in Akinyemi, 1972) as saying:

"If the African Teacher is to cope adequately with the monumental task that lies ahead of him, he has to be well trained for his job. He must be willing to enter into the spirit of new African age, willing to share new information and skills with his fellow teacher; seek more knowledge on his own initiative and above all, be flexible and willing to experiment and not be afraid of failure. The new teacher envisaged must have flexibility built into his total professional and academic make-up, and should be helped through regular in-service training to keep abreast of new techniques, skills and research in his field. Effective teacher education programs are a necessary prerequisite for a reliant education system. They lead to increased confidence in both teacher and students as they coordinated learning effectively and professionally, and rectify problems inherent in the teacher education."

Clearly, it is believed in this study that experiences from other countries of the globe will offer increased insights on the importance of teacher education, and from these experiences Nigeria will learn "best practices" and realize the significance of teacher education in national development. This study could also help the Ministry of Education in Nigeria as well as those in other developing countries to effectively manage their teacher education programs. This study is undertaken with the belief in the premise that professionalism and academic training are two distinctive words and that both of them are necessary prerequisites for good job effectiveness. The kind of professional knowledge teachers require, the role of teachers in making this knowledge available to their colleagues and students, and the impact of motivation on teachers' job effectiveness are essential to educational development. Thus, this research has both practical and conceptual aims which would facilitate a broad understanding

of the issues surrounding teachers' job effectiveness in connection with their competencies in Nigeria.

Furthermore, in this circumstance, the need for strategic planning in education is essential to help revitalize the decaying teacher education program in Nigeria. It is against this background that this study points our attention towards empowering education planners and policy makers in Nigeria to learn from what is obtainable from other functioning teacher education programs around the world because insufficient planning has been identified as one of the most important factors hindering education productivity in Nigeria (Fafunwa, 1985). In the same vein, Hannele Niemi's discussion of whether teachers have a future and the condition for teachers' growth drew attention to the fact that teacher education and school administration are important forces for the empowerment of teachers and changing their status in society (Niemi, 1996).

The results of this research may be vital for the universities and other teacher education institutions particularly in developing countries. In essence, it would be possible to develop education in general and enhance learning so that future students and employees gain better knowledge and skills. This study is also aimed at filling the existing gap in the Nigerian teacher education literature. Though the author could have done a comparative study between two countries, but was narrowed down to Nigeria because of the lack of data from other countries. However, the author made use of existing literature from other countries especially from the West to support this study.

1.2 The General Structure of Nigeria's Educational System

With the growth of British commercial and colonial interests in the 19th century, British missionaries established institutions for formal education in order to create understanding between the colonial rulers and native Nigerians to perpetuate their economic, political, social and religious imperialism. Nearly all of today's developing countries were once colonies. That is, they were under the direct administrative rule of one or another European power. America broke free from European rule in the late eighteenth century, but most countries in Africa, the Near East, and Asia won their independence only in the past 50 to 60 years. Between 1945 and 1968, 66 countries gained political independence from colonial rule. Thus, most of the developing world consists of rather new states (Brint, 1998, p. 67) of which Nigeria is one. Brint further contends that colonial rulers were mainly interested in raw materials, cheap labor, and acquiescent subjects, thus schooling for the masses was considered helpful, but it was a comparatively low priority. In the absence of strong official support, Christian missionaries often introduced formal education as a way of evangelizing the indigenous populations.

After independence in 1960, Nigeria's federal government had little influence on education matters at the primary and secondary school levels because that was the constitutional responsibility of the states. This resulted in a multiplicity of educational policies and practices and varying standards of education. Prior to the coming of the British, various Nigerian people had their own educational system, as is the case in other countries of the world. As Fafunwa (1974, 1991) rightly pointed out, the young were taught how to conform to social customs and traditions of the community and to learn a trade or vocation to make them good citizens. Such education was aimed at maintaining continuity in various vocations (especially in medicine, arts and crafts) and the continuity of culture by transmitting to successive generations not only accumulated knowledge but standards of belief, norms and values.

However, what marked a turning point in the Nigerian educational system was the contribution of the United Nation General Assembly (1979). Since then, the Nigerian government has pursued educational policies aimed at shaping the individual into a sound, useful and patriotic citizen of the country. The UN General Assembly proclaimed 1979 as the International Year of the Child which among other things called for free and compulsory primary education, secondary education accessible to all, and the accessibility of higher education accessible on individual capacity (Human Rights and Education, 1987). This declaration considerably supported and encouraged the less developed countries of the world to embark on educational development in their various countries through diverse educational programs.

This underlies the phenomenal expansion of education at all levels and the vigorous experimentation in all aspects of education within the last two decades in Nigeria. In support of this, the government provided educational opportunities for all citizens at the primary, secondary and tertiary levels. The government places emphasis on the quality of education and establish nationally acceptable standards and practices in order to ensure even progress and development throughout the country (Federal Ministry of Information and Culture, 2000). Unfortunately little has been achieved over the years despite efforts by the federal government to ensure that education was actually adopted as an instrument for effective national development. Researchers (Lawal, 2003; Olofube, 2005; Yusuf, 2002) argued that these problems could largely be attributed to the use of incompetent teachers in the instructional processes.

Consequently, a national policy on education was fashioned. The National Policy on Education (NPE) is as much a policy statement as it is a curriculum document. It sets out the goals and aims of Nigerian society, from which issue the goals of education and subsequently the objective of each level of schooling (Akpe, 1991, pp. 213–219). According to Nwagwu (1997, pp. 87–95) NPE, popularly known as the 6–3–3–4 System, was introduced in 1977 and revised in 1981 (Federal Republic of Nigeria, 1981). It marked a radical departure

from the British system of education which Nigeria inherited at independence in 1960. Nigeria adopted the American system of 6 years of primary education, 3 years of junior secondary school, 3 years for senior secondary school, and 4 years of university education.

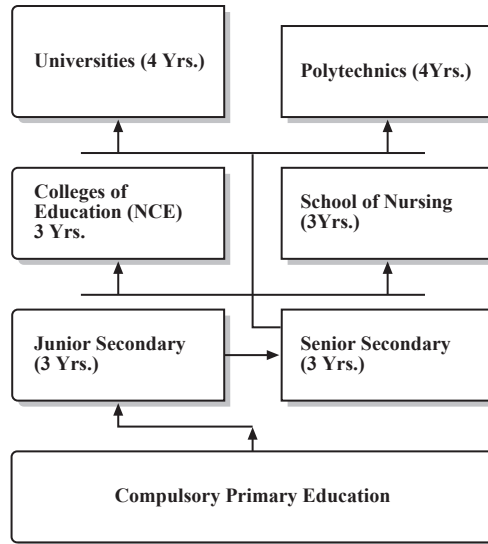


Fig: 1.2.1. Simple Structure of Education in Nigeria.

The 6–3–3–4 system of education has been prescribed and implemented in all 36 states of the federation including the federal capital territory. Primary school education is free and compulsory and in some states of the federation, junior and senior secondary education are free as well. The junior and senior secondary school curricula are supposed to put equal emphasis on both academic and pre-vocational subjects to ensure the achievement of the school objectives. University, Polytechnic and Colleges of Education are not free, fees are charged, the amount of which depends upon the course of study and lecture materials. As a result, higher education in Nigeria is only for those who can afford it. The federal government at the national, state and local government levels runs approximately 45,000 primary, 6,025 secondary schools, 200 tertiary institutions, 47 Universities, and 57 Colleges of Education and Polytechnics etc. (Marinho, 2000).

The 6–3–3–4 system of education as copied from the United States was adopted in order to achieve or at least further the following national goals.

- The inculcation of national consciousness and national unity.
- The inculcation of the right type of values and attitude for the survival of the individual and Nigerian society.
- The training of the mind in the understanding of the world around it.
- The acquisition of appropriate skill, ability and competencies, both mental and physical, as equipment for the individual to live in and contribute to the development of his society (NPE 1989, p. 8)

The objective of Nigerian teacher education as contained in the National Policy on Education (1981) revised (1989) is as follows:

- To provide highly motivated, conscientious and efficient classroom teachers for all levels of our educational system¹
- To encourage further the spirit of inquiry and creativity in teachers;
- To help teachers to fit into the social life of the community and society at large and enhance their commitment to the national objective.
- To provide teachers with adequate intellectual and professional background for their assignments and to changing situations, not only in the life of the country but also in the wider world.
- To enhance teachers' commitment to the teaching profession. (NPE, 1989, p. 38)

It is interesting to note that the aforementioned aims and objectives of teacher education in Nigeria are meant for all levels of education and sound very good and promising to move a country forward. However, embezzlement, corrupt practices and serious neglect have taken over the system. Thus, academic standards have fallen tremendously over the years. Educational achievements amongst students are purely self-effort with a little assistance from some sincere teachers. Presently, almost all the instructional materials that aid teaching and learning i.e. textbooks, classrooms, laboratory equipment, access to the Internet (computers), etc. are in short supply. To make matters worse, inconsistency in electricity and economic and political instability have hampered the growth of education in Nigeria.

Another major problem with Nigeria's education system is in the area of finance and human resources management (HRM). According to Nwagwu (1997, pp. 87–95) the crisis of educational funding is a fundamental issue because a critical shortage of finance has affected the organization and admin-

¹ Chapter 9 of the National Policy on education deals with Teacher Education and starts with the famous truism "no education system can rise above the quality of its teachers". There is no gain saying the fact that no matter how laudable an education system may be, and no matter how well equipped the institution may be not much will be achieved by way of manpower training in the absence of adequately trained and well motivated teachers (Aiyepoku, 1989, p. 63–64).

istration of education at all levels. The consequences of the shortage of funds were immediate. For example, the free universal primary education (UPE) scheme, which was started by the federal government in 1976, was hurriedly handed over to the state governments and the poor ones could not sustain the program. Bursary awards for students were stopped and subsidized feeding for students in higher institutions were also abolished as a result of lack of funds.

In 2002 the incumbent civilian president of Nigeria (Chief Olusegun Obasanjo) re-launched free and compulsory primary education known as Universal Basic Education (UBE). Countless controversies have arisen regarding the success or failure of the program. In my opinion, the UBE program will only succeed if Nigerians learn from the mistakes of the UPE era. Nevertheless, primary school enrolment in Nigeria is currently as high as 95% under the UBE scheme.

The current crisis in our educational system has led to private schools taking over the education industry in Nigeria following the constant strike actions embarked upon by public schools. Most parents, especially the rich ones and some middle class or poor who know the importance of education, have moved their children/wards to private schools. Thus, the private school business is booming in Nigeria.

1.2.1 Categories of Teachers in Nigeria

The researcher discusses the various levels and what it takes to be a teacher in Nigeria with special reference to primary and secondary school education levels. The following categories of teachers² can be identified in Nigeria.

Primary school level teacher qualification

1. Teachers holding the Teachers' grade two certificates; thus teachers with:
 - a) Five years of training in education and study of academic subjects after primary school leaving certificate;
 - b) Two years of training in academic and professional subjects after full secondary school education but did not obtain a certificate.
 - c) One year of training in mostly education after obtaining the secondary school certificate.

² The word teacher can be used to refer to anybody who is involved in the business of teaching regardless of title—teachers, instructors, lecturers, associate professors or professors (Bin Mohamed Ali 1995, p. 1).

2. Teachers holding the teachers' grade one certificate; those with teachers' grade two certificates, at least two subjects at the General Certificate of Education Advance level and a teaching practice level examination.
3. Teachers holding the Teachers' grade two certificates and the Associateship Certificate in Education obtained after one year of professional studies in the faculty of education at a university: an institution affiliated with the faculty of education at a university
4. Teachers with the Nigeria teachers' Institute (NTI) certificate which is obtained after two or three years of professional training.
5. Teachers holding the Nigeria Certificate in Education (NCE) "Primary" after professional studies of three years in the College of Education.
6. Teachers holding Bachelor of Education degree (B.A /B.Sc. Ed, B.Ed.)

Secondary school level teacher qualifications.

1. Teachers holding the Nigeria Certificate in Education; that is, those teachers with three years of studies in academic and professional subjects from the Colleges of Education after obtaining "either" the West Africa School Certificate, Senior School Certificate or National Education Certificate.
2. Teachers holding a Higher National Diploma (HND) without professional studies in education from a Polytechnic.
3. Teachers holding the Bachelor of Art degree (B. A), Bachelor of Science degree (B.Sc.), Master of Art degree (M.A), Master of Science degree (M.Sc.) and so on.
4. Teachers holding the Bachelor of Art Education degree (B.A.Ed), Bachelor of Science Education degree (B.Sc. Ed), Bachelor of Education degree (B.Ed.) Master of Education degree (M.Ed.), Master of Art Education degree (M.A Ed), Master of Science degree (M.Sc. Ed), Doctor of Education degree (Ed. D. or PhD.) etc.
5. Teachers holding the B.A, B.Sc., M.A, M.Sc., Ph.D. Certificate and a Postgraduate Diploma Certificate in Education after one year of studies in Education at a university.

The six categories of teachers in the primary schools level are regarded as possessing professional teaching qualifications while teachers holding certificates in categories 2 and 3 of the secondary school level are academically qualified and not professionally trained to be teachers. Categories 1, 4 and 5 of secondary school level teachers are regarded as possessing professional teaching qualifications. It is important to note that there are teachers at the primary school level who hold Bachelor of Education Certificates. However, NPE sec-

tion 9, paragraph 61, p. 39, emphasized that the NCE will ultimately become the minimum basic qualification for entry into the teaching profession.

1.3 Statement of Problems

An educational system is effective to the extent it makes use of the available resources to achieve its stated aims and objectives. The major objective of every school system irrespective of the level of education is to provide high quality education for learners (Whawo, 1993, p. 4). The resources needed to provide this high quality education include financial as well as human and material assets (Carrim & Shalem, 1999, pp. 59–84). School effectiveness researchers acknowledge the diverse educational aims of acquiring subject knowledge, skills, values and attitude necessary for the educational context and for future participation in the wider society (Lockheed & Verspoor, 1990; UNESCO, 1990). Apart from the family, school is the principal agent of socialization through which children get an academic education and learn many cultural codes (Brander *et al.*, 1995; Ezewu, 1983).

In addition, the success of any educational system no doubt depends on the available methodological competence, educational qualification level, and the administrative machinery established for its implementation. In recognition of this fact, therefore, professionalism is given a major emphasis in all teaching activities. For this reason, there has been an upsurge in attempts to acquire professional teaching qualifications such as the Nigeria certificate in Education (NCE), Bachelor of Art Education (B.A Ed), Bachelor of Science Education (B.Sc. Ed), Bachelor of Education (B.Ed.), and Master of Education (M.Ed.), Doctor of Philosophy (Ph.D.), in education, and other educational qualifications that are needed to become a professional teacher in Nigeria (Ololube, 1997).

On the other hand, there has been a general conception in Nigeria among teaching and non-teaching staff that the ability to teach with enthusiasm may be both in-born and acquired. It was further argued in my discussion and evaluation with university colleagues that academic qualification without also undergoing a period of professional training is all that is required for teaching competence. In this paradigm, the public see intelligence, interest, and other personal traits as the only qualities assumed to be necessary for effective teaching. Therefore, they concluded that teacher education is unworthy. As a result, most unemployed Nigerian college and university graduates see teaching as short-term employment as teachers, until they get job that is in line with their academic qualification. This is because they are been offered job opportunities by the Ministry of Education regardless of the availability of teachers that

are both academically and professionally qualified. In the same consideration, Ezewu (1983) notes:

There are different reasons why people take to teaching as a career. Some take to teaching because they have no alternative jobs. Others because they expect some material gains, yet others take to teaching to pursue some intrinsic values. Those who pursue intrinsic values in teaching are more successful as teachers, an analysis of the teaching action shows that teaching has to have pre-determined goals and properly selected means from a pool of alternatives. The goals itself has to be qualified to analyze what constitutes the attainment of the goal ... (Ezewu, 1983, p. 125).

At the same time, this problem is not peculiar to Nigeria alone. Many colleges and universities in the United States of America according to Distinguish Research Professor Emeritus Robert G. Owens (2004, p. 406) took the position that teacher education was unworthy to be included in the august ranks of academia. Yale University's example was not atypical: it simply abolished the small department of education that it once had. In many institutions of higher education, schools of education struggled with little support and often were isolated from either the leadership of the university or the faculty in the other schools. By the year 2000, according to Owens, universities were called both to account and to action in taking responsibility for meeting the need to educate and train the 2.5 million new teachers who would be needed in the United States in the first decade of the twenty-first century. According to Owens the reason for this shift was that "inevitably as school reforms unfold, increased attention was focused on the education of teachers. Not only was there rising dissatisfaction with the achievement of students in schools, but with the quality of instruction that students receive" (Ibid). Research has shown that the quality of instruction that students receive in schools affects their academic achievements thus the competencies of the teaching staff gains increased importance (Kerry & Wilding, 2004; Murphy, [n.d]; Sammons, Hillman & Mortimore, 1997; Scheerens, 1992, 2000; Wheldall & Glynn, 1989).

An incompetent teacher is a disgrace to the teaching profession. Such incompetence may be a matter of low intellectual capacity, inadequate training, and resistance to modern pedagogical methods, or poor attitude about the teaching profession and a lack of dedication to professional duties (Fafunwa 1985; Ololube 1997). Researchers (e.g. Highet, 1963, Ukuje, 1979; Aghenta 1987; Edem, 1987, Peretomode 1991, 1995; Okwubunka, 1994) found that incompetence in teaching involves one or more of the following factors:

1. Poor classroom organization
2. Lack of knowledge of the subject-matter
3. Poor methodological competencies

4. Ineffective use of languages
5. Poor planning and preparation of lesson plan
6. Lack of motivation competencies
7. Poor material utilization competencies
8. Poor construction and employment of various evaluation techniques
9. Lack of interaction competencies.

In comparison, the same authorities conclude that a competent teacher is one who knows and applies the principles, rudiments, methods and techniques of teaching in the teaching and learning processes. Teachers should be selected based on technical expertise because future evaluation procedures—in particular the objectives stated in the National Policy of Education of 1981—will be based on the ability to perform effectively. Professional courses in education intended to remove deficiencies in the teaching and learning process include Educational measurement and Evaluation, Educational Psychology, and Educational Management and Planning. Others are Sociology of Education, Philosophy of Education, Curriculum Studies and General Method Courses, Educational Technology, Guidance and Counseling, and Comparative Education.

This means that the effects of teacher's professional and academic training on job effectiveness need to be investigated to assess their job value. The study also examines the utilization of available instructional materials, motivational process competences among co-teachers and the instructional process competencies of both academically trained and professionally trained teachers. The widely expressed view in Nigeria that all that is required to be an effective teacher is the general qualification earned from a university also needs to be investigated. Maybe that is the reason why unqualified teachers are still employed in Nigerian schools. To this end, this investigation also attempts to ascertain whether higher academic qualification improves a teacher's job effectiveness in Nigerian secondary schools.

1.4 Objectives and Purpose of the Study

Research on school effectiveness and school improvement has become a major industry in the west, not only in the United Kingdom but also in Australia, Canada, and the United States of America. Though it took a decade or more to happen, this body of research has now had a major impact on policy at national, local and school levels. As a result, I have sought explicitly to learn from the research on school effectiveness and school improvement and to apply its lessons to policy on, for example, failing secondary school education in Nigeria. However, the revival of education in recent years has been built around

the same body of research. Indeed, it would only be a slight exaggeration to say that it saved these schools from extinction (Barber & White, 1997, p. 1).

Conversely, given that there were limited research publications in Nigeria as regards this area of discourse, and those that did exist they were very narrow and did not focus on other possible features that might improve teachers' job effectiveness, this study has given considerable insights to these divergent factors. However, that does not mean that this research is an end in itself; rather it is a means to help in resolving the problem mentioned. As a result, one of the purposes of this study is to fill the intellectual gap in the understanding of the key issues of educational achievement in Nigeria, with particular reference to teachers' job effectiveness. By doing this study, the researcher participated in the global debate of educational improvement and students' academic achievement from the viewpoint of a developing country.

The overall objective of this study is to improve teacher education in Nigeria. This study's expectation is to explore the practical policies of teacher education and understand professionalism and academic qualification because they are two distinct concepts with reference to their application in Nigeria. It is also an attempt to analyze theoretically and empirically teachers' academic and professional qualifications as a way of improving their job effectiveness. The study is also a demonstration of what actually happens in practice in the real world of instructional effectiveness and improvement (Creemers, 1994b, 1994c; Kerry & Wilding, 2004; Oolube, 1997; Scheerens, 1994; Wheldall & Glynn, 1989).

Another reason for this investigation is to identify 'best practice' management and planning strategies in the management of schools, especially at this time of austerity in Nigeria when educational systems the world over are doing more with fewer resources. The identification of 'best practices' and greater quality performance of teacher education and school management elsewhere will help Nigerian education planners, policy makers and educational effectiveness researchers to learn from other functioning educational systems how to implement these practices toward improving educational effectiveness in Nigeria. This research yields knowledge about the characteristics of teachers' professional and academic competencies and how they affect education. As a result of these inherent problems, the need to establish whether higher academic qualification improves teacher job effectiveness is essential. It is believed that higher education or increased academic qualifications are required to improve the work performance of teachers. Moreover, it is expected that teaching staffs that are actively committing to their academic and professional development will improve their job performance. This is because traditionally teachers have entered the profession with no professional training and as a result, there are large percentages of untrained teachers in the system. This is one of the strongest shaping forces in teacher education in Nigeria.

Specifically, this study is designed to theoretically and empirically investigate the following research objectives:

1. To make a theoretical analysis of school effectiveness and teachers' academic and professional competencies.
2. To investigate the methodological competencies of teachers and their role in improving instructional processes.
3. To investigate how teachers' motivational competencies improve students and co-teachers ability to achieve educational objectives.
4. To examine if teachers' material utilization competencies assist students during learning.
5. To explore how a teacher's instructional process competencies affect teaching and learning.
6. To ascertain teachers' evaluation competencies and their teaching effectiveness.
7. To determine the qualities of good teaching that are best for instructional purposes.

Eliciting information from secondary school teachers, principals and educational supervisors from the Ministry of Education and Post Primary Schools Board in Rivers State of Nigeria, constitute an approach to reach this end. It is important to note that the scope of this research is limited to the examination of the management roles of educational planners and policy makers as they affect academic and professional qualification and teachers' instructional effectiveness in Nigerian secondary schools. Finally, the findings of this study will constitute added input in the improvement of teacher education and school effectiveness in Nigeria.

1.4.1 Research Questions

The following research questions were adapted from the problems stated above. The research questions of this study provide focus and direct attention to the major issues of concern in this research project and what the researcher specifically wanted to understand by doing this study. Therefore, they help determine what data to collect and how and where to collect it. In order to provide possible answers to the problems of this study, the following research questions were addressed:

1. To what extent does higher academic qualification improve teachers' job effectiveness?
2. To what extent does professional training of teachers' improve their effectiveness on the job?

3. How do teachers' motivational competencies improve their job effectiveness?
4. What type of instructional processes do teachers use to improve their effectiveness?
5. To what extent do teachers employ and use various evaluating techniques effectively?

1.4.2 Research Hypotheses

Research questions are not the same as research hypotheses; research questions state what a researcher wants to learn. Hypotheses in contrast are the statement of the researchers' tentative answers to those questions—what they think is happening (Maxwell, 1996, p. 53). Good research hypotheses³ are educated guesses about the relationship between variables; using concepts from probability and the sampling theory statistically tests the research hypotheses which helps to make decision about the hypotheses (Andy, 1992, p. 168). Nworgu (1991, pp. 44–45) drew attention to the fact that hypothesis is a conjectural proposition, an informed intelligent guess about the solution to a problem. It is an assumption or proposition whose veracity and validity is to be established. Formulation and testing of hypotheses are essential steps in any scientific research. A hypothesis provides the researcher with the necessary guide or direction in searching for the solution to the problem under investigation. This ensures that the researcher does not waste or dissipate all energy in searching for the solutions anywhere and anyhow.

However, the main setback of explicitly formulated hypotheses is that, like prior theory, they act as blinders, preventing one from seeing what is happening. As with prior theory, one needs to treat these hypotheses critically, continually asking oneself what alternative ways there are of making sense of the data (Maxwell, 1996, p. 54). The following research hypotheses (null) were raised. A null hypothesis is a hypothesis, which states that “no difference” or “no relationship” exists between two or more variables. It is a hypothesis of “no effect” or “no difference” (Nworgu, 1991, p. 46). Thus, the hypotheses for this study include:

³ What makes a good hypothesis? Is that it aids researchers in evaluating ideas or explain why psychologists see certain research ideas as more meaningful and interesting than others. If one emphasizes that “interesting” research ideas are manageable in scope, make specific predictions, and have implications beyond the immediate study (the finding relates to theory, to other studies, or to other behaviors rather than being an isolated fact), one may be spared from a class full of students saying things like “I want to do a study to see if drinking alcohol affects card-playing” <<http://spsp.clarion.edu/mm/RDE3/C2/c2hyp.html>>.

1. There are no significant differences in job effectiveness between teachers' that have professional training and those without.
2. There are no significant differences in the effectiveness of professional and non-professional teachers towards their methodological competencies.
3. There are no significant differences in the effectiveness of professional and non-professional teachers towards their material utilization competencies.
4. There are no significant differences in the opinions of respondents' background information towards APQTJE.

On the contrary, alternative hypotheses were raised in case the null hypotheses were rejected or not confirmed. The alternative hypotheses are:

1. There are significant differences in job effectiveness between teachers that have professional training and those without.
2. There are significant differences in the effectiveness of professional and non-professional teachers towards their methodological competencies.
3. There are significant differences in the effectiveness of professional and non-professional teachers towards their material utilization competencies.
4. There are significant differences in the opinions of respondents towards APQTJE.

1.5 Justification and Significance of the study

It is important to pose the question raised in relation to a researcher's motivation in conducting a particular study: Does our motivation for a given research topic or problem align with what the professional group sees as worthy of investigation? (Sarangi, 2002; Kamwendo, 2004). If the answer is no the research has no value, but if the answer is yes, then the need to carry out research of this kind is significant.

Concerns have increased over the years regarding raising standards of professional training and academic qualifications in order to improve teachers' effectiveness (Buchberger *et al.*, 2000). For that reason, the researcher hopes that the findings from this present study might encourage the Ministry of Education to train teachers as professionals. This is also relevant to on-the-job training. In-service teacher development is part of a wider enterprise to adapt teachers to new challenges and new circumstances. This is because teachers are central to the 'capacity' of schools to respond to the present world of technological changes. At the same time, professional development of teachers and

educational reform have always gone hand in hand according to the executive summary of OECD (1998, p. 11).

The second justification for this study is that the lukewarm attention paid to educational effectiveness in Nigeria by both the federal and state governments is reason for concern. In order to improve educational effectiveness, this study encourages policy makers in education and strategic education planners to explore the “best practices” used elsewhere, at least in the West, to improve and support teacher in-service training programs. The Ministry of Education will be encouraged to know the cadre of teachers to remove from the teaching position, and by so doing entry into the teaching field will be curtailed and controlled, thus focusing on manpower planning, training and development.

The OECD’s (1992) report reveals that slower recruitment of teachers and the inability to recruit the right caliber of teachers in most developing countries makes it imperative to strengthen in-service training activities. Therefore, this study is significant because it investigates the caliber of teachers found in Nigerian schools and fills the wide gap of improving the effective management of teachers as the human resources base of the school. In addition, discovering why certain educational systems in some countries progress while others stagnate, just like the situation we find Nigeria’s educational system, is a phenomenon worth investigating.

It is also significant that the findings from this research might go a long way in creating public awareness of the need to train children professionally. As mentioned earlier, some people are of the opinion that basic education is all that is required to become effective, and the rationale is that potential users can then determine for themselves if the results of this study can be used in a new but similar setting. The researcher made frantic effort to provide information about the content and context aimed at, offering contribution to the discussion and development of issues surrounding this research work. It is presumed that this study will bring some new insights and expand the discussion in this endeavor. Because this writing is from an international perspective, it is important that the results from this study might be sustained and improved upon by other developing countries in general and Nigeria in particular in the years ahead so as to guarantee an enduring system of secondary school education. It is important to mention that societal development depends on the acquisition of technical, human and conceptual skills, which are essential for teachers to help student’s developmental process, because training or remediation of these specific technical competences might be attained through the assistance of colleges of education and faculties of education at a university.

Another very significant feature of this investigation is that it examines the activities of teachers in relation to the environment, motivation and supervision, and by making connections and assessing the influences they have on the educational effectiveness and teachers’ job effectiveness. Not only did the

researcher link the school effectiveness research and the school improvement literature, but he tried to develop a comprehensive picture of the changing process by relating this study to concepts such as Human Resources Management (HRM), leadership, learning outcomes and evaluation since the roles of teachers have continued to evolve to best match changing perceptions and the needs of the post industrial, postmodern educational system where there are very few certainties (Davies & Worrall, 2003, pp. 58–63). This dilemma of educational purpose between serving the needs of the market place and the requirement for democratic living is but one of the many postmodern paradoxes facing schools (Stoll & Fink 1996, p. 4).

Therefore, it is argued that this study is significant because to the best of the researcher's knowledge this is the first time that a study of this magnitude has been conducted concerning Nigerian secondary school teachers' job effectiveness. This study therefore, breaks new academic ground by focusing on the under researched teachers' job effectiveness domain. This study sets out to answer some important questions in relation to the researcher's earlier studies of 1997 and others which were equally narrow. It is also important to state that this current study contributes to the understanding of educational effectiveness and school improvement in Nigeria. The reason for lack of publications in this area was not because of lack of researchers but the academically restrictive climate caused by decades of inadequate funding of research projects under the military dictatorship in the country. For example, the under funding of higher education in Nigeria by the government has resulted in reduced expenditure on research. This is one of the major reasons for the constant standoff between the Federal Government and the Academic Staff Union of Universities (ASUU), which has affected the educational development of the country. However, those who are fortunate enough to get research funding from external sources have to satisfy the donors' research agenda (Kamwendo, 2004).

Finally, when the researcher applied for a research permit from the Rivers State Ministry of Education as stipulated in the approval for research permit letter, I was further directed to furnish the Department of Planning, Research & Statistics with the details of my proposed study including the number of Schools and their location (see Appendix C). For this reason, I will donate one or two copies of this thesis to the Ministry and some copies of it to a few universities, national and state libraries in Nigeria with the aim of drawing attention on the need for research and to allow the stakeholders come in contact with the research findings.

1.6 Purpose and Outline of Chapters

This research investigation is divided into seven major chapters. Every chapter includes more or less first hand information, as chapter four is based on empirical data.

Chapter 1 provided the general background of the study. The chapter begins with a consideration of the background information concerning the study, which includes an autobiographical statement in which the enthusiasm for the topic is anchored. In addition, the chapter neatly fits the statement of problems, research questions and hypotheses; it presents the objectives and purpose of the study by examining the reason for school effectiveness and improvement. Finally, this chapter further discusses the justifications and significance of the study by examining teacher education programs as they affect academic and professional qualification of teachers as well as the scope and delimitations of the study, likewise contributions and suggestions for further studies are put forward.

Chapter 2 presents the conceptual framework and theoretical discussions. It is committed to the review of various theoretical literature relating to this study, which includes an examination of ideas and comments concerning school effectiveness and teachers' perception of academic and professional training on their job effectiveness with reference to their competencies. The research's specific objectives provide the bases of the review.

Chapter 3 focuses not simply on what school effectiveness and improvement are, but the impact it has on teachers and students academic achievement aimed at meeting the challenges facing global competition for education reform. It also discusses quality teaching and learning in the schools. The subject of this chapter is to examine the wider context in which measures are made regarding school effectiveness and quality improvement.

Chapter 4 describes the research methodology considerations and choices in this study. It involves a description of the research design, research population, sampling, and sample size. It also involves a compact description of the research instruments used. The validity and reliability of this investigation are equally presented in this chapter, as well as explaining the data collection methods. The last section is comprised of well-constructed data analysis techniques.

Chapter 5 links the empirical data presentation, interpretation and analysis. It consists of the arrangement of the results of the empirical data in their raw form

drawn from interviews and questionnaires from teachers, principals and supervisors of education from the Ministry of Education and Post Primary Schools Board. The interpretation and analyses of the data engross the determination of their strength and weaknesses which involve the use of multiple statistical procedures. The clear merit of this chapter in the researcher's opinion is that the results are connected to the information given in the literature review.

Chapter 6 is a description and discussion of the practices in education that demonstrate the importance of goal achievement within a system of school effectiveness and improvement. The discussion is based of the data from the respondents and makes use of evidence from literature to support the arguments. The obvious advantage of this chapter is that the results are connected to the literature reviewed.

Chapter 7 concludes the study by discussing its main outcomes, which provide background for educational development policies and practices. The chapter discusses the relationship between theory and practice in the production of this treatise. It begins with a summary of the research investigation, major findings, and implication of findings, and conclusions. The chapter concludes with positive recommendations, scope and delimitation of this study and contribution and suggestions for further studies.

2 Conceptual Framework and Theoretical Discussion

2.1 Introduction

This chapter is devoted to the review of various theoretical literature relating to this study, which includes an examination of ideas and comments concerning school effectiveness and teacher's perception of academic and professional training and their connection to competency. The research's specific objectives provide the basis of the review. The review of literature in educational research is regarded as a preparatory stage to gathering data. It serves to acquaint researchers with previous research on the topic they are studying. It thus enables them to continue in a tradition, to place their work in context, and to learn from earlier endeavors (Cohen & Manion, 1994). As Nworgu (1991) explains:

The review of relevant literature is an exercise in which the researcher tries to identify, locate, read and evaluate previous studies, observation, opinions and comments related to his intended research. Such a review is aimed at providing the researcher with a good knowledge of the state of art in the area he is working. It affords him or her opportunity of knowing what areas have been covered, what remains to be covered, what techniques to employ in his investigation (p. 22).

While Pole and Lampard (2002, p. 14) conclude that literature review allows new research to be located substantively in relation to what has gone before, by identifying what is already known, it also provides insight into where the new research may contribute and continues the process of progressive focusing.

2.2 Theoretical Underpinning

2.2.1 Functionalism: Education for the Good of the Society

The conceptual framework of this study is grounded in the functionalist conception of education. Functionalism is the oldest, and still the most dominant, theoretical perspective in sociology and many other social sciences such as education. This perspective is built upon two emphases: application of the scientific method to the objective social world and use of an analogy between the individual 'organism' and 'society'. This study presumes a functionalist view of 'society' specific to the middle years of the twentieth century, a time characterized by a high degree of occupational specialization, shared norms and values, stability, and the tendency to maintain equilibrium in the presence of social

changes. According to Murphy (n.d), underlying functionalism is the fundamental metaphor of the living organism, its several parts and organs, grouped and organized into a system, the function of the various parts and organs being to sustain the organism, to keep its essential processes going and enable it to reproduce. Similarly, Jarvie (1973) opined that members of a society could be thought of as cells that institute organs whose function is to sustain the life of the entity, despite the frequent death of cells and the production of new ones. Functionalist analyses examine the social significance of phenomena, that is, the purpose they serve a particular society in maintaining the whole.

Whawo (1993), citing Hearn and von Bartalanffy, sees society as an open system that maintains equilibrium through a feedback process or that portion of a system's output that is feedback to the input and affects succeeding outputs and adjusts future conduct by reference to the past. Heylighen and Joslyn (1992) see functionalism as the 'Trans-disciplinary' study of the abstract organization of phenomena, independent of their substance, type, or spatial or temporal scale of existence. Functionalism investigates both the principles common to all complex entities, and the (usually mathematical) models, which can be used to describe them. Schools are component parts of a system in the society and tend to maintain themselves in a steady state. A steady state occurs when a constant ratio is maintained among the components of the system, given continuous input to the system. A burning candle is often used as an example of a steady state. Upon being lighted, the flame is small, but it rapidly grows to its normal size and maintains the size as long as its candle and its environment exist. It is also self-regulatory; using the above illustration, a sudden drift will cause the flame to flicker, but with the ceasing of the drift, the flame regains its normal characteristics (Whawo, 1993).

According to an Internet source⁴, structural functionalists view schooling as essential to society, in that it sorts and sifts above average students from average and below average students. It does this in order to ensure that the more talented students rise to the top of the socio-economic status system. Another major role of structural functionalism is that it teaches the skills and norms of society. Structural functionalists believe that in order for society to remain a viable system all components must function together and thus requires a system to instill similar beliefs and values to each member of that society.

Hurn (1995, pp. 45–48) asserts that according to functionalist theory those who excel in society are those who have worked the hardest for their position, a social phenomenon called meritocracy. According to Hurn "this is a society where ability and effort count for more than privilege and inherited status". Society needs the best and the brightest to function at the highest levels, and therefore it gives its highest rewards to this same group of people. Hurn also

⁴ <http://uwp.edu/~goldmip/education/funcism.pdf>

theorizes that society functions much better economically when there is more education for the individual or for society at large. An individual's acquisition of additional skills provides benefits to the society in which he lives. Hurn further stated that the more education there is the less likely there will be much inequality. Whereas, human capital theorists see education as an investment in which those who feel that the benefits of college outweigh the money are the ones that rise to the top of the socio-economic pyramid. Those who do not decide to further their education, then, are less deserving of the rewards that society has to offer. This is the basic fundamental way that functionalists see education.

Durkheim (1956, p. 71) feels that schools are there to teach morals to children. These morals are the ones that society has set up so that everyone is the same and need to be taught at school rather than in the home because there is too much bending of the rules at home whereas school is a colder environment. In teaching morals, the schools are also teaching children that they must become part of society and have ties to society or the child and society will break down. Durkheim concluded that these were the most important things that a school could give to its children, a sense of belonging to a larger society.

In Talcott Parson's opinion, a school's main function is to socialize children by using the idea of commitments. There are two types of commitments, commitment to the implementation of the broad values of society and commitment to the performance of a specific type of role within the social structure (Parsons, 1959). Presenting the functions of education from the sociological aspect, Carr and Kemmis (1986) drew attention to the fact that the principal functional requirements of education are first, to socialize the young into prevailing norms and attitudes so as to preserve social stability, and secondly, to stratify individuals in accordance with the complex network of roles that sustains the existing social order. The critical idea here is that school does not operate in isolation and its function in society is imperative to the development of the society. While D'Aeth (1975, p. 32) observed that the central objective of education was to raise the level of skills, especially technical and management skills, needed to support economic growth and to provide an adequate supply of the whole range of professional expertise needed to run a modern nation.

Basic to this perspective is the conviction that the regular patterns displayed in human action are caused by social laws operating to ensure the order and cohesion necessary for the preservation of society. Society is therefore regarded as an interdependent entity maintained through impersonal law-like processes that operate without the intervention of human purpose. Particular institutions, such as education, are presumed to be 'functional' in the sense that they exist in order to serve some of the functions that must be fulfilled for society to survive (Carr & Kemmis, 1986, pp. 58–59). Carr and Kemmis further argued that the functionalist sociology of education provides knowledge of how the social

mechanism already operating in educational institutions could be modified so that the equilibrium of society could be maintained.

The researcher takes as his point of departure the functionalist approach to education because it views the school as a unified purposeful organization or simply as a system that is made up of component parts. The entire staff in the school system are viewed as a whole and they are supposed to be experts in their field. Thus, a clear picture of this 'classic' view of 'professionalism' is the first step toward understanding the contemporary meaning of professionalism for today's education and practical issues. Therefore, I conclude that functionalism as a school of thought focuses on what makes society function determines its use and purpose. However, given that different situations may influence instructional processes of students and the society at large, Eraut (1994, p. 1) argued that most accounts of the ideology of professionalism follow the functionalist models developed by Goode (1969), Merton (1960) and Parsons (1968), which accord primacy of place to the professional knowledge base. The problem, to which the concept of a profession is said to provide an answer, is that of the social control of expertise. Experts are needed to provide services which the recipients are not adequately knowledgeable to evaluate. Hence the emphasis put by the professions on moral probity, service orientation and codes of conduct. Equally, Jarkko Leino systematically argued that professional qualifications should be designed to indicate that aspiring professionals have completed their pre-service education and training and continuously sustained their competence of qualification and competence in different ways during their practice years (Leino, 1996, p. 74). It was in this same perspective that he averred that the concept of qualifications and competences form a complementary pair describing both the knowledge of and ability to perform professional task.

On a final note, therefore, the application of the functionalist approach to this study was vital because it offered the opportunity to first, define problems in systematic/functional terms. Second, view problems as always interrelated thereby lending its application to other components in the society. And third, the interdependence of the other components of society was given consideration. Also, the purpose of this choice is not to test or refute functionalist theory, but to use it to select variables of interest and to organize my research. An examination of the concepts used in this work fits into this framework because a picture of the typical outlook of professionalism is the first step towards accepting the contemporary meaning of professionalism for today's teaching and practice issues. In essence, the goal was to test how academic and professional qualification of teachers can influence the degree to which teachers fulfilled their teaching job. The researcher's preference of the functionalist theory does not mean that functionalist theory is not without criticism from other schools of thought. The functionalists were criticized on their view of the causes of

educational failure which apportioned blame on the individuals not the society, the poor, or the rich. Functionalists were positive regarding the common social goals of education and failed to recognize that it was hard to achieve common social goals. They also criticized the functionalist's failure to see that social stability might be a result of a 'manipulated' and 'illusive' consensus. They failed to see education as necessary for motivating individuals for their own personal development rather than the sake of national economic need.

2.3 Teachers' Professional Competencies

It is well known that a teacher's way of thinking and beliefs guide his or her behavior and decisions inside and outside the classroom. The challenge set for the classroom teacher is high. Besides having to master their various subjects, they must have command over a wide repertoire of different teaching methods and strategies (pedagogy) and understanding of the learning processes of students (Ahtee & Salonen, 1995, p. 162).

Shulman's (1987) introduction of the term pedagogical content knowledge (pck) discusses the combination of content knowledge and pedagogic skills that are necessary for the organization of classroom situations and activities of learners. He defined pedagogical content knowledge as "the particular form of content knowledge that embodies the aspects of content most germane to its teachability." It means that both teacher expertise and teacher knowledge of subject matter differ from ordinary scholarly knowledge and pedagogy. In other words, teachers have to be able to fuse the subject matter knowledge and pedagogical knowledge into pedagogical content knowledge in their everyday actions in the classroom. Furthermore, in addition to knowledge of science pedagogy, content knowledge includes an understanding of what makes the learning of a specific concept difficult and what instructional strategies could help in presenting different aspects of the instruction processes. Pedagogical content knowledge also includes knowledge of what motivates students, students' attitudes toward different subjects, learning and school, the cognitive development and reasoning abilities of a wide range of students and so on.

For this reason, particular attention has been devoted to teacher education. Under headlines like *academization* and *professionalization*, reforms have been carried out at all levels of education. In addition to secondary-school teacher education, other forms of teacher education have been more or less tightly linked to universities especially in the west. The overall aim is to improve the quality and status of the profession of teachers. For example, throughout the history of teacher education in Finland, secondary-school teacher education has been university based. Subjects are studied in subject faculties while the pedagogical contents are studied at a department of teacher

education, which is normally located within a Faculty of Education of a University (Bergem *et al.*, 1997, pp. 433–458). The underlying principle is to continually increase the professional development and competencies of teachers (Day & Sachs, 2004).

The Finnish education system is well regarded as offering a consistently high level of curriculum and scholarship and it is said to be one of the best in Europe and in the world⁵ (OECD, 2005, <<http://www.oecd.org/edu/eag2005>>). The significant productivity of researchers, innovative instructional practices, successful placement of students into professional occupations, and carefully laid out national plans are among the noteworthy and unique features of the Finnish university system (Anyamele, 2004).

According to the publication of Ministry of Education of Finland⁶ (n.d), the principle underpinning teacher education and the basis of the teaching profession is that: The teacher's idea of man and conception of knowledge and learning are the foundations on which successful teaching is built. The teacher's idea of man creates the basis for understanding different kinds of learners. The teacher's conception of knowledge, in turn, underpins his or her conception of learning. It is on this foundation that teachers base all problem solving in the line of work. Consequently, these principles must be included in all initial and subsequent training given to teachers. This is because teachers who are aware of their work and its meaning are the foremost goal of teacher education in Finland. Being a teacher in Finland means encountering change, living with change and influencing change. Thus, changes in pupils, their living environment and society as a whole require sensitivity and willingness to anticipate future developments.

One important skill for the teacher is to analyse changes in the environment with other members of the work community, to see these changes in relation to the teacher's and the school's possibilities and to determine which changes and outcomes are of the greatest relevance to the development of teaching. Teachers' professional and academic competencies are seen in their ability to make use of the learning opportunities available in the environment. Their work is linked to society in many ways. In the future, being a teacher will mean willingness to take active part in influencing social development because the teacher influences the kind of values pupils adopt and how education for democracy is effected in the school. Both of these require a sound idea of education and the future the basis for which is built during teacher education. Teacher education needs close contact and diverse interaction with its environment in order to be able to anticipate and influence factors which will bear upon teaching in the future.

⁵ For more detailed reading, see Buchberger *et al.* 2000.

⁶ <<http://www.minedu.fi/julkaisut/OPEKO/opekoeng.pdf>>

From the above, teacher education in Finland seems to be based on a solid foundation which is worth emulating by developing countries not only in Africa, but around the world. It tells us about the where, what, who, and when, (4Ws) of how teacher education functions in order to achieve educational objectives.

Nevertheless, in describing the categories of teachers in Finland, the Teacher Student Union of Finland⁷ (n.d), explained that teacher training is arranged by universities and vocational institutes of higher education, for instance:

Pre-school teachers obtain a bachelor's degree in educational science, which extends to 120 credits. This degree qualifies an individual as a kindergarten teacher as well as a pre-school teacher.

Classroom teachers study a master's degree in educational science (160 credits). This degree qualifies students to serve as classroom and pre-school teachers. Compulsory education in Finland lasts nine years, from the age of 7 to the age of 16.

Subject teachers study for 160 credits for a Master's degree. There are two possibilities to get into subject teacher education. The more common way is to start studying the subject at the university first and then later add pedagogical studies. After these pedagogical studies one is qualified to teach the subject in question. The other way is to apply directly to the subject teacher education. This direct selection to teacher education is getting more common, but so far it is only possible in a few subjects.

Special-education teachers require 160 credits for a Master's degree in educational science. This degree qualifies them to serve as special-education teachers in elementary schools, junior high schools, and as classroom teachers.

Vocational school teachers as a rule get a degree at a university or a vocational institute of higher education. After receiving their degree they work for a few years and then begin pedagogical studies at a vocational institute of higher education to qualify as teachers and develop their professional competencies.

Competence in one's professional work role is important in the overall learning process. Ready (1967) described competence as a motivational factor that is responsible for individual achievement. Still, results of numerous studies reveal that teachers are experiencing difficulties in the performance of several professional activities. Rawls and Fatunsin (1985, pp. 59–62) reported that activities involving adult education, supervised occupational experience programs, classroom teaching, and program administration and policies were the main sources of problems for teachers. In addition, other studies identified additional problems associated with the performance of professional activities of both beginning and experienced high school teachers (Findlay, 1989, pp.

⁷ <<http://www.sool.fi/english.html>>.

47–53). Overall, teachers are expected to be well-grounded in their academic subject and prepared adequately to understand the child and help him to learn through a well-integrated general education, professional training and academic orientation (Ololube, 2005, pp. 17–37).

2.3.1 The Concept of Professional Competencies

What is professional or job competence? What are the main domains and structure of professional competence? What part of competence can be upgraded by education? The answers to these questions are necessary for trying to find the most successful ways in maintaining and developing professional competence (Kautto-Koivula 1996, p. 152; Kautto-Koivula 1993, pp. 14–16). There are considerable diversities in the terminology used in the study of professional competence. The main reason for this is the early developmental status of the field and the multifaceted nature of the phenomenon being studied. Most of the research work to date has been discipline specific, so the concepts and terminology much reflect the perspective of a given discipline.

Moreover, since there are enormous diversities in the definition of the concept of professional competencies, and in as much as the competency concept is young and in development, the multiplicity of definitions does not mean that various scientific and professional publications do not agree on a single aspect of the competency concept. For example Kirschner and Thijssen (2005, pp. 70–75) described the competency concept as a cluster of person-related qualities suitable to deal in a fitting manner with a clearly defined problem situation. Their definition includes three competency characteristics where a reasonable level of agreement exists:

- Competency is person-related. People possess different competencies in varying degrees.
- Competency is criteria-related. Different criteria must be defined and used to assess the acquisition of a competency.
- Competency is context-related. A competency can manifest itself in different ways in different contexts as opposed to knowledge, which is context independent.

There has also been an increased argument about whether professional competence is best defined and measured as a one-dimensional concept or a multidimensional concept involving many distinct components. Meanwhile, empirical studies have suggested both models of competence; however, multidimensional models are particularly useful for at least the following reasons:

- As individuals continue in their professions across their work life, their knowledge, skills and abilities become increasingly differentiated and

specialized. The wide variety of experiences accrued by mid-career results in the development of competence in various domains.

- A multidimensional approach is useful for identifying those components most in need of updating. It is likely that a mid-career professional's level of competence varies across different skill domains. So because of a supportive work environment or updating activities, a mid-career professional may remain competent in some dimensions but less competent in others.
- A multidimensional approach is useful in examining how specific factors in the work environment support or limit performance in particular competence domains (Kautto-Koivula, 1993).

Though Eraut (1994, p. 164) trying to distinguish between professional competence claims noted that sometimes this is very general and means little more than being properly qualified, especially in professions where the unqualified are not permitted to practice. For instance, when clients or service users describe a professional as competent they usually mean that they have had nothing detrimental on the grapevine. That means the everyday use of the term professional competence carries some performance referencing, although it may be neither extensive nor specific.

According to Willis and Dubin (1990, p. 3) professional competence involves the ability to function effectively in the tasks considered essential within a given profession—in comparison to job competence that is more concentrated to a specific organization and job. Professional competence is reflected in the performance of the professional, and observing the professional's performance accesses the level of competence. An important outcome of the maintenance of competence is professional vitality which involves the ability to meet successfully the forth-coming challenges (ibid).

To Kautto-Koivula (1996, p. 154) professional competence is often considered to involve at least two main domains: (1) proficiencies specific to the profession, discipline or organization. These include the discipline-specific knowledge-base, technical skills considered essential in the profession, and the ability to solve the type of problems encountered within the profession, and (2) general characteristics of the individual that facilitate the individual's development and maintenance of professional competence; these are intellectual ability, personality traits, motivation, attitudes and values. She further distinguished three cognitive domains of competence: (1) skills (either manual or intellectual); (2) knowledge which is simply information committed to memory, and (3) the deeper learning variously described as understanding, conceptual learning or meaningful learning.

Turning to Eraut (1994, p. 165), in professions (or specialism within a profession) where work is relatively homogeneous, there will be little confusion between statements of general and specific competence because one can be reliably inferred from the other. However, in professions or specialities where the work is relatively heterogeneous and one profession may handle a completely different set of situations than another, general statements become rather dangerous. Willis and Dubin (1990) made it clear that it is important to differentiate between level of competence and level of productivity, and it is equally presumed that there is a correlation between competence level and production level. However competence cannot be evaluated completely in terms of productivity. Although they argue that competence is necessary for high-level productivity, by itself it is not sufficient. An individual may be highly competent but because of personal or environmental factors, not productive.

Nevertheless researchers like Willis and Dubin (1990); Eraut (1994); Kautto-Koivula (1993, 1996); Leino (1996) and Kirschner and Thijssen (2005) recognized that a network of colleagues or experts (professional associations) is an important tool in broadening the competence of individual professionals. It is clear therefore that this factor is very relevant to professional competence. Likewise it is important to note that individual professional experience and personal characteristics as parts of high professional competence should not be undermined. The relationships and importance of different competence factors are very much dependent on the job and further profession requirements. By whatever means, there is a strong case for professional development according to OECD (1998). They concluded that for professional competence to flourish, there must be greater collaboration between individuals, schools, universities, and society at large.

2.3.1.1 Teachers and the Teaching Profession

It is an open question as to which occupations should be regarded as professions. Today there are a great number of occupational groups, most having university ties and licensing restrictions, which claim professional status (Leino, 1996, p. 71). However, professions are a group of occupations, the boundary of which is ill defined. While the most powerful professions of law and medicine are commonly perceived as the 'ideal type', few others even approach their degree of influence. For instance, public-sector professions with significantly less power such as teaching and nursing, were described by Etzioni (1969) as 'semi-professions'; but this simply added one further ill-defined category. Several scholars have approached the problem of definition by compiling lists of professional 'traits'. Though not without interest, such lists have not solved the problem of definition for three main reasons:

- Without any clearly argued justification, each list appears to be based on its author's view of the most salient characteristics of high-status professions.
- When Hickson and Thomas (1969) applied a list of thirteen commonly agreed upon traits to forty-three qualifying associations, they found a continuum of scores from 0 to 13 without any clear cut-off points and little evidence of some traits taking precedence over others.
- Several traits are culturally specific, with greater significance in some countries than others.

Nevertheless, discussion of such traits has drawn attention to those characteristics of the most powerful professions which others seek to emulate and fuelled the debate between advocates and critics of professional power this debate is most clearly focused around the concept of an 'ideal type' profession (Eraut, 1994, p.1). Eraut further argued that most accounts of the ideology of professionalism follow the functionalist models which accord primacy of place to the professional knowledge base. The problem to which the concept of a profession is said to provide an answer is that of the social control of expertise. Experts are needed to provide services that the recipients are not adequately knowledgeable to evaluate. So how can clients be protected against incompetence, carelessness and exploitation? If state control is unacceptable, as it was when the ideology of professionalism first developed in nineteenth-century Britain and America, then control has to be vested in the experts themselves. Hence the emphasis put by the professions on moral probity, service orientation and codes of conduct (Ibid).

In addition, Eraut stressed the importance of professional preparation and higher education, stating that the occupations now claiming to be professions have employed several modes of training and preparation, often in combination. These include:

- A period of pupilage or internship, during which students spend a significant amount of time (up to five years) learning their 'craft' from an expert;
- Enrolment in a 'professional college' outside the higher-education system;
- A qualifying examination, normally set by a qualifying association for the occupation;
- A period of relevant study at a college, polytechnic or university leading to recognized academic qualification; and
- The collection of evidence of practical competence in the form of a logbook or portfolio (Eraut, 1994, p. 6).

Each of these modes makes a distinctive contribution to the student's knowledge base and to his or her socialization into the occupation. However, some scholars have also argued that an understanding of the role which professionalism plays in the work of teaching cannot be found in borrowed typologies from outside the occupational domain and its real-life expressions of the experience of teachers' work. This argument rebuts the usual arguments about teacher professionalism based upon similitude, certification, and opposition because they do not touch the heart of teaching as human experience (Shacklock, 1998, pp. 177–189).

Soder (1991, p. 298) equally argued that attempts to articulate professionalism in teaching reliant upon such comparative measures are empty because of an implicit silence about what it is to be a teacher. Although most conventional analyses are dependent upon criteria grounded in sociological traits argue a case for professionalism, they are quiet on the real-life experiences of teaching because they consist of commentaries about the work of teaching without any registration of teacher's voices (Shacklock, 1998). Furthermore, Shacklock found that teachers' working days are highly structured and their work practices are highly organized. The importance of thinking about teaching in this way is that it allows teachers' occupational lives to be located within a labor process of teaching. That has analytic power for understanding the complex of historical and sociological influences that affect the macro and micro aspects of teachers' work. Among the strongest influences that impact teachers' conceptions of their work and their identities as workers are ideologies of professionalism. Ideologies of professionalism are important in teaching because they legitimate work practices and strategies for control in teachers' work, delimit possibilities in the workplace and set boundaries for the disclosure of knowledge about the work of teaching in schools and beyond.

However, Lawn and Ozga's (1988, p.81) assessment of teachers as educational workers concluded that there is an overwhelming "common-sense" view that professionalism and teaching are not synonymous, though they discovered the inherent complexity of professionalism as a sociological construct in describing teachers' work due to the variability of people, contexts and purposes to which the concept can be applied. This observation is important because it signals to researchers and policy makers that there are dangers in undifferentiated theorizing about teachers' work. Specifically, such insights warn against the aspiration for decontextualized generalized statements about teachers and professionalism (Shacklock 1998, pp. 177–189).

Ismat (1992), citing Pratte and Rury, Burbules and Densmore, and Sockett succinctly listed four criteria that shape the traditional view of a profession: remuneration, social status, autonomous or authoritative power, and service. These characteristics include professional autonomy; a clearly defined, highly developed, specialized, and theoretical knowledge base; control of training,

certification, and licensing of new entrants; self-governing and self-policing authority, especially with regard to professional ethics; and a commitment to public service. Ismat argued that teaching is not strictly a technical/rational, skill-driven task. The context of teaching is closer in texture to parenting than to debating in a courtroom or overseeing surgery in an operating room. The nature of teaching, the context in which it is performed, and the process by which occupations traditionally have become professions make it impractical and undesirable to use traditional models of professionalization for teaching. In summary, regardless of whether one agrees that professionalization is the best path to take to improve the condition of teachers and teaching, it is evident that several of the key features associated with professions are missing from teaching.

However, Shacklock (1998) noted that it requires an up-close view of the significance attached to professionalism by teachers to locate the meaning of professionalism in the day-to-day complexities of teaching as dealt with by teachers in accommodating the political, organizational and relational aspects of their work. When teachers go about their routine work with pupils and colleagues, they hold implicit practitioner views and assumptions about the role of professionalism in their work, whilst at the same time being aware of, and influenced by, the explicit views held by those outside the world of classrooms and staff rooms. To tap into how professionalism is used in this grounded practitioner sense requires that teachers' voices concerning professionalism in teaching be heard. It requires an articulation of instances of professionalism as control and resistance in narrative accounts constructed from particular details of classrooms and relationships in teaching workplaces.

The evidence from the above discussions seems to indicate that a profession is an occupation requiring special training. In addition, a professional is one "who is suitable and extremely competent in a job". Leino says that a profession is a guild of practitioners who are expected to be masters of a knowledge base and skill area. A profession is expected to set and maintain standards for its members (Leino, 1996, p. 86). (See Ezewu, 1983, p.126; Odor, 1995, p.213).

2.3.1.2 Teachers Academic and Professional Qualification and their Job Effectiveness

During instructional periods, students are expected to acquire knowledge and certain cognitive and behavioral skills. To do this, they work on content that is presented in various ways with the help of various media, ranging from very concrete to symbolic and highly abstract forms. They are also required to carry out activities, which can be purely physical and behavioral, affective, or cognitive in nature (Marjoribanks, 1991, p. 50). The information that students

learn in the school is described in the curriculum. All the codes and forms of information that exist in permanent memory are used to represent curricula. These include auditory schema (a fugue), visual propositions (a tangent to a curve), plans (finding items in a library), verbal concepts (metaphor) and more. In addition, it should not be overlooked that an important part of the total curriculum is learning how to learn from teaching. Since students' understanding of instructional cues mediates learning from teaching, teachers should instruct students about how to use instructional cues to learn from teaching or enabling curriculum as well as teaching the subjects (Ibid, p. 214).

A curriculum could be defined as the totality of experiences which the school offers to the students. These experiences should be systematically planned to produce positive behavior changes in students to make them fit into society. The curriculum is always a reflection of what the people think, feel, believe and do in a given society (Gbamanja, 1989, p. 3). Furthermore, he asserts that curriculum is a broad term meant to include all the experiences of the learner while under the guidance of the school. These include academic and non-academic, vocational, emotional and recreational activities from which the learner will receive his experiences. It is a larger umbrella embracing the syllabus, scheme of work and lesson notes. On the other hand, according to the constructivist view, the curriculum should be seen as a series of learning tasks and methods or strategies which will help the pupils to construct their own knowledge towards a better scientific understanding (Ahtee & Salonen, 1995, p. 161).

The teacher chooses the knowledge and the required skills to transmit or impart to the learner. He also decides on the appropriate methodological approaches to facilitate meaningful learning and develops extra-curricula activities that enrich learning. Such activities include field trips, various school societies, school plays, and games. This also evaluates the teaching and learning outcome of the students. The teacher is a facilitator of learning and therefore must be resourceful and improvisational. This is very important particularly for classrooms in Africa where learning facilities are in many cases inadequate. The status of the teaching profession in Nigeria, and in fact Africa, is low; recruitment has been carried out haphazardly while training has been inadequate. In analyzing the teachers' position, the competent teacher is a good citizen, a good community leader, innovator and an enlightened parent. His influence extends beyond the confines of the classroom; if he is a university graduate, he has a great influence because everybody expects him to be a reservoir of knowledge and skills (Fafunwa, 1985).

Banjo (1960) reveals that teachers as much as possible should be qualified, suitable and interested in the teaching profession. They should cultivate the right attitude, be dedicated to duty, and professionally qualified. This will help them successfully teach the children of today who will become leaders of

tomorrow. In a similar study concerning high quality education and training, Buchberger *et al.* (2000) found that:

“Over the past few decades European societies have been confronted with substantial social, cultural, economic and technological changes and challenges. There seems to be widespread agreement that education and training will have to play a key role in order to meet these changes adequately and the challenges pro-actively” (pp. 2–5).

For example, Buchberger *et al.* (2000) regard the establishment of a “Europe of Knowledge” as indispensable with emphasis on the “professionalization” of teaching and teacher education. The measures taken to improve teacher development in a number of member states of the European Union seem primarily to have been guided by modification strategies influenced by changing perceptions on the role of the state within the education sector. The process of continuous professional development (CPD) otherwise called staff development or teacher development starts with the recruitment process of the initial students of teacher education, and consists of the following closely related components: initial teacher education, induction, in-service teacher education, and further education (see Day & Sachs, 2004). Day (1999) defines it as consisting of all natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school and which contribute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitments as agents of change and by which they acquire and develop the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues (Day, 1999, p. 4).

Mediocrity is unacceptable or it is not in the best interest of both students and the larger world. Teachers have to be academically qualified as well as professionally competent to be able to perform in their post. In fact, both academic and professional developments work hand in hand the world over. For example, the Finnish Council of State through the Ministry of Education set up a committee of experts to work out lasting reform in the education system and the need to develop teacher education. However, standardized teacher education and raising the level of that education was started in the late 1960s. The reform of the teacher education system was inaugurated by the teacher education commission, whose report aimed at coordinating the education of classroom teachers and subject teachers; it proposed that the education of both groups should be academic and provided in the same institution. The teacher education commission further recommended that subject and pedagogical studies should be brought closer together in the education of subject teachers. Thus, the Curriculum Commission for Teacher Education constructed a three-year

classroom teacher curriculum based on the matriculation examination, which extended and advanced both pedagogical and subject studies that will lead to the awarding of a bachelors degree in the universities (Hytönen, 1996).

As Hytönen (1996, pp. 2–3) wrote, according to the commission, it is important that the education of both primary and secondary school teachers be centralized in the universities as this would increase the academic level of teacher education, subject command, and interaction between teaching and research. According to the commission, the reform should aim at an education system in which basic education meets formal qualifications that are relatively comprehensive and can be easily complemented by further studies. The long-term aim is the coordination of all teacher education programs. At the same time, teacher education is to be brought closer to other academic fields. In the area of the reevaluation of the position of pedagogical studies, three central goals were found in the assessment: (1) Teachers' expertise in pedagogy was to be improved. Teachers should be qualified to guide pupils' social-emotional and psychometric development in addition to theoretical instruction, i.e. they should be educators in the broad sense of the term. Didactics should be an essential element in the pedagogical qualification of teachers, but educational sociology and psychology of learning are even more vital. (2) Theoretical and practical studies were to be integrated by bringing teaching practice and pedagogical theorization closer to each other. The aim was to help future teachers to independently discern the problems in their work and solve those using theoretical methods. According to the commission, teachers should approach their work as researchers. And (3), pedagogical studies and subject studies should be better integrated. In addition to pedagogical studies, extensive studies in the chosen teaching subject are essential. Tackling learning problems in the schools requires teachers to have both a pedagogical education and command of the discipline on which the subject was based.

According to the commission, teachers should adapt a holistic view of their influential position and duties in society. Educational problems in society should be the background for the inclusion of social science issues. This calls for an interdisciplinary approach, as problem-solving often requires broad analysis combining many fields of study. Moreover, the commission considers it important that the work of teachers advance the operation and development of the school system in accordance with democratic principles. Lastly, education should be continual: the commission predicted that the quality and quantity of further education of teachers would increase in the future. It formulated a long-term aim of giving all teachers a sabbatical term for further education every five to seven years. The central aim of the suggestions made by the commission has been achieved. However, the standardization of teacher education and a sabbatical term for all teachers have not been accomplished (ibid, p. 4).

The above discussion is in line with Arene's (1990) view. According to her, education helps a person to become somebody in the society and an instrument for self-actualization. She further pointed out that academic training helps the teacher to adapt to the teaching field. She continued by arguing that education should be geared towards producing teachers who can function well in the educational system. There are new techniques as well as methodologies in the teaching field and teachers should be well informed in these areas. Similarly, Arene expressed the view that for a person to carry out this duty in the most appropriate manner in line with the curriculum, he or she should be well educated in his or her area of endeavor. Good education promotes all-round development of an individual. Poorly trained doctors, lawyers, engineers, architects and so on, do not effectively perform their duties. The same is true for educators; thus teachers should be well educated in the first place so that they are in the best position to train others.

Several persons have researched how academic qualifications and professional training have influenced job effectiveness. One such study was carried out by Bosmart (1991) who evaluated the job effectiveness of graduates from Auchu Polytechnic from 1985 to 1989. The following are some of his findings:

1. The majority of employers were satisfied with the effectiveness of the job performed by electrical/electronic engineering graduates.
2. They were also satisfied with the effectiveness exhibited by civil engineering graduates.
3. The majority of employers were satisfied with the job effectiveness of mechanical and production engineering graduates.

A principal factor is found in this finding: the idea that effectiveness is primarily the fact that the graduates have undergone some form of educational training, which makes them qualified to carry out their duties in the most appropriate manner. A similar study conducted by Aghenta (1979) revealed the importance of vocational education training in the production of goods and services while analyzing and evaluating training, employment, and job effectiveness of vocational school graduates in the former Bendel state of Nigeria.

Aderounmu and Ehiamentalor (1985) also believe that the potential and quality of manpower depends on the quality of teachers⁸. According to Pillai (2001, p. 1) teachers constitute a central part of any education system. They are portrayed as largely responsible for the translation and implementation of educational policies, active participants in curriculum development, and producers

⁸ The quality of teachers depends on their pedagogical competencies and their willingness and ability to affect changes that occur in the instructional process.

of instructional materials and assessors of learning outcomes. Teachers are also described as exerting a great deal of influence on the character formation and the process of socialisation of the children placed under their physical, social, mental and emotional care.

In a similar development, Fafunwa (1991) stated that for a country to develop educationally there must be emphasis on teacher education because with a well-trained teaching cadre, a country can have a place educationally in the committee of nations. "Since education is the door to socio-cultural development, teachers hold the key to the door; teachers are therefore great builders of national development". It is clear from this statement that professional teachers are the hubs of our educational system around which the quality of the teaching and learning experience revolve. A school cannot be better than its teachers because they determine the quality of education. Therefore, the nation's educational system at all levels must to a great extent be improved upon or marred by the quality of its professional teachers.

Odor (1995) hinted that nine months training in education is not enough to be called a professional teacher. Fafunwa, (1991) was of the same view when he noted, "persons were trained to acquire a certificate in B.A/B.Sc. education. But now there is emphasis on B.Ed or PGDE". Although he further argued that it was agreed that a degree with a nine-months diploma was not a satisfactory method and lacked professional aptitude, many are interested in teaching as a stepping stone to other fields of endeavor. There is great need for a sound professional background; an unqualified teacher is an enemy to the students' progress and a danger to the child's up bringing. For a non-professional teacher to handle any subject in school is a very serious problem because it concerns the intellectual, moral and emotional phases of the child's life (Fafunwa, 1985). Ikuembe (1980) indicated the need for teachers to be professionals since their professional qualities will make them do the following:

- Display the refinement character of objectivity expected of a professional.
- Be proud of his profession and attempt to promote respect for it.
- Accept personal responsibility for compliance with rules and for attention to administrative requests.
- Not abuse privileges.
- Critical of and constantly trying to improve his personal work.
- Initiate or participate fully in activities designed to meet the needs of his school.
- Possess adequate subject matter background.

Conceptual learning is essential but becomes useless if it does not refer back to the real world. As such, trained teachers make sure that children apply their

learning to the solution of real life problems. From this perception, it is glaring that students' knowledge, effectiveness and general well being depend on the type of teachers. It therefore follows that a qualified teacher has the methodological competence to enable students to develop skills for creativity and understanding. For example, a study by Adigwe (1992) shows that a chemistry teacher in a secondary school must be proficient in the intellectual demands of chemistry at that level, the first step in the academic preparation of chemistry teachers is, therefore, to ensure that they acquire a thorough knowledge of the fundamentals of the subject and its process skills. Similarly, Adigwe citing Bajah insisted that the mastery of chemical concepts, principles and processes must be regarded as the first step in the education of secondary level chemistry teachers, who must be confident and resourceful.

The issue of the academic competence of chemistry teachers is very crucial. How much knowledge of chemistry do they possess; how much of this knowledge is functional in the sense that they can apply it directly and correctly in solving chemical problems; and how effectively can they communicate the knowledge they possess to their students? Problem solving is regarded as very difficult for secondary school students because it is a complex intellectual task and one of the principal causes of scholastic failure in school science and mathematics. It will be highly embarrassing if teachers who are supposed to inculcate the skills and processes of problem solving in students lack skills that are basic for developing understanding of the processes as well as the content (Adigwe, 1992, pp. 93–104). For that reason, education should be rooted to every phase of national development. For in whatever phase one finds himself, be it social, economic, religious, cultural or political, one is faced with the ever-recurring need for a trained work force. Adequate training cannot take place without competent teachers to handle instructional programs because no educational system can rise above the quality of its teachers. From the time an intended teacher enters college, the student has made at least some commitment to the teaching profession and is being socialized into an occupational role. Odor (1995) avers that the availability of educational infrastructures in the school system mean nothing if there are no trained, competent teachers to handle them. Therefore, it could be suggested that there is big world of difference between academically qualified teachers and professionally qualified teachers.

2.3.2 Methodological Competencies and the Act of Teaching

Methodology refers to the process of teaching and learning which brings the learner into relationship with the skills and knowledge that are specified and contained within the curriculum. According to Gutek (1988, p. 7), methods are

the means or procedures that a teacher uses to aid students in having an experience, mastering a skill or process, or acquiring knowledge. If efficient and effective, methods of instruction will achieve the desired end because teaching implies the use of a technique or method of instruction to secure a desired objective. 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 in techniques and methods of teaching (e.g., mastering learning method, lecture method, demonstration method, dramatizing and discussion method, questioning method etc.) because through these methods teachers can acquire the competencies needed to carry out instructional processes effectively.

Similarly, Colman (1967) defined method as an ordered system by which a teacher puts educative agents to work to produce certain changes or results. As a result, Colman 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 the learner has achieved the particular aim.

(Colman, 1967, pp. 5–7)

In addition, Collins Concise Dictionary defines methodology as a way of proceeding or doing something, especially a systematic or regular one. The same source defines competence as the condition of being capable—having sufficient skill and knowledge—therefore, methodological competencies could be defined as the procedure of having enough skill and knowledge to carry out an action. In addition, methodological competencies could further be defined 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 one's procedures (Oolube, 2005, pp.17–37).

Stimulating students to be thrilled with learning and gain a zest for education that will continue for life is an elaborate task. 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 human potential. In addition, in order to carry out the teaching task effectively and efficiently, teachers are guided by certain principles of teaching and principles of learning which have great implications for teaching (Gbamanja, 1989, p. 81). These

principles are learned from professional educational institutions established to train intended teachers through teacher education programs. However, Gbamanja further identified some principles of teaching which he claims will reinforce teaching:

- Planned teaching results in more learning.
- Students tend to achieve in ways they are tested: thus 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, teachers 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 an objective.
- Students learn from one another: working in groups while solving problems can enhance learning.

(Gbamanja, 1989, p. 82).

One of the most important methods of teaching is mastery learning because it accommodates the *natural* diversity of ability within any group of student. As a result, Beare, Caldwell and Millikan (1989, pp. 51–52) observed that with careful preparation and greater flexibility in instructional methods, all students can be appropriately accommodated according to their respective levels of understanding and can progress at their own pace. That is, the role of teacher changes from that of purveyor of all wisdom to 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, Caldwell and Millikan (1989) say, should be directed to individual student or to small groups of students dealing with essentially the same problem or learning mode rather than to the entire class of students. In such a situation, the teacher monitors more closely the progress of each student and ensures that concepts and processes are understood before the student progresses to the next component. Scholars have argued that the advantages of this method of instruction are that it can be used to provide remedial materials for individual students, encourage individual study and thus frees the teacher from routine teaching, and the participation in the learning task is almost hundred percent (Gbamanja, 1989, p. 108).

Thus courses that can expose teachers to these methodological skills are courses in education that enhance teachers' capacity to handle instruction processes in the classroom that are embedded in the training process of various faculties of education or similar institutions charged with the responsibility of training teachers (Reid, Hopkins & Holly 1987). This is evidence that psy-

chology of education, sociology of education, teaching method courses and curriculum development and evaluation all play an essential role in teacher education programs. Accordingly, Owens (2004, p. 19) noted that 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 tests, measurements, and statistics which loom large in the undergraduate and graduate studies of teachers. However, Highet (1963) and Stones (1966) stated that teachers' own perceptions, beliefs, and values guide their interaction with students, and the selection of curriculum materials and organization within the classroom improves their performance.

2.3.2.1 Modes of Teaching and Teachers' Job Effectiveness

Effective teaching connotes the ability on the part of the teacher 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 teacher is therefore a person who can communicate with genuine enthusiasm (Amahala, 1979, pp. 230).

Gbamanja (1989, pp. 82–83) has identified the following four teaching modes and their implication for various patterns of curriculum organization and instruction:

- ***Didactic Mode:*** This is the telling mode of teaching. It is a way of dispensing facts to the learner. A teacher who uses the didactic mode of teaching is good at narrating or reporting facts. Activities in this mode include lectures, assignments, recitations and examinations. The content of the mode is traditional subject matter. It is the teaching mode that conveys information which is aimed at imparting knowledge and building skills for the students to remember. According to the Eastwood Paideia School (2004), the didactic mode of teaching allows students to learn concepts, skills, and formulas through texts, lectures, and study guides in classes that require active student involvement. Students practice and master skills introduced in their classes (<http://eastwood.cps-k12.org/home.html>).
- ***Heuristic Mode:*** This mode of teaching involves inquiry and discovery methods. The teacher here is an arranger organizing inquiry/discovery activities to facilitate meaningful learning. The teacher is a resource

person. Activities in this mode include organizing learners, giving criteria, holding conferences, and checking progress of students. The content of this mode is traditional subject matter discovered through discovery or inquiry techniques. It involves dynamic methods and processes of learning. It is the teaching mode that serves to guide, discover, reveal and to solve problems. The aim is for students to know how to learn. According to Glossary of Teaching Terms (n.d), heuristic teaching, also called the discovery method of teaching and learning is a process in which conditions are established which allow students to encounter information and derive their own conclusion.

- ***Philetic Mode:*** This is the effective mode of teaching where students' feelings or opinions are aroused. A philetic teacher is a friend, a counselor and a 'parent'. The teacher who operates in this mode holds conferences with students. He or she is a social arranger, creates the mode, and is a performer of things for the enjoyment of students. Every one of the teachers' activities is focused on the ego of the learner and is aimed at winning the confidence of the learner. It is a teaching mode that is concerned with students' development, both intellectually and as people. It is aimed at students knowing themselves. According to the Eastwood Paideia School (2004), conferences with students are the peak of this mode of teaching because each student must think critically to understand ideas, solve problems, make decisions, resolve conflicts, and apply knowledge and skills to new situations. Speaking and listening are improved because of this mode of teaching.
- ***Guristic Mode:*** The Guristic mode is an approach of instruction where the teacher tries to explain his or her experience or feelings. There is no motive to teach per se or the desire to impart any of the above three modes. Nevertheless, from his or her given information about his or her own views of life, students pick out what their lines of interest are. A guristic teacher is a good interpreter of the future. He or she sees the future and imagines for the learner. Their activities involve reflective thinking. They are at the center stage, the focus of attention, which is aimed at expounding on knowledge.

The above modes should help teachers know more about themselves—how they operate now and how they plan to operate in the future—and which mode they deem suitable for what they desire to teach. It is very important that teachers know their strengths and weaknesses. Several factors influence the way a teacher teaches. One's professional training as a teacher may influence one's teaching techniques or methods. Scholars also are of the opinion that personal characteristics, mode of life in general, socio-economic environment

or perhaps general attitudes determine one's teaching performance (Gbamanja, 1989). That is why great teachers say that there is no one method of teaching that is appropriate for all learning situations (Amalaha, 1979, pp. 229–253).

2.3.2.2 *Methods of Teaching*

There are several methods of teaching to inculcate and give students insight during instructional processes. Insight, defined in Webster's dictionary is "The act of grasping the inward or hidden nature of things." Collins Concise dictionary sees it as ability to perceive clearly or deeply. According to an online teacher web page *The New Curriculum* (2003), if insightfulness equals intelligence then we have to better look at how we teach and ask if that is where 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 springs? Let us take a look at some common methods of teaching and see what they tell us.

Lecture method

The lecture method, also referred to as the 'talk and chalk', is the traditional method of teaching which many modern educators consider out-dated. Nonetheless, it is still prevalent in the educational system in many parts of Africa and is probably the most commonly used teaching method in American college classrooms as well (McKeachie, 1999). This method is widely used particularly at the upper secondary school level in Nigeria. In many parts of West Africa, for instance, the educational system puts a premium on paper qualifications, which are earned through public examinations. The lecture method is seen as a method that fosters easy coverage of the school syllabus (Amalaha, 1979; Akusoba, 1979 Gbamanja, 1989). The advantages of this method are that large amounts of material can be covered with a large class size in a single period. The lecture method can communicate the intrinsic interest of the subject matter. The teacher can convey personal enthusiasm in a way that no book or other media can. This enthusiasm stimulates interest and interested people tend to learn more. Thus this method could be used effectively if the teacher is introducing a new topic. Nevertheless, this method has several instructional disadvantages. Gbamanja (1989) has identified some of these disadvantages as:

- Learning through active involvement is omitted because the learner is only put in the position of a listener.
- The learner is a passive learner and thus does not develop an inquiring and creative mind.
- As the method is didactic, the learner is easily bored, frustrated and thus is prone to restlessness and subsequent disruption.

- The method is textbook oriented learning. This also encourages rote memorization and regulation of information without necessarily aiding understanding (Gbamanja, 1989, p. 85).

Demonstration method

The demonstration method of teaching means teaching by displaying an instruction situation with an audio-visual explanation of an idea, process or product. It involves showing and telling the students the point of emphasis. It is mostly used as a technique within a method of teaching, but is sometimes used as a method itself. In his methods of teaching, Gbamanja (1989, p. 90) described the demonstration method of teaching as a technique within a method used in order to assist students discover the concept of metal; that is, the teacher needs to demonstrate the physical and chemical properties of several different metals. In addition, in the laboratory for example, the teacher needs to demonstrate the use of a microscope to the class before letting the students use it to discover things themselves. When a science teacher shows the action of carbon dioxide on a piece of moist blue litmus paper, he or she is presenting a demonstration. Likewise a teacher may demonstrate the dissection of a toad or of a rabbit to the students in the laboratory or classroom before students do it themselves (Amalaha, 1979).

Laboratory work is an essential ingredient of science courses, and some component of this is generally preserved even though the amount may fall. In addition to the experience of laboratory work, students have a lot of their contact with teachers in the laboratory setting, and compensation for this may be needed if laboratory time is significantly reduced (Forster, Hounsell & Thompson, 1995).

However, some people confuse the use of the words demonstration and experiment. The two concepts are different but are closely related as a means of problem-solving learning experience in the classroom (Brown, Lewis & Harclerod, 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 the correct use of some equipment (Abdullahi, 1982; Gbamanja, 1989). In any case, it is argued that a well-trained teacher tends to use this method effectively in order to aid students' understanding because the competence in teaching stems from the capacity to reach out to different categories of students by creating a rich and multi-dimensional environment (Reid, Hopkins & Holly, 1987, p 156). In addition, the demonstrator (teacher or student) combines the showing 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, according to Brown,

Lewis & Harclerod (1959, p. 284) students are brought into close personal contact with the materials or equipment demonstrated.

Dramatizing and Discussion Method

Dramatizing and discussing are two related types of active learning experiences with wide applicability in modern day schooling. Many of the varied forms of both general types have similar basic purposes and values in instructional situations. Indeed there are occasions when either dramatizing or discussing may be chosen as the creative vehicle for achieving specific classroom goals (Brown, Lewis & Harclerod, 1959, p. 295). Discussion on the other hand, is a situation where two or more people interact verbally with each other. It can be adopted deliberately in a learning situation. However, it sometimes occurs spontaneously as a teacher uses another method of teaching. It can also be considered as a technique of teaching within a method and sometimes occurs for brief intervals during an informal lecture. It is considered student-centered teaching. Brown, Lewis & Harclerod (1959, p. 295) see the discussion method as naturally inspired or flowing from dramatization. Often, both categories of activities are employed in association. The rewards of these methods of instruction are:

- They assist students in developing a sense of confidence through participation and exchange of ideas.
- They encourage participation and involvement in what is going on in the learning environment. In this way, students acquire knowledge.
- They develop 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.
- They develop critical and evaluative thinking and listening.
- They give students the opportunity to develop oral communication skills.

(Gbamanja, 1989, p. 89; Brown, Lewis & Harclerod, 1959, pp. 295–315)

Questioning Method

Questioning is actually more of a technique than a method of teaching. It can be used within various methods of teaching. Education goals and methodologies are changing today from the mere acquisition of facts and information to the development of reflective thinking and the intelligent manipulation of materials. According to Reid, Hopkins and Holly (1987, p 124) and Gbamanja (1989, p. 109), questioning is a technique used to sensitize an inquisitive mind and to ascertain if learning objectives can be attained. By so doing teachers

can develop more ownership of the class. Sensitizing somebody else's mind requires listening and insightful questioning; in other words it requires the art of being a good conversationalist. A good inquiry-oriented teacher is an excellent conversationalist. He or she listens well and asks appropriate questions assisting students in organizing their thoughts and gaining insight into what is being taught. An inquiry-oriented teacher seldom tells but often questions. When questioning is handled well, it leads to student centered teaching, which is a fundamental requirement in modern instruction.

Additionally, Gbamanja (1989) argued that questioning is not merely finding out whether students prepared for the lesson, it is used for teaching, drilling or practicing, guidance or leading the minds of learners, stimulating or motivating students to learn, and evaluating their understanding of the lesson. It takes the competence of good questioning to achieve these objectives. Good questioning according to (Reid, Hopkins & Holly, 1987; Amalaha, 1979) should be clear, concise, brief and direct to the point. It should be free from ambiguity and thought provoking and should be suited to the age, abilities, interests and characteristics of the particular learners.

In summary, according to an online teacher web page, *The New Curriculum* (2003), the transmission of knowledge and understanding to students is a never-ending challenge that requires a toolbox far broader than the methods outlined above. Moreover, it requires a teacher who knows how and when to use a given approach with a given student. This is the great challenge of teaching. Therefore, it follows that this piece is not a rejection or even a criticism of training, explanation or any other mode of teaching that primarily serves to feed information into students' minds. Rather, my goal is to raise the questions, "Do we value insight?" and if so, "Can we teach our students to be insightful people?" I believe we should and I believe we can. By fostering insight, we are teaching students to make sense out of complex circumstances where data is not handed to them in neat packages (i.e. human existence). To achieve the above goals, a variety of teaching methods are more effective than a single method. There are at least two reasons for this: One has to do with the stimulation students, which comes from the freshness of a new approach while the other reflects the point that one device is more suited to some kinds of subject matter and learners than another (Brown, Lewis & Harclerod, 1959, p. 18).

2.3.2.3 Classroom Competencies

There are different levels of classroom competencies that teachers should possess in order to create an effective school. For example, the teacher is expected not only to impart knowledge but to foster the adjustment of students, understand students' basic cognitive and social problems, match curricular offerings to levels of mental development, make curricular specifications relevant; and

provide a smooth transition from home to school and from one level of education to another (Amalaha, 1979, pp. 230–240).

Adjustment of students: The duty of the teacher in the classroom does not stop at giving information to students. As Stones (1966, p. 389) puts it, “the traditional stereotype of the teacher as one who stands in front of the classroom and ‘tells’ the children has been at odds with views of educationists for many years now.” Teaching in the contemporary world involves the task of assisting students in making worthwhile and satisfying adjustments to school work, social groups, and their occupations. If these issues are not resolved, the individual child may not appreciate learning. Since the main duty of the teacher is to get the individual student to learn, it is also his or her duty to remove obstacles to that learning. If proper adjustments are not made, friction and frustration will set in and learning will not take place. According to McDaniel (in Amalaha, 1979, p. 231), “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 a vital part of making learning meaningful for the child thereby making him more interested in his schooling.

Student’s cognitive and social problems: Students manifest cognitive and social problems in school; as a result, the classroom teacher is involved in assisting the student in solving them. Due to a lack of effective early stimulation, students may show weakness in some areas of their study. If such a situation arises, teachers need to have full grasp of the situation and then remediate the child to alter the effects of lack of stimulation. On the other hand, some children are problem behavior cases. Problem behavior, according to Amalaha (1979, p. 232), is any behavior that is characterized by an inability to meet the demands of the school environment. They may include the inability to get along with other children, achieve self-reliance, and adhere to the values prescribed by a system. Educators (e.g., Alberto & Troutman, 1995) have long understood that many students come to school having developed problem behavior because their parents allow them children to get what they want when they exhibit problem behavior such as ‘temper tantrums.’ According to Amalaha, in such a case, (1979) the reinforcement of problem behavior results in the repetition of that behavior. In other words, students who exhibit problem behavior at home and are rewarded for doing so exhibit problem behavior at school with an expectation of the same result. Similarly, Stones (1966, p. 383) believes that when students come with specific emotional problems, it is important that the teacher realize that they exist and be able to identify them. Children who are of a nervous temperament, popularly described as ‘highly strung’, need sympathetic treatment from the teacher. The teacher’s task should not be to exacerbate that nervous behavior by giving the child increased attention because of it, but instead to help them acquire confidence which will lead to remission of

the problem. Such students need more encouragement than the average student react more strongly to failure. Encouragement and success in their schoolwork, the sympathetic understanding of the teacher, and a friendly cooperative atmosphere in the classroom will help them to develop more confidence. The question now is that what can the teacher do to help?

To help students with this problem, according to Gibson (in Amalaha, 1979) teachers must find out what the students acceptable interests and capabilities are and then find a group of peers with similar interests for the student to meet socially. To do this is not part of the talk-and chalk work, but the teacher has to do it to help the student in need of assistance. This fulfillment of a child's emotional needs will help the child's overall attitude thereby assisting in the attainment of factual knowledge. However, Stones (1966, p. 385) advocates that teachers 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 whose duty is to diagnose the difficulties of children referred to them and recommend a course of action.

Matching curricular offering with levels of mental development: If the teacher's work is to bear fruit, he or she has to be concerned with *what* he or she teaches and *who* he or she teaches. This is because knowledge has various levels of abstraction, which can be grasped by the child whose mental development is in keeping with the level of knowledge given them (Stones, 1966). Teachers should be concerned with the '*entering behavior*', which the child has for the work at hand. This entering behavior (Amalaha, 1979, p. 233) is the foundation upon which new knowledge must be built. If, for example, a teacher wishes to teach a child how to run, the teacher should be concerned with whether or not the child has previously learned to sit erect, crawl, and walk. It is only when the child 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 the child is at the state of crawling is useless.

Amalaha further added that since any knowledge has various levels of abstraction, a teacher should concern himself with the child's level of mental development and gear his or her teaching to suit that developmental level. That is why Stones (1966, p. 199) argued that the fostering of cognitive schemas based on an understanding of the logical connection between things is a very important part of the work of teaching. A classroom teacher would do well to concentrate upon arranging the student's activities so 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 their levels of intelligence of their work so that they can provide feedback (Ibid, p. 392).

Curricular specifications and relevance: Very often, mostly among untrained teachers, we find those who teach what they find in the syllabus. Finding a place in the syllabus *per se* does not qualify a topic to be taught. The right type of classroom teacher should be sufficiently knowledgeable about the current question and debate about designing a school curriculum to design lessons and curricula accordingly (Amalaha, 1979, p. 237). In the broadest sense, curriculum can be defined as the organizational experiences that a student has under the guidance and control of the school (Gutek, 1988, p. 5). In a more precise but restrictive sense, the curriculum is the systematic sequence of the 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.

Classroom teachers should appraise the curriculum specifications according to how they suit the students they are teaching. The classroom teacher should further be guided by the relevance of the material to those children (Stones, 1966). For example, most teachers just teach 'chemistry' or 'mathematics' without paying attention to their relevance and therefore confuse their students who fail to understand *why* they are learning the given subject. For this reason, a classroom teacher does a good job of teaching when he or she can think of the subject in terms of relevance to the students and the society in which the student is a part (Amalaha, 1979, p. 239).

Smooth transition from home to school: Research has shown that certain unnatural disruptions of intellectual life occur when the child's environment changes drastically and his or her experiences are discontinuous (Amalaha, 1979, p. 239). 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 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. The second category consists of children whose school situations may be so radically different from their home environments that they are totally unable to apply their past to this current situation. Students found in this category need the teachers more than those found in the first category (Parelius & Parelius, 1978; Ezewu, 1983). Therefore, all classroom teachers should endeavor to discover what constitute appropriate experiences for children through professional training and studies because a classroom teacher who allows these children to waste is no teacher.

It could be concluded that classroom instructional competencies, when accompanied by clearly written instructional objectives and the application of adjustment aids for students who require them, understand students' basic

cognitive and social problems and thus match curricular offerings to the levels of students' mental development. As well as the translation of curricular specifications into relevance; and the provision of a smooth transition from home to school without doubt provides the student with the necessary guidance in learning and helps the instructor in assessing the outcome. Therefore aiding in overall teaching, learning and assessment, will result in more effective student academic achievement because teachers' 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**).

2.3.3 Motivational competencies

2.3.3.1 Motivation as a Strategy for Teaching and Learning

Schools have much to learn by examining the informal pedagogy of everyday life; the principles of good teaching are no different for school than for home and community. When true teaching is found in schools, it observes the same principles that good teaching exhibits in informal settings (Tharp & Gallimore, 1998, p. 93). Furthermore, some researchers (e.g., Scheerens & Creemers, 1989; Creemers, 1994) are of the opinion that quality teaching is found in the school, this is because it is presumed that teaching and learning go on well in the school environment and they are being carried out by qualified teachers who can motivate students to learn under diverse conditions. Therefore, motivation is regarded as one of the qualities of achieving good teaching and learning in schools.

The phrase "student's motivation to learn" has, to some degree, different meaning. Hermine Marshall defines it as the meaningfulness, value, and benefits of academic tasks to the learner regardless of whether or not they are intrinsically interesting (Marshall, 1987, pp. 135–150). Carole Ames, on the other hand, remarks that motivation to learn is characterized by long-term, quality involvement in learning and commitment to the process of learning (Ames, 1990, pp. 409–421). Student motivation naturally has to do with students' desire to participate in the learning process, but it also concerns the reasons or goals that underlie their involvement or non-involvement in academic activities. In other words, while students may be equally motivated to perform a task the sources of their motivation may differ (Lumsden, 1994). Students who are intrinsically motivated undertake an activity for its own sake, for the enjoyment it provides, the learning it permits, or the feelings of accomplishment it evokes. Extrinsically motivated students perform in order to obtain

some reward or avoid some punishment external to the activity itself such as grades, stickers, or teacher approval (Lepper, 1988, pp. 289–309).

At any rate, students are more effective learners if they are intrinsically motivated towards learning than if they are extrinsically motivated. A growing body of evidence suggests that intrinsically motivated students employ strategies that demand more effort and that enable them to process information more deeply (Lepper, 1988, pp. 289–309; Beare, Caldwell & Millikan, 1989, pp. 42–61). Condry and Chambers (1978, pp. 61–84) also found that when students were confronted with complex intellectual tasks, those with intrinsic orientation used more logical information-gathering and decision-making strategies than did students who were extrinsically oriented. Furthermore, students with an intrinsic orientation tend to prefer tasks that are moderately challenging, whereas extrinsically oriented students gravitate toward tasks that are low in degree of difficulty. Extrinsically oriented students are inclined to put forth the minimal amount of effort necessary to get the maximal reward (Lepper, 1988, pp. 289–309). Although every educational activity cannot, and perhaps should not, be intrinsically motivating, these findings suggest when teachers can capitalize on existing intrinsic motivation (Harris 1991; Harris & Muijs, 2005).

The question remains: what factors influence the development of students' motivation? According to Brophy (in Lumsden, 1994), motivation to learn is a competence acquired through general experience but stimulated most directly through modeling, communication of expectations, and direct instruction or socialization by parents and teachers. For example, when children are raised in homes that nurture a sense of self-worth, competence, autonomy, and self-efficacy, they are more likely to accept the risks inherent in learning (Beare, Caldwell & Millikan, 1989). Equally, when children do not view themselves as basically competent and able, their freedom to engage in academically challenging pursuits and capacity to tolerate and cope with failure are greatly diminished because the sources to which children attribute their successes and failures have important implications for how they approach and cope with learning situations.

In Hardre and Reeve's study, "*A Motivational Model of Rural Students' Intentions to Persist In, Versus Drop Out of High School*" it was found that there are large differences in teachers' beliefs about and orientations toward motivating students. Beliefs ranged from a strong bias toward student and family responsibility for effort at school, through a moderate view, to the belief that a large burden of the responsibility for promoting students' motivation falls to teachers and schools. Asked how they identified whether students were motivated in class, some teachers had difficulty saying, and more admitted that they often lacked effective strategies for promoting students' motivation. A large majority of teachers see students' motivation as impressionable believing that

they actually could make a difference and they actively tried to intervene when students obviously lacked motivation (Hardre & Reeve. 2003, pp. 347–356).

However, the beliefs teachers themselves have about teaching and learning and the nature of the expectations they hold for students also exert a powerful influence (Raffini. 1993). According to Deborah Stipek, students learn if their teachers expect them to learn (Stipek 1988). School wide goals, policies, and procedures interact with classroom climate and practices to affirm or alter students' increasingly complex learning-related attitudes and beliefs, and developmental changes comprise one more strand of teachers' motivational competencies (Ames. 1990, pp. 409–421).

Students are not the only ones that need motivation; teachers must also be stimulated to make schools effective. Teacher-to-teacher interactions are a powerful factor in student's motivation process. Because as co-teachers interact and tell each other the problems they encounter in their various classes, they tend to discuss and make useful suggestions as to how to handle situations. For example, co-teacher review is a process of gathering information and evidence about the effectiveness of the teaching/learning process. Thus, co-teachers encourage fellow teachers in carrying out their teaching job effectively (Stiggins, 1986, pp. 51–58; Stiggins & Duke, 1990; Dunkin, 1997, pp. 37–51). The purpose of the program is to provide assurance that students are able to achieve what the courses require them to achieve and improve teaching practices. Co-teachers critically review and improve teaching through the exchange of ideas with their peers. Co-teachers are also a valuable source of formative feedback on whether goals are achieved (Koch & Burghardt, 2002; Niederhauser, 1997). Teachers work most effectively when they are supported by other teachers and work together collegially. Thus, successful schools create collaborative environments that encourage involvement, professional development, mutual support and assistance in problem solving (Harris & Muijs, 2005, pp. 13–14).

2.3.3.2 Fostering of Motivation to Learn in Schools

Obviously, motivation is a critical issue in education; it is regarded as an essential component of teaching, but it is also crucial for students. For this reason, it is vital to address students' motivational needs. Hardre and Reeve (2003) and Austin, Dwyer and Freebody (2003) identified three important elements in student's motivation to learn—the learning environment, classroom instruction, and interpersonal interaction. Some motivational elements at all of these levels are within the teacher's control and all of these can influence students' academic inspiration positively or negatively. First, teachers can motivate by features of the environmental design, which include their indirect effort to motivate students by arranging the classroom-learning environment in ways

that promote students' motivation. Second, teachers can motivate students by using instructional strategies which include features of their instruction (e.g., scope, sequence, materials, media, interactions) that are intended to facilitate students' motivational characteristics such as attention, interest, engagement, effort, value, and their perception of their own competence. Third, teachers can motivate students by using motivating strategies which include direct efforts to motivate individuals or groups of students (e.g., activate or remediate their current motivation), are highly adaptive based on specialized student needs and circumstances. Motivating strategies are individualized and arise out of the teacher's specific beliefs and perceptions of individual students' motivational states and traits. Teachers use language to help students initiate and regulate (manage) their class-related activities. When teachers use informational, flexible language, teachers nurture students' own initiative, helping them find reasons to act because they want to rather than because the teacher says they must (Harris & Muijs, 2005).

Conversely, students often fail to reach their full potential due to low motivation. Some factors that affect their motivation may relate to a country's education system in general while others are institutional or cultural views (Niederhauser, 1997, p. 8). For example, the use of power in schools is important in motivating students which also helps in determining high student achievement: Teachers use this method to influence student's compliance in the classroom. This is evident in Cheng, Cheung and Tam's (2002) study. However, their investigation was limited to grade six students. Cheng (1994a, pp. 221–239) defined the power base as the use of reward power, coercive power, position power and personal power or professional power in the classroom to ensure students' compliance. Researchers, especially in Africa and Asia, see power as a valuable tool for effective teaching and high student academic achievement (Olofube, 2004; Olofube, 2005).

However, to motivate the unmotivated students, teachers should recognize that even when students use strategies that are ultimately self-defeating such as withholding effort, cheating, procrastination, and so forth, their goal is actually to protect their sense of self-worth (Raffini, 1993). It is crucial for parents, teachers, and school leaders to devote themselves fully to engendering, maintaining, and rekindling students' motivation to learn (Lumsden, 1994) because the potential payoff of having students who value learning for its own sake is priceless.

2.3.3.3 Basic Principles of Motivation

Unfortunately, as children grow their passion for learning frequently seems to shrink. Learning often becomes associated with hard work instead of delight. A large number of students, more than one in four, leave school before

graduating. Many more are physically present in the classroom but largely mentally absent, failing to invest themselves fully in the experience of learning (Lumsden, 1994). Therefore, the purpose of this section is to determine the significant differences that exist between some basic principles of motivation which are applicable to teaching and learning in some situations and which may well help teachers to encourage students and reduce the dropout rate in our secondary schools:

The environment: Teachers who create warm and accepting yet professional atmospheres will promote persistent effort and favourable attitudes toward teaching and learning (Beare, Caldwell, & Millikan, 1989, p. 154). This strategy is successful in children and adults. Interesting visual aids, such as booklets, posters, or practice equipment, motivate learners by capturing their attention and curiosity (Lepper, 1988, pp. 289–309; Stipek, 1988). In the same way, strong and lasting memory is connected with the emotional state and experience of the learner. People remember better when learning is accompanied by strong emotions. When a teacher makes something funny, exciting, happy, loving, or perhaps even a bit frightening, students learn more readily and the learning lasts much longer. Emotions can be created by doing something unexpected or outrageous, by praise, and by many other means. For example, the day a teacher comes to class with a bowl on his head and speaks about humans as an alien observer will be a day and lesson remembered (Harris, 1991).

Incentives for motivating motivate learning: Motivation includes receiving privileges and/or praise from the teacher. The teacher determines an incentive that is likely to motivate an individual at a particular time. In a general learning situation, self-motivation without rewards will not succeed. Students must find satisfaction in learning based on the understanding that the goals are useful to them or, less commonly, based on the pure enjoyment of exploring new things. According to Harris (1991), extrinsic motivators in the form of rewards can help students who do not yet have powerful intrinsic motivation to learn. Thus it is often effective to reward correct behavior and answers rather than criticizing unwanted behavior or answers. Harris further suggested that rewards could and should be small and configured to the level of the students. Everyone likes the feeling of achievement and recognition; rewards for good work generate those good feelings (Niederhauser, 1997).

Internal motivation: A number of individuals, predominantly children of certain ages and some adults have little capacity for internal motivation and must be guided and reinforced continually. The use of incentives is based on the principle that learning occurs more effectively when the student experiences feelings of satisfaction. However, caution should be exercised in using peripheral rewards when they are not extremely necessary because their use may be followed by a decline in internal motivation. Students respond with interest and motivation to teachers who appear to be human and caring (Con-

dry & Chambers, 1978, pp. 61–84). According to Harris (1991), such personalizing of the student and teacher relationship helps students see teachers as approachable human beings and not as unfriendly authority figures. Teachers should show that they care about their students by asking about their concerns and goals. For instance, what do they plan to do in the future? What things do they like? Such teachers will be trusted and respected more than the ones who are all business (see, Niederhauser, 1997; Lumsden, 1994; Austin, Dwyer & Freebody, 2003).

Readiness to learn: Schools are or should be about helping students grow. While a variety of approaches may prove successful, success is often measured too narrowly. Too often, we inhibit real success by ignoring students' reaction to their own learning (Dillon, 2001, pp. 97–98). Most times student's readiness to learn comes with time, and the teacher's role is to support its development (Ames, 1990, pp. 409–421). Harris (1991) notes that one of the major keys to motivation is the active involvement of students in their own learning. Standing in front of them and lecturing them is thus a relatively poor method of teaching. It is better to get students involved in activities, group problem solving exercises, helping to decide what to do and the best way to do it, helping the teacher, working with each other, or in some other way getting physically involved in the lesson (Mercer & Fisher 1998). Assigning students homework that involves helping teachers is a step in the right direction to bring out the inner self of students that are ready to learn (Austin, Dwyer & Freebody, 2003).

Instructional material: In general, better organized material makes the information more accessible to the individual. One method of motivation includes relating new tasks to those already known (Niederhauser, 1997, p. 8). For example, even before young people were reared in a video environment, it was recognized that memory is often connected to visual images. In the middle ages, people who memorized the Bible or Homer would sometimes walk around inside a cathedral and mentally attach certain passages to objects inside so that remembering the image of a column or statue would provide the needed stimulus to remember the next hundred lines of text (Harris, 1991). Maehr and Midgley opined that other ways to relay meaning are to determine whether the students being taught understand the final outcome desired and instruct them to compare and contrast ideas (Maehr & Midgley, 1991, pp. 399–427). (See also, Hight, 1963; Stones, 1966.)

On the whole, none of the methods mentioned above will create continual inspiration unless the goals are realistic for the learner. Thus effective teachers enlist student help in goal setting. To have learners assist in defining goals increases the probability that they will understand them and want to reach them. Nevertheless, students sometimes have unrealistic notions about what they can accomplish. Possibly they do not understand the precision with which a skill must be carried out or have the deepness of understanding to master some

instructional materials. To identify realistic goals in any case is an essential part of the professional teacher's vocation; therefore, teachers must be skilled in assessing student's readiness or student's improvement in the direction of stated objectives.

2.3.4 Instructional Process Competencies

The factors that make teachers apply the most effective instructional method to achieve an objective is a critical aspect of secondary school reform and increases the likelihood of a school being effective (Ololube, 1997). I make no distinction between instructional process competency factors and what factors make teachers apply effective instructional methods to achieve instructional objectives—they are said to signify the same notion and will be used interchangeably in this paper.

Teaching is viewed sociologically as a social action because teachers in the classroom interact with their pupils in such a way as to attain specific pre-determined goals. The performance of this action by the teacher is affected by the quality of the teachers' role socialization. The role socialization of the teacher involves the training which the teacher received before engaging in the act of teaching (Ezewu, 1983, p. 125). As a result teaching can be seen as a diverse and complex activity because the goal of any teaching task is achievement. Therefore, all the interrelated actions of the teacher at any given moment in the classroom must lead to students' academic achievement (Ololube, 2004). Education serves a number of social functions but its core and distinctive purpose is concerned with learning and the generation of knowledge. In this regard, its product is a developed learner. This entails a sharp divide between education and other sectors such as medicine or engineering as far as relationship to knowledge base is concerned. While successful practitioners in any sector have access to relevant knowledge bases and draw on them appropriately when addressing practical situations, education stands apart in the overlap between the underpinning knowledge base and the domain of professional practice. Whereas civil/construction engineers for example, draw on physics and material science to build bridges, teachers draw on theories of learning and bodies of knowledge to generate student learning in those bodies of knowledge through effective instruction (Hegarty, 2000, pp. 451–465). The application of contemporary knowledge and ideas, effective use of appropriate questioning, time management and the arrangement of the classroom, proper curricular development, and the statement of the instructional objective and mastering of subject matter are seen as effective instructional methods (Creemers, 1994b).

We hear and talk about gifted teachers and gifted classrooms. What makes a teacher gifted? And what makes their classrooms special? Do they have cer-

tain inherent abilities or qualities that make their classrooms more successful than others? Or do they use techniques that make learning more interesting and permanent for their students. It leaves us asking if teachers can be trained to provide an enriched environment and teach a curriculum in such a way that every child is challenged to perform far above grade level (Miranda & Landmann, 2001, pp. 230–235). Getting qualified personnel to provide the instructional services necessary for the achievement of the goals of the school system is imperative because the goals of any school are to provide society with the right kind of manpower for development and to enhance the quality of living.

Pedagogy experts like Banjo (1960); Fafunwa (1991) and Hegarty (2000) believe that instructional competence is needed to do well in the teaching profession. They see having quality teachers in schools to handle instructional processes as vital to education while Wilson, Floden and Ferrini-Mundy (2002) acknowledge that knowing how schools, districts, states, professional groups, and institutions enable high-quality teaching and learning is critical to the welfare of the nation's education system and the young people it serves. Hegarty (2000) also makes it clear that if we want to focus on knowledge bases, which are intrinsic to teaching, we have to turn to pedagogy. However, Hegarty cautions that while instructional competencies or skills are important, an excessive focus on them leads to an impoverished notion of teaching which reduces it to the unreflective application of rules devoid of insight and creativity.

The traits of devotion to duty, love of children and the desire to always improve on past effectiveness as well as proper presentation and the creation of successful learning environment are all part of instructional competence. Thus, a trained teacher is supposed to be fair, friendly, polite, firm and upright with his or her pupils while performing his or her instructional duty (Gbamanja, 1989; Hight, 1963; Stones, 1966). Lloyd (1980) for example, when writing about how to become a good teacher of agriculture said: "Persons considering the profession of teaching have certain decisions to make. They should decide whether they have the following: instructional competence, methodological competence, motivation competence and qualifications and if they do not have them they should decide whether they have the ability to attain them." These requirements are necessary for the successful teaching of agriculture. He further argued that these characteristics or qualification would equip the teacher to be committed to the teaching profession and be able to do the following:

- The teachers will believe in their programs and have the initiative to carry them out.
- They will be willing to dedicate themselves to their jobs and render services efficiently.
- They will become persons of perseverance since success cannot be attained overnight.

- They will have faith in their work and possess the enthusiasm and courage to continue even though at times things do not appear the brightest (Lloyd, 1980)

To Whitty (1996), instructional competencies involve “*professional characteristics*” and “*professional competences*”. Professional characteristics are what he considers to be the underlying qualities of the teacher that enables him or her to pull the individual instructional competences together and apply them in the professional context. In describing the characteristics in this way, he was not, of course, suggesting that they are innate, and that “good teachers are born and not made”. Instead, his purpose is to show that these qualities can be fostered and developed. His suggested lists related to the following aspects of professional activity are:

Professional characteristics of a successful teacher:

- Professional values
- Professional development
- Personal development
- Communication and relationships
- Synthesis and application

Whitty recommended that this list be read along with other lists of specific competences which were divided into professional knowledge and understanding and professional skills as follows:

Professional competences of the successful teacher:

- 1 Knowledge and understanding:
 - 1.1 Knowledge of children and their learning
 - 1.2 Subject knowledge
 - 1.3 Knowledge of the curriculum
 - 1.4 Knowledge of the education system
 - 1.5 Knowledge of the teacher’s role
- 2 Skills:
 - 2.1 Subject application
 - 2.2 Classroom methodology
 - 2.3 Class management
 - 2.4 Assessment and recording
 - 2.5 Understanding the wider role

Whitty envisioned the two statements as interlocking. They could either be seen as a matrix with professional characteristics permeating the performance of professional competences or be represented graphically as in Figure 1. Either way, he tried to indicate that the professional characteristics of the teacher ought to permeate the application of the specific competences identified under the heading of professional knowledge and professional skills and further insisted that a professional teacher requires both in order to have enough instructional competence.

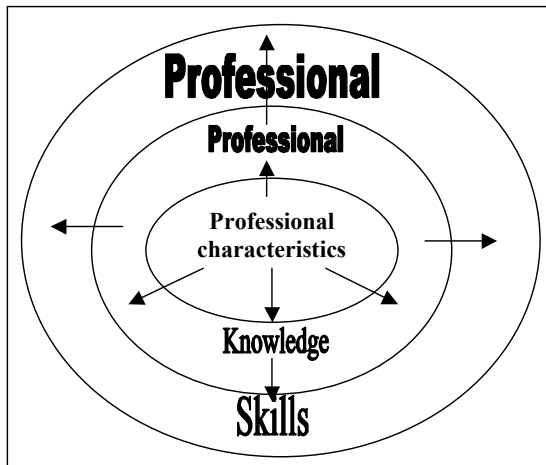


Fig: 2.3.4.1: Professional characteristics, knowledge and skills. Source: Whitty (1996, p. 90).

In this circumstance therefore, there is every reason for good professional training to be given to teachers despite some people's claim that they are intuitive teachers. Teachers must have a broad and deep knowledge base of the subject matter and extensive facility with diverse instructional strategies in variable teaching contexts. As such new teachers should learn to give up the security of certainty and step gingerly into the risky world of meaning making, where they are on their own, applying what they know in interpreting the hundreds of events that make up their teaching day (Wassermann, 1993, 1996).

Given this evidence, it is clear that most of the studies reviewed have made a strong case for academic training in addition to professional training and development having a hand in teachers' instructional effectiveness. It is also established that academic qualification alone has its limitations; for example, discussion of standards, quality and teacher preparation. With regard to the latter, there is a growing realization of the central role of professional develop-

ment in bringing about the desired educational reform (Olugbemiro, 2000, pp. 287–309). Achieving such reform, according to Dass (1998), is a complicated task, which cannot be achieved by simply introducing new curriculum materials or supplying new communications gadgetry into the school system. It goes far beyond that; the core of the successful transformation of society to achieve the standards of education now being suggested is that teachers are charged with the ultimate implementation for such programs. Thus, the best conceived educational reform program in the world, in the most ideal environmental setting and using excellent instructional materials, can easily come to naught if those who are to implement the program at the classroom level are not confident enough to carry out their tasks efficiently and effectively. Sparks (1993, pp. 65–72) equally noted that teacher training and development offers one of the most promising roads to the improvement of instruction. As Ahamibe (1979) also indicates, teacher training means an exercise seeking to improve instructional competence in the classroom. Training implies exercising or reputation, and it is for a particular purpose. A study of Shalveson (1976) shows that instructional goals, the use of effective teaching methods, the understanding of instructional outcome, the evaluation of the utility of instructional outcome and the understanding of environmental conditions which influence the effectiveness of a particular method require teachers to be trained.

Teachers' training results in the development of pedagogical content knowledge (PCK) which captures a combination of content knowledge and pedagogic skills necessary for the organization of classroom activities. Teachers who need help will develop their content knowledge, their pedagogic skills and the realization of certain educational practices that are very useful to students' academic success through teacher training programs. Pedagogical content knowledge has a component that has to do with the teacher's ideas of what it is to be a good teacher and how one goes about that (Shulman, 1987). However, we recognize that teachers' comments regarding the physical environment of the classroom have a strong bearing on what they can attempt to do—numbers of students, seating, desk spaces, and space to move around the classroom, availability of audio visual aids (AVA), computers and even blackboards. This is obviously the physical component to their environment, and classroom settings are both a physical and social component in which the teacher has to work (Monk, 1998).

2.3.4.1 Effective Instruction

“Instructional strategies” or “effective instructions” are the various methodologies used to involve the learners in the training program. Effective instruction means the ways we can breathe new life into effective teaching. For instructional process to be result-oriented in the way of improving students' academic

achievement, teaching requires effective instructional skills that improve students' ability to learn effectively. Conversely, Perry (1994) sees effective instruction as the necessary condition that includes the performance of the teachers; the construction of the subject (proper development of curricula), furniture, and equipment for teaching as well as the backup of good library and learning resource facilities. He points to the fact that this list however provides only the necessary, not the sufficient condition for a judgment of effective teaching. He further argues that quality in teaching is primarily the quality of students' achievement at the end of their term. It is what a student knows, understands and is able to do, that is the main and legitimate purpose of the measurement of instructional effectiveness (Alexander, 1992)

Recent research has revealed that mastery learning as an effective learning program are an important element of high student performance. This research points out that those educational institutions that develop such programs not only have more student academic achievement capabilities, but also more effective schooling. The concept of mastery learning, in several forms (and in combination with other grouping procedures and educational strategies) has been shown to be essentially effective at all levels of education. In general, adaptive instruction is instruction geared at the learning characteristics and needs of individual students, which is more effective than class instruction with respect to cognitive as well as to affective measures (Creemers, 1994b, p. 193; 1994c). However, grouping procedures as a means for ensuring mastery learning are designed to increase the effectiveness of instruction aimed at organizing instruction at the classroom level in such a way that instruction can be adapted to the individual characteristics of students. The effects of grouping are strongly determined by the quality of the effective characteristics of the instruction within a grouping procedure (Beare, Caldwell & Millikan, 1989, pp. 50–53).

During instructional processes, questioning is seen as a useful tool in assisting students' learning process, which leads them further in their Zone of Proximal Development (ZPD) (Tharp & Gallimore, 1998). In a classroom situation, students often have to answer questions. Questions are posed to find out if students have understood what they are expected to learn. Such questions capture student's actual developmental level (Austin, Dwyer & Freebody, 2003; Freiberg & Freebody, 1995). Few teachers, however, ask their students questions to make them think further to gain a better understanding (Postholm *et al.*, 2002)

Research has also demonstrated that teachers' behavior in the classroom is positively related to students' achievement. Especially important in this respect is the allocation and use of teaching time and classroom management which is aimed at an orderly atmosphere that promotes learning. It also involves teachers' activities in several education components such as structuring the content,

questioning, evaluation, feedback and corrective instruction (Motimore *et al.*, 1988; Scheerens, 1992, 1994; Stringfield, 1994). To ensure an effective instruction process in school that will create effective schooling, the following characteristics of teacher behavior are important:

- Management of the classroom in order to create a situation where learning can take place.
- Expectations teachers (and schools) have of their possibilities to influence student outcomes probably also influences what teachers do.
- Clear goal setting (learning Objectives) that include a restricted set of goals, emphasis on basic skills and emphasis on cognitive learning and transfer.
- Structuring the content. This includes the organizing the content according to the hierarchically ordered goals. The use of advanced organizers can also structure the content for students.
- Clarity of presentation, which implies the above-mentioned element, but also refers to the transfer process itself (avoiding vagueness and incomplete sentences).
- Questioning by means of low and higher order questions keeps students at work and can be used to check their understanding.
- Immediate exercise after presentation. Like questioning: it provides a check for understanding and can be used to clarify problems.
- Evaluation of whether the goals are obtained by testing, providing feedback, and corrective instruction (Creemers, 1994b, pp. 194)

The above characteristics are based on research of teaching and school effectiveness. It is not an enumeration of all (possible) correlations, but a choice of characteristics based on empirical evidence on the one hand and our theoretical notions on the other (Creemers, 1994b, p. 195).

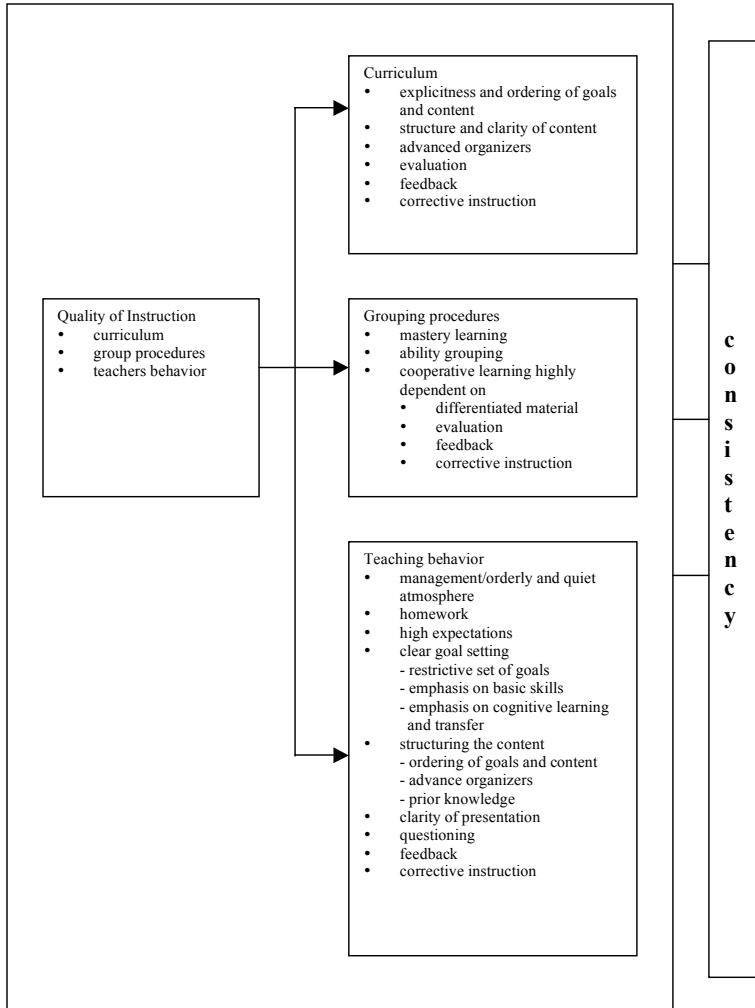


Fig: 2.3.4.1.1: Basic model of educational effectiveness: consistency of effective characteristics and components. Source: Adapted from Creemers (1994b, p. 202)

On the whole, instructional effectiveness and research on teaching show that the important conditions of effective teaching include direct instruction (i.e., a conglomerate of factors such as reinforcement, highly structured learning tasks and frequent monitoring of students' progress), time and class management. That is, the amount of instruction enhanced by using the school's days more effectively and successful methods of instruction which lead to greater

student academic achievement through mastery learning with an emphasis on reinforcement and feedback, co-operatives learning, personalized and adaptive instruction, use of advanced organizers, high teacher expectations, longer wait time and good questioning techniques determine teachers' job effectiveness (Creemers, 1994a, p 18).

2.3.5 Teachers' Material Utilization Competencies

Teachers, like doctors and any other professional workers, need essential tools to do their work best. Of course, it is true that the central figures in any learning situation are always the students and not the teachers, but it is equally true that learning may be greatly enhanced by the utilization of the many resources available in the school and various school agencies. Nevertheless, the teacher's planning of effective learning activities will be easier, less time consuming and often vastly expanded in potential scope when they know precisely what type of materials are available to them and when to draw upon them (Brown, Lewis & Harclerod, 1959, p. 47). Therefore, it is imperative that teachers be thoroughly acquainted with the teaching resources and services available to them and that they have a clear understanding of the essentials of a functional materials-selection program.

Many of the materials needed for effective teaching are used often enough to warrant their being part of every classroom's basic equipment. However, at the other extreme are materials—often relatively expensive and needed in individual classes rarely and for short periods—which serves the specific needs of an educational system. Teachers are concerned about the ready availability of appropriate instructional materials because they know how much such tools influence teaching and the quality of learning in the classroom (Ibid, p. 48).

For instance, the University of North Texas (UNT) College of Education holds as its conceptual framework the idea that educators are guides for engaged learners. This concept is portrayed visually as a compass which represents the tools educators' employ as they orient students in the exploration of landscapes for learning. The engagement of learners requires simultaneous commitment to academic knowledge bases and to learner-centered practice. Competency development in all UNT programs for educators is paramount. UNT sees professional communication as very important, hence, effective interpersonal and professional oral and written communication that includes appropriate applications of information and communication technology (ICT) during instruction are a subject of focus in the program. The idea behind ICT in education is to develop professionally competent teachers who can handle instructional processes and appropriately use the available instructional materials in a school environment to affect teaching and learning.

In addition, the purposes of effective teacher training, are (1) to increase student teachers' awareness of theories of instruction, (2) to assist students in the development of criteria to select and evaluate teaching methods and instructional materials, (3) to provide knowledge and analytical tools so that student teachers may expand their repertoire of teaching methods, and (4) to encourage student teachers to engage in reflective practices. It focuses on the derivation of appropriate methods and techniques from basic principles of learning. Student teachers will develop working skills needed in the cooperative planning, selecting and organising of teaching materials and their utilization to meet the environment and its technological changes because the pace of technological change is quickening. However, a number of critics charge that secondary schools have taken too little action to assure that their graduates have the technical skills needed to function in our increasingly technologically oriented society (Barlow, 1992).

Meanwhile secondary schools especially in the developed world are under pressure to make students more personally familiar with emerging technologies. This trend has in turn influenced teacher education programs to appropriately train pre-service teachers. There is a general belief that students graduating from secondary schools must have levels of expertise beyond the simple ability to use current technology, and what is needed is technological competence (Armstrong & Savage, 1994). This implies a sophisticated cognisance of technologies that includes the ability to see novel applications and to expand the nature of the technologies' usage (Dickman, Van-Sickle & Bogan, 1997).

Fundamentally, educational technology introduces teachers to the evaluation, selection, and use of audiovisual materials and equipment including films, slides, transparencies, projectors, globes, charts, maps, bulletin boards, programmed materials, information retrieval systems, and instructional television (Ololube, 1997). Nonetheless, one important difference between some educational practices today and those of a generation ago is the relative emphasis teachers put upon doing as a means of teaching and learning. Today's schools give more attention to realistic, lifelike learning situations, which go well beyond the word-of-mouth explanations by the teacher or word-in-print explanation of books. One means of developing this realism is through classroom construction activities, which challenge students to solve instructional problems in many fields of study by transforming simple, inexpensive instructional materials into forms which help them and other people to learn.

2.3.5.1 The Role of Teachers' in the Use of Instructional Materials

For some time now, there have been predictions that new teaching and learning technology would replace teachers, textbooks and even schools. It was also anticipated that the major method of learning by 2000 would involve the

use of modern technology like computers at all levels and in almost all subject areas (Borg, 1980). However, Crook (1994) found that this prediction does not appear to be true. Cuban (1986) and Cohen (1987, pp. 153–170) on the other hand claim that the use of computers has to fit into the teacher's pedagogical view of teaching and learning, and if introduction of computers for instance in schools is to be successful, one must start with the question of why they should be used and not how they should be used. It appears that technology is looked upon as having a supplementary role in teaching and that it should be organized according to the view of most educators and parents (Postholm *et al.*, 2002). Cuban (1993) maintains that the “dominant cultural norms” with respect to learning, instruction and the nature of knowledge almost have a neutralizing effect on development. Postholm *et al.* (2002) on the other hand argues that some features of Information Communication Technology (ICT) must be seen as a potential that has to be implemented in contexts of learning.

Although in this direction, Vygotsky (1978) developed the concept of the **zone of proximal development (ZPD)** that has had a great effect on how we regard teacher's instruction and assessment in assisting students' level of development. This is reinforced by appropriate use of instructional materials. This concept is defined as:

The distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers (p. 86).

Conversely, Wood, Bruner and Ross (1976, pp 89–100) use the term “scaffolding” to describe an adult helping a child to carry out a task or achieve goals the child could not reach without this help. They also state that teachers need to know how to solve the task and recognize the performance qualities of their students before these goals can be achieved. However, Tharp and Gallimore (1988) argue that teachers also need to know how to scaffold the student, and they developed a theory of scaffolding methods, based on the premise that a good teacher is a master of simplification. Thus, teaching can be said to occur when assistance is offered at points in the ZPD at which performance requires assistance. According to Austin, Dwyer and Freebody (2003) and Freiberg and Freebody (1995), during the use of particular instructional materials, questioning is seen as a useful tool in assisting children in their learning process and leads them further in their ZPD. In school, children often have to answer questions which are posed to find out if students have understood what they expected to learn. Such questions capture students' actual developmental level (Postholm *et al.*, 2002).

2.3.6 Teachers' Evaluation Competencies

Teachers' evaluation competencies included here are the knowledge and skills critical to a teacher's role in the instruction process. However, it is understood that there are many competencies beyond evaluation competencies that teachers must possess in order to be effective in their instructional processes. Therefore, this section proves that students' evaluation is an essential part of teaching and good teaching cannot exist without good student's evaluation.

2.3.6.1 *The Concept of Evaluation*

Many researchers have advanced definitions regarding the best way to view the term evaluation. Collins Concise Dictionary defines evaluation as "to ascertain or set the amount or value ... to judge or assess the worth of" whereas Gbamanja (1989, p. 131) sees evaluation as a process by which we find out how far the learning experiences as developed and organized are actually producing the desired results. This involves identifying the strengths and weaknesses of a plan and it helps one check the validity of the basic hypotheses upon which the instructional program has been organized and developed. And it also checks the effectiveness of the particular instruments, that is, the teachers and other conditions that are being used to carry forward the instructional program. Evaluation results assist teachers in knowing whether the curriculum has been effective and how curriculum programs could be improved upon.

Evaluation in education is a process by which we find out whether the changes in behavior of students have occurred. If these changes have not occurred, we are left to question why they have not occurred and what could be done in order to enable the planned changes to take place. With this in mind, Gbamanja (1989) defined evaluation in a broader perspective as that "wherein several aspects of the curriculum must be evaluated such as the objectives, its scope, the quality of teachers, principals and other personnel in charge of the curriculum, the capability of the students, the relative importance of the various subjects, the effectiveness of the equipments and materials, the suitability of the instructional environment and all strategies and methods proposed to achieve the objective at hand" Are rated.

According to Amalaha evaluation is placing a value upon something on the basis of a standard that we set up. Teachers set up standards through their objectives of instruction; they then evaluate students to establish whether or not they have met these objectives. Therefore, teachers are concerned with teaching outcomes, both quantitatively and qualitatively (Amalaha, 1979, p. 251).

To this end, we must attempt to distinguish between evaluation, measurement and assessment. In summary, evaluation involves appraisal or judgment with respect to some criteria. Measurement on the other hand is only a compo-

ment of evaluation—it refers to the process of obtaining a quantified representation of some characteristic. It implies some sort of scale on which individuals can be ranked with respect to what they can do or what they know. Measurement describes quantitatively the degree to which individuals possess a certain trait. These traits or characteristics are usually well defined and specific. Evaluation however, depends upon the results of measurement (Gbamanja, 1989, p. 32).

Assessment is a term for investigating the status of an individual or group, usually with reference to certain expected outcomes. Assessment tells us how well a student or group of students have achieved particular concepts or skills using various forms of measuring techniques. Assessment is undertaken either as a continuous process or terminal one. Terminal assessment involves one final test or examination at the end of a program, but continuous assessment is a continuous updating of a teacher's judgment about his or her own students that permits cumulative judgments about their performance to be made (Ibid). Sanders *et al.*, (1990) defined assessment as the process of obtaining information that is used to make educational decisions about students, to give feedback to the student about his or her progress, strengths, and weaknesses, to judge instructional effectiveness and curricular adequacy, and to inform policy. The various assessment techniques according to them include, but are not limited to, formal and informal observation, qualitative analysis of pupil performance and products, paper-and-pencil tests, oral questioning, and analysis of student's records. Collins Concise Dictionary defines assessment as “the estimate of the value of outcome, the evaluation of student's achievement in a course.”

The above definitions of evaluation and assessment have little or no difference as the term is used in this study. However, there are many ways of getting evidence about behavior changes in students as a result of particular curriculum programs. Consequently, any way of getting valid evidence about the kinds of behavior represented by educational objectives laid out in a school curriculum is considered an appropriate evaluation procedure.

2.3.6.2 Teacher's Professional Role and Responsibilities for Student Assessment

There are some standards in making sure that students are evaluated properly. In recognizing the critical need to revitalize classroom assessment, a number of standards focus on classroom-based competencies while others focus on the assessment of the whole educational program. According to Sanders *et al.*, (1990) the scope of a teacher's professional role and responsibilities for student assessment may be described in terms of the following activities which require competence in student assessment and sufficient time and resources to complete in a professional manner.

- Activities Occurring Prior to Instruction
 - (a) Understanding students' cultural backgrounds, interests, skills, and abilities as they apply across a range of learning domains and/or subject areas;
 - (b) Understanding students' motivations and their interests in specific class content;
 - (c) Clarifying and articulating the performance outcomes expected of pupils; and
 - (d) Planning instruction for individuals or groups of students.
- Activities Occurring During Instruction
 - (a) Monitoring pupil progress toward instructional goals;
 - (b) Identifying gains and difficulties pupils are experiencing in learning and performing;
 - (c) Adjusting instruction;
 - (d) Giving contingent, specific, and credible praise and feedback;
 - (e) Motivating students to learn; and
 - (f) Judging the extent of pupil attainment of instructional outcomes.
- Activities Occurring After The Appropriate Instructional Segment (e.g. lesson, class, semester, grade)
 - (a) Describing the extent to which each pupil has attained both short- and long-term instructional goals;
 - (b) Communicating strengths and weaknesses based on assessment results to students, and parents or guardians;
 - (c) Recording and reporting assessment results for school-level analysis, evaluation, and decision-making;
 - (d) Analyzing assessment information gathered before and during instruction to understand each students' progress to date and to inform future instructional planning;
 - (e) Evaluating the effectiveness of instruction; and
 - (f) Evaluating the effectiveness of the curriculum and materials in use.

It is only when teachers understand the techniques of evaluation that they will be capable of maximizing the potential of their students (Amahala, 1979, p. 251).

2.3.6.3 *Standards for Teacher Competence in Educational Assessment of Students*

Every standard that follows is an expectation for assessment knowledge or skill that a teacher should acquire in order to perform well in his or her evaluation effort. As a set, according to Sanders *et al.*, (1990), the standards call on teachers to demonstrate skill at selecting, developing, applying, using, communicating, and evaluating student assessment information and student assessment practices. The standards are:

1. Teachers should be skilled in choosing assessment methods appropriate for instructional decisions: Skills in choosing appropriate, useful, administratively convenient, technically adequate, and fair assessment methods are prerequisite to good use of information to support instructional decisions. Teachers need to be well-acquainted with the kinds of information provided by a broad range of assessment alternatives and their strengths and weaknesses. In particular, they should be familiar with criteria for evaluating and selecting assessment methods in light of instructional plans.
2. Teachers should be skilled in developing assessment methods appropriate for instructional decisions: While teachers often use published or other external assessment tools, the bulk of the assessment information they use for decision-making comes from approaches they create and implement. Indeed, the assessment demands of the classroom go well beyond readily available instruments.
3. The teacher should be skilled in administering, scoring and interpreting the results of both externally-produced and teacher-produced assessment methods: It is not enough that teachers are able to select and develop good assessment methods; they must also be able to apply them properly. Teachers should be skilled in administering, scoring, and interpreting results from diverse assessment methods.
4. Teachers should be skilled in using assessment results when making decisions about individual students, planning teaching, developing curriculum, and school improvement: Assessment results are used to make educational decisions at several levels: in the classroom about students, in the community about a school and a school district, and in society, generally, about the purposes and outcomes of the educational enterprise. Teachers play a vital role when participating in decision-making at each of these levels and must be able to use assessment results effectively.
5. Teachers should be skilled in developing valid pupil grading procedures that use pupil assessments: Grading students is an important part of pro-

fessional practice for teachers. Grading is defined as indicating both a student's level of performance and a teacher's valuing of that performance. The principles for using assessments to obtain valid grades are known and teachers should employ them.

6. Teachers should be skilled in communicating assessment results to students, parents, other lay audiences, and other educators: Teachers must routinely report assessment results to students and to parents or guardians. In addition, they are frequently asked to report or to discuss assessment results with other educators and with diverse lay audiences. If the results are not communicated effectively, they may be misused or not used. To communicate effectively with others on matters of student assessment, teachers must be able to use assessment terminology appropriately and must be able to articulate the meaning, limitations, and implications of assessment results. Furthermore, teachers will sometimes be in a position that will require them to defend their own assessment procedures and their interpretations of them. At other times, teachers may need to help the public to interpret assessment results appropriately.
7. Teachers should be skilled in recognizing unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information: Fairness, the rights of all concerned, and professional ethical behavior must undergird all student assessment activities, from the initial planning for and gathering of information to the interpretation, use, and communication of the results. Teachers must be well-versed in their own ethical and legal responsibilities in assessment. In addition, they should also attempt to have the inappropriate assessment practices of others discontinued whenever they are encountered. Teachers should also participate with the wider educational community in defining the limits of appropriate professional behavior in assessment (Sanders *et al.*, 1990).

3 School Effectiveness and Improvement

In this chapter, I intend to focus not simply on what school effectiveness and improvement are, but the impact they have on teachers and students and the part they play in meeting the challenges facing education globally. The purpose of this section is to examine the wider context in which measures are made on school effectiveness and improvement, as well as quality teaching and learning.

3.1 The Concept of School Effectiveness

“We will not have better schools without better teachers, but we will not have better teachers without better schools in which teachers can learn, practice, and develop”

(Owens, 2004, p. 406).

The concept of school effectiveness is very complex. In its simplest form, concern for school effectiveness includes such questions as what and how can students learn. How can other teachers’ help students learn more with greater ease, or depth, or speed? What should we be teaching children? How can a curriculum be structured to maximize students’ learning? How should teachers teach the curriculum? It is only after these questions have been considered that we can sensibly ask a ‘school effectiveness’ question such as how can schools be organized and operated to maximize the quality of curricula and instruction offered to students? (Stringfield, 1994, p. 55). Additionally, not only are school effectiveness questions complex, they are important. Almost every society assigns many of its instructional tasks (teaching students to read, write, do mathematics and so forth) to schools. If our children are to achieve levels of productivity, citizenship, and personal comfort that exceed our own, they will have to be better educated. Much of that improved education must be provided in schools through a teacher’s guidance. Therefore, our schools must become more effective to be able to carry out these functions (Ibid).

However, there two strong trends in the mid-1970s have substantially changed the way schools in the west are regarded and managed. Beare, Caldwell and Millikan (1989, p. 1), classified the first of these strong trends as, “the effective schools management”; it was in fact a concerted attempt in several countries in the west to discover ways of creating excellent schools. The movement has produced an impressive amount of literature which school managers cannot afford now to overlook. The second movement was a profound change

in the field of study called educational management in Great Britain and educational administration in North America and Australia and which has tended to make many of the educational ideas from before 1975 obsolete.

The emergence of the school effectiveness movement resulted from social science findings that argued that home background had a far greater influence on a child's development than did the school the child attends. To combat this attitude, a wide range of research efforts focused on separating the impact of family background from that of the school, ascertaining whether some schools were more effective than others and, if so what factors contributed to the positive efforts (Stoll & Fink, 1996, p. 27). School effectiveness researcher's aim is to ascertain whether differences in resources, processes and organizational arrangements affect student outcomes, and if so in what way. Ultimately, school effectiveness research seeks to describe what an effective school looks like (Stoll & Mortimore, 1997, p. 9). There are several obstacles to the development of a vibrant school effectiveness research domain the world over. The reason for this slow development in school effectiveness is lack of consensus regarding content that should be learned. The lack of knowledge about how people learn and the lack of quality measures of learning are also major factors. Especially troublesome is the historic lack of a firm teacher effectiveness research base, problems with multi-collinearity, the lack of development of psychometric tools for dealing simultaneously with multiple levels of analysis, and finally, the lack of models on which to build (Stringfield, 1994, pp. 56–57).

Nonetheless, school effectiveness depends on several other factors, especially in recent times when global reforms in education and innovation have been the order of the day. Researchers, educational planners and policy makers have been much occupied with what constitutes school effectiveness. They are also concerned with how to make their schools more effective and raise quality and standards of achievement. In spite of all these efforts, not one research finding has proved otherwise or suggested a strong perception on this issue (Levine & Lezotte, 1990 in Stoll & Mortimore, 1997, p. 9). A basic definition of 'effectiveness' is 'the production of a desired result or outcome.' It is clear from research literature that the quality of teaching is at the heart of effective schooling. However, high quality teachers do not always perform to their full potential and teaching styles and strategies are important factors related to pupil progress (Sammons, Hillman & Mortimore, 1997, p. 103).

The question remains, according to Owens (2004, p. 167), what is it that the schools do in order to fulfil the responsibility of quality teaching? Purkey and Smith (in Owens, 2004) developed a penetrating analysis of the effective school research literature by stating "the most persuasive research suggests that students' academic performance is strongly affected by school culture. This culture is composed of values, norms, and roles existing within insti-

tutional district structures of governance, communication, educational practices and policies and so on. Successful schools are found to have cultures that produce a climate or 'ethos' conducive to teaching and learning: efforts to change schools have been most productive and most enduring when directed towards influencing the entire school culture via a strategy involving collaborative planning, shared decision making, and collegial work in an atmosphere friendly to experimentation and evaluation." While Owens (2004) further argued that increased involvement of teachers and other staff members in decision making, expanded opportunities for collaborative planning, and flexible change strategies that can reflect the unique personalities of schools are all factors to be included in school effectiveness models. The goal is to change the school culture, which requires staff members to assume responsibility for school improvement, which in turn is predicted on their having the authority and support necessary to create instructional programs that meet the educational needs of their students.

Scheerens and Creemers (1989, pp. 691–706) attempt to contribute to the development of the school effectiveness model by means of critiquing the state of the art of school effectiveness by examining the overall structure of a multilevel school effectiveness model and by further specifying some of the basic substantive ingredients. Nie Xiaorong describes it as "a contextual, multilevel and multifactor model for school effectiveness" (Xiaorong, 2001, p 26).

Scheerens and Creemers's (1989) five-factor model of school effectiveness is characterised by first looking at students and the factors that cause rather than features that affect high academic achievement. As the first factor of their model recognized that it is particularly difficult to ignore high expectation of students' outcome factors. The second factor in the model is the need for methodological competence in teaching and learning because of the need for basic skills. Xiaorong (2001) similarly sees these factors as academically-relevant, and opines that anyone who has regular direct interaction with students including regular classroom teachers and persons providing additional academic service must be included in this category. Scheerens and Creemers argued that instead of seeing it as a goal-measurement factor, it could be considered a control variable. The third requirement deals with the need for strong instructional leadership. Instructional leadership in this context involves providing vision, direction and support to students. The fourth dimension involves initiating moves towards carrying students, teachers and parents along and giving feedback where necessary. The final facet involves the general idea of what should and should not be in the school effectiveness agenda, and the need for a more refined school effectiveness model. This includes both structural and cultural conditions for closely monitored learning.

Beare, Caldwell and Millikan (1989) drew from research on school and teacher effectiveness to suggest that instructional leadership should involve

two broad interrelated areas of activity: the fostering of excellence in teaching and the capacity to deal successfully with certain 'key situations'. They concluded that to achieve excellence in teaching involves six types of activity:

- Clinical assistance: This means the capacity of the teacher to diagnose student needs and provide learning experiences to meet the needs of each individual student.
- Planning: The selection of appropriate objectives, learning experiences and assessment procedures by the teacher.
- Instruction: The successful communication and achievement of experience for all students.
- Classroom management: Maintaining an orderly environment for learning.
- Monitoring of progress: This is a continuous process of assigning and reporting for all students, providing information for the ongoing process of clinical assistance, planning and instruction.
- Care for students: This is an action on the part of the teacher which reflects values such as respect, acceptance, support, and recognition. (p. 154).

They identified the key situations in instructional leadership as:

- Teacher supervision and development
- Teacher evaluation
- Instructional management and support
- Resource management
- Coordination
- Trouble shooting (p. 155).

Scheerens and Creemers (2001, pp. 691–706) acknowledged that more refined models of school effectiveness have been developed by educational researchers (e.g., Duckworth, 1983; Glasman & Biniaminov, 1981; Blom, Brandsma & Stoel, 1985; etc.). They took into consideration the student's socio-economic background variables and learning theory at the student level. Although students' socio-economic background cannot easily be influenced by education, it is used as a control factor which has to be taken into account in order to facilitate interpretation of other factors.

Students are nurtured in a learning community. Learning theory provides the basic ideas for the activities of teaching and educating. With respect to the conditions of better school effectiveness at the classroom level, Scheerens and Creemers (2001) considered two important factors: the opportunity to learn and the quality of instruction. Opportunity to learn refers to the amount of time allocated to learning and the subject. This factor is an intermediate variable

between teaching and the learning of students. The effects of management activities in the classroom can be measured in the extent to which the opportunity to learn is enlarged. Quality of instruction refers to the variables of clarity and the structure of instruction. To look for factors of school effectiveness at the classroom level, two prerequisites must be fulfilled—a suitable curriculum and the development of professional teachers (Xiaorong, 2001).

Theories both on learning and instruction are essential since teaching improvement fosters learning improvement, and one does not know whether teaching has improved if there is no improvement in learning. Learning theory is mainly based on cognitive theory which gives an important impetus to the hypotheses about teaching in the school (Creemers, 1994a, p. 16). In an attempt to establish a more refined model of school effectiveness Scheerens (1992) wrote on the process indicators of school functioning. These indicators describe the performance of the education system. According to Scheerens, when an entire education system functions better, the individual school system becomes equally effective. Scheerens's "Context-input-process-output-outcome" model of schooling is categorized into five stages. However, he wrote further on the "process" aspect, mentioning little about the other four aspects. Although, the first indicator in Scheerens model "context" involves consumer demands or the general demand for education and the willingness of clients to pursue a program in school. The second aspect "input", discusses the resources needed for educational effectiveness, and "teacher qualification" emphasises the caliber of staff require to carry out instructional processes. The third stage, "process" as Scheerens puts it, refers to characteristics of education systems that can be manipulated. This involves "curriculum" or the totality of experiences which the school offers to students (Gbamanja, 1989, p. 3). Next on the line is "school organization"; it contains administrative activities aimed at goal achievement (Peretomode, 1991; Whawo, 1993; Ukeje, Okorie & Nwagbara, 1992).

Another factor that constitutes a necessary part in school effectiveness models is "school climate", which includes all the environmental conditions that influence educational effectiveness. In a study conducted by Barry J. Fraser, it was observed that combining the effect of environmental factors such as home, peer, classroom and mass media environment proposed in the model of educational outcome showed that these factors had strong influences on students' learning abilities (Fraser, 1989, pp. 107–719). Fraser argued that "output" was the fourth step while Scheerens (1992) reported about the end product (graduates). "Outcome" indicates the desire for employment and good earnings. (see also, Mortimore *et al.*, 1988; Owens, 2001, pp. 167–68)

Scheerens's (1992, p. 66) integral model of school effectiveness is an improved model that embraces more facets and gives an overview of the degree to which each of the factors has been empirically supported. On the whole,

according to Scheerens, the most straightforward way of seeing this meso (school level) / micro (classroom level) relationship is to assume that meso-level conditions facilitate micro-level conditions. This implies that instructional processes are regarded as the most direct determinants of school learning and achievement and organizational and curricular conditions at the school level are considered to be more indirect conditions of educational achievement.

Corroborating Scheerens's idea, Campbell *et al.* (2004, p. 9) argued that a distinctive characteristic of a teacher is the "power to teach". It is the ability to adjust general pedagogical principles which are acquired during professional training in light of his/her judgement about a student in a particular context. They further accepted that teachers' subject knowledge is widely believed to influence their job effectiveness (p. 53). It should be noted that understanding the meaning that teachers attach to teaching effectiveness and the appropriate combinations of qualitative and quantitative paradigms are also in an exploratory stage in contemporary research endeavors (p. 11).

According to MacBeath and Mortimore (2001, p. 11), in general effective schools tend to be good for all their students while all students tend to perform poorly in ineffective schools. To them, school is an indispensable tool in the education of children that has been entrusted with the education task and accepted from generation to generation as completing this task honestly and ethically. Ball (in Fielding, 1997, p. 144) rightly observed that quality and effectiveness are not neutral mechanisms in education, they do not simply improve education, they change it.

Alternatives to school have been tried and for most part have enjoyed a brief life. Schooling has become such an integral feature of the social and economic landscape that it is almost impossible to conceive of different approaches to educating children, at least in their pre-adolescent years. On the whole, an ill equipped teaching cadre in schools have never been result oriented and tend to be damaging to the development of a country, as we have experienced in Nigeria over the last two decades. In light of this, our schools must reform.

3.2 Educational Accountability and Effectiveness

3.2.1 Educational Accountability

The rising cost of education often leaves some schools with low quality and inadequate material and human resources. In addition, as enrollment in schools increases daily, the available resources may become over-stressed. The situation becomes even more frightening when a universal education program in Nigeria is about to be fully implemented. Therefore, adequate planning of the human and material resources are required to address the issue of ever-increas-

ing enrollment of students and the need to provide schools with teachers who can help them achieve appropriate educational objectives. The complexity of schooling, its constraints, contingencies, and other difficulties, also make planning a necessity.

The rising outcry for educational accountability is a universal issue that also necessitates planning. The school system must account for resources invested in it by society in terms of how provided resources are utilized to meet educational goals and objectives. This is the logical philosophy which underlines the process of feedback in the education process. Accountability in the school system examines the efficiency and effectiveness of education production. Educational planning coordinates the activities of the school system towards goal realization. Experts suggest that unplanned activities are random, dysfunctional and not directed towards the accomplishment of educational objectives (Adesina, 1980, 1982, 1988; Adeyemi, 1995; Whawo, 1993).

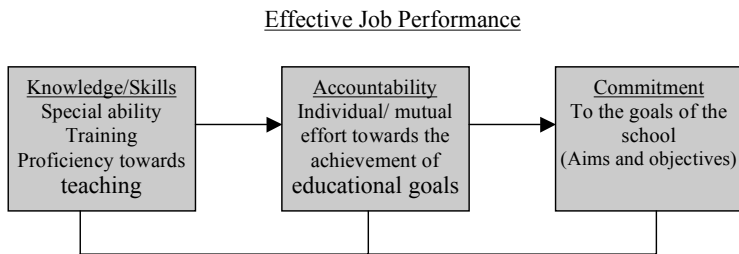


Fig: 3.2.1.1: A mini-model of the basic elements for goal achievement (Ololube, 2004).

According to Enaohwo and Eferakeya (1989), accountability means ensuring that the level of performance of educational inputs is sufficiently related to the level of educational goal achievement. In other words, accountability attempts to establish a desirable relationship between inputs and outputs. The relationship involves responsibility, answerability, control, and educational productivity, probity, responsiveness, appraisal and goal-achievement. However, to Ukeje, Okorie and Nwagbara, accountability is the requirement of answerability for one's performance or action. In a sense, it is the opposite phase of responsibility. This is so because, as they have stated, responsibility is assigned downward from top management while one is accountable upward to some superior for the proper performance of his functions. Accountability is manifested in many ways. It is manifested in form of products (students in terms of school), in programme budgeting (objectives), and in the adoption of system-analysis in management designs (that is in terms of emphasis on efficiency in operation). If one has been delegated an amount of authority commensurate

with his assigned responsibility then he can legitimately and legally be held accountable for the results obtained. In terms of relationships, just as responsibility is derived from functions and authority is derived from responsibility, accountability is derived from authority. Thus the relationship between and among the factors can be depicted as follows: Functions–Responsibility–Authority–Accountability (Ukeje, Okorie & Nwagbara, 1992, pp. 18–19). The argument here is that accountability requirement involves satisfying extrinsic economic and social purposes towards the achievement of educational goals.

3.2.2 Teachers' Job Effectiveness

Drucker's idea in Schoderbek *et al.* (1988) distinguished between effectiveness and efficiency on the job, where they tolled their line of reasoning that:

"Effectiveness is the foundation of success, efficiency is a minimum condition for survival, efficiency is concerned with doing things right, effectiveness is doing the right things" (p. 22).

Drucker's quotation has several important implications. It means that prospective workers will succeed only by identifying the critical component of their professional assignment. It further suggests that extremely efficient managers may be successful even if they are doing the wrong things. This distinction between effectiveness and efficiency is important. Effectiveness⁹ is making sure that the functions that influence success are carried out. Efficiency is related to the number of outputs versus the number of inputs (productivity). Of the two effectiveness is more important. Thus the basis of this research work (see Fig 3.2.2 1).

⁹ The ultimate goal of formal organizations is effectiveness to the extent to which organizations achieve their objectives with minimum expenditure of time and money. The effectiveness of an educational institution is the extent to which students are achieving, the teachers are satisfied, the staff morale is high, the student's drop-out rate is low, etc. In public utility it is the extent to which services are rendered promptly and satisfactorily; and for business organizations, it is the extent to which profit is maximized. Public utilities in Nigeria in general are said to be ineffective because they fail to satisfy public expectations by not rendering services promptly and adequately (Ukeje, Okorie & Nwagbara, 1992, p. 281).

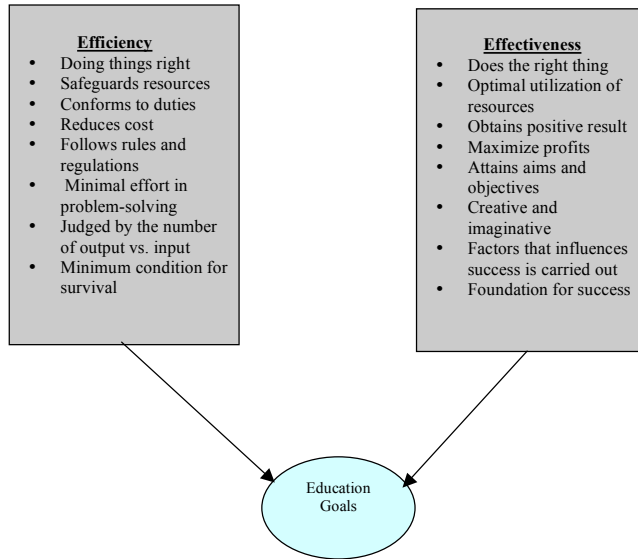


Fig: 3.2.2.1: Efficiency Vs Effectiveness on teachers Job Performance.

Carrying these ideas one-step further, we can recognize the need to isolate the critical parts of every profession. Ultimately, a teacher's success will be a function of his or her ability to identify and achieve results in teaching, based on his/her academic and professional training. It is no secret that most companies advertising for vacancies include additional qualifications and professional ability as added advantages in their recruitment and selection exercise. The medical profession for instance, emphasizes adequate training of persons who want to be called doctors. This is primarily based on the assumption that professional and academic training have a lot to do with effectiveness.

The medical doctor's position is taken into consideration because he or she deals directly with human beings and not files just like teachers. In order to avoid mediocrity, teachers need to be professionally and academically trained. Professionalism and academics must go hand in hand so that there are no discrepancies in the job effectiveness of teachers. If one is sound academically and not professionally there is still a problem because professionalism entails one being an expert in addition to academic qualifications. This means that for any particular work to be effectively performed there has to be a balance between academic and professional training (Ololube, 2000, p. 2).

However, if success as a teacher can be stated so simply, why are there so many unsuccessful and ineffective teachers? It is one thing to define success in terms of achieving results; it is something else to determine why some

teachers succeed and others fail. Many attempts have been made to isolate and pinpoint the factors or conditions associated with teachers' success; Katz (1974, pp. 90–102) suggests that three skills are important for career success: technical, human and conceptual skill. The acquisition of technical, human and conceptual skills is the responsibility of each individual teacher. The training and remediation of these skills may be attained through the assistance from institutions established to do just that. A question needs to be asked; how do people learn to teach and acquire the needed skills?

For example, to Schoderbek *et al.* (1988, p. 22), people learn how to manage through formal education that teaches the principles and theories of management; theories have to be applied correctly to produce a successful manager. They also identified “managing through experience” as an outlet to success. Thus experience commands respect. Many have implicitly underscored the value of experience. Yet experience can also be a milestone around the neck of a manager who must operate in a world of rapid change. For experience to be useful, a manager must first be knowledgeable professionally. What this means is that a teacher needs to undergo formal education that teaches the principles and theories of education in order for that person to be able to teach effectively.

In addition, modern organizations need technical specialists who are aware of the current developments in their industry and specialty. Thus, recruitment brochures and company pamphlets often highlight attractive work assignments, desirable locations and examples of notably successful young professionals. Some organizations have come up with policies that employees who have worked with them for more than 10 years and are holders of an academic qualification such as B.Sc., BA, HND, OND etc, should embark on the acquisition of a professional qualification such as CIA, ACCA, ACA, NIM, MBA, and MILR so that the employee can better cope with the trends and dynamic nature of the business world (Oolube, 2000, p. 4).

For example, in 1986, Nokia realized that to cope with the ever-increasing global competition, it had to offer its employees better opportunities to develop and educate themselves while in full-time employment short courses were considered insufficient for the purpose of updating and expanding the competence of experts. It was realized that training and education must be goal-oriented, long-term and well-motivated activities. Therefore, an opportunity to gain a generally accepted degree was offered. Nokia's Technology Education and Training (TET) model is based on cooperation with universities and numerous other educational institutions. The institutions offer the formal training setting, professional teachers and performance evaluation. The objective of the TET model is to maintain and expand the competence of Nokia's employees by upgrading their educational level. To achieve this goal, a number of TET Programs have been implemented for each level of technical educa-

tion: Ph.D., M.Sc. (Eng.), and B.Sc. (Eng.). At the end of 1992, over 600 persons had begun to pursue degree-oriented studies within these programs, and nearly 200 persons have already completed them. Nokia's positive experiences encouraged several other Finnish companies to build similar programs. Educational authorities, universities and other educational institutions welcomed the cooperative scheme, and soon a number of similar government-funded courses were introduced. At the end of 1992, more than 2000 students in Finland were pursuing degree-level studies while in full-time employment (Kautto-Koivula 1993, p. 1). The understanding here is that employees cannot perform effectively on the job if they have not acquired the proper training and academic qualifications required to do the job.

In relation to the abovementioned, it is clear that teachers need to be well trained so that they can be effective in their jobs. For example, teachers in Finland complete an academic degree, i.e., they take their master's thesis, primarily in education. The subject teachers major in other faculties but do their educational studies at the Department of Teacher Education. The special teacher's program consists of postgraduate, professional training, leading to a diploma (Tella, 1996, p. 63). In the Subject Teacher Section, education is coordinated and integrated with other university degree studies: the future teacher's educational studies and teacher training take place alongside their other academic subjects' studies before they complete a university degree (M.A). A study period with concentration on subject studies may be followed by periods of more intensive educational studies or periods of teacher training. The basic idea of this integration is to make teacher education more efficient and systematic combining theory with practice, and to make better and economic use of the teaching resources in the universities (Ibid, p. 54). Class teacher and subject teacher programs are aimed at educating teachers for general education tasks and jobs. These teachers are expected to be capable and willing to develop Finnish education and the Finnish educational system.

In all, it is presumed that a professional teacher needs to be imaginative, interesting, curious, empathetic, friendly and above all hardworking in order to be effective in the classroom. Thus their education should be structured so that it best helps them create a learning environment that enhances and strengthens the learning disposition of students based on their training (Reiger & Stang, 2000 pp. 62–64).

3.3 Teachers' Motivation for Effective Schooling

The term motivation is a complex and difficult term to define; many writers and researchers have put forward definitions of motivation (e.g., Vroom, 1964; Mintzberg, 1979; Locke, 1970, 1976, 1983; Herbert, 1981). However, Golem-

biewski (1973, p. 597) refers to motivation as the degree of readiness of an organization to pursue some designated goal and implies the determination of the nature and locus of the forces inducing the degree of readiness. To Kelly (1974, p. 279) motivation has to do with the forces that maintain and alter the direction, quality and intensity of behavior. According to Hoy and Miskel (1987, p. 176) motivation is the complex forces, drives, needs, tension states, or other mechanisms that start and maintain voluntary activity directed towards the achievement of personal goals. From the above definitions, some issues are brought to mind. They deal with what starts and energizes human behavior, how they are directed and sustained, and their outcomes (performance).

It follows therefore that there is a relationship between motivation and job satisfaction, which is paramount in any organization. However, motivation and job satisfaction concepts are often confused with one another. Peretomode (1991) citing the work of Gibson *et al.*, pointed out that the two terms are related but are not synonymous concepts. They stated that satisfaction is one variable that is part of the motivational process. While motivation is primarily concerned with goal-directed behavior, job satisfaction refers to the fulfillment acquired by experiencing various job activities and rewards. It is possible that an employee may display low motivation from the organization's perspective and yet enjoy every aspect of the job. This state represents high job satisfaction. Peretomode also argued that a highly motivated employee might also be dissatisfied with every aspect of the job (Peretomode, 1991, p. 113).

Herzberg *et al.* (The two-factor theory of 1959) developed another theory that is heavily based on need fulfillment because of his interest on how best to satisfy workers. They carried out several researches to explore those things that cause workers in white-collar jobs to be satisfied and dissatisfied. The outcomes of their study shows that the factors that lead to job satisfaction when present are not the same factors that lead to dissatisfaction when absent. Thus, they saw job satisfaction and dissatisfaction as independent¹⁰. They referred to those environmental factors in the system that cause workers to be dissatisfied as *Hygiene Factors*. To them, the presence of these factors does not cause satisfaction and consequently fails to increase performance of workers in white-collar jobs. Their hygiene factors are company policy and administration, technical supervision, salary, interpersonal relationships with supervisors and work conditions; they are associated with job context:

- ***Company policy and administration:*** This may be referred to as the rules and regulations of the organization, hence the do's and don'ts.

¹⁰ It is of considerable importance to note that the contribution of Herzberg *et al.* (1959) was to help recognize that the opposite of dissatisfaction is not satisfaction but not dissatisfaction. Both hygiene factors and motivators are important but in different ways (Naylor, 1999, p. 542).

- **Technical supervision:** According to them, the relationship among employees does not motivate them to work harder.
- **Salary:** To Herzberg *et al.*, pay is not a motivating factor and does not stimulate the employee.
- **Interpersonal relationship with supervisors:** The relation with one’s supervisors does not make one work harder.
- **Work conditions:** The condition of work may be very good, but according to Herzberg and others, working conditions do not influence job performance and do not make one to work extra hard.

Herzberg *et al.* indicated that the aforementioned factors are perceived as necessary but not sufficient conditions for the satisfaction of workers. They further identified *Motivating Factors* as those factors that make workers work harder and classified them as: achievement, recognition, work itself, responsibility and advancement. Achievement is represented by the drive to excel, accomplish challenging tasks and achieve a standard of excellence. The individual’s need for advancement, growth, increased responsibility and work itself are said to be the motivating factors.

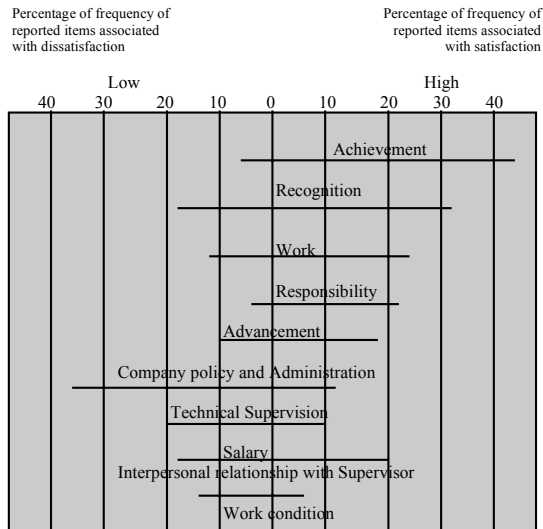


Fig: 3.3.1: Summary of Herzberg’s Research Findings. Source: Schoderbek et al. (1988, p. 270)

The above Fig: 3.3.1 reveals that both the hygiene factors and the motivating factors interplay with each other. The motivating factors have an upper hand

and are sufficient reasons why workers ought to work harder. The motivators are related to job content and it is presumed that there is a direct relationship between effectiveness and job satisfaction. Herzberg et al's theory has been widely influential and commonly appears in literature of business and industry as well as education. Although some advocate abandoning it in favor of newer and more complex expectancy theory, this two-factor model remains a powerful explanation of motivation in the workplace (Owens, 2004, p. 379).

Similarly, according to Owens (2004, p. 378), citing Ralph Savage's interviews with Georgia teachers, reported that Herzberg's theory was generally accepted. Also, Rodney Wickstrom's study, which reported a study of teachers in the Provinces of Saskatchewan, Canada, concurred. Owens (2004) referring to Gene Schmidt's study of 132 high school principals in districts in a Chicago suburb, again found that the two-factor theory appeared to be strongly supported by the schools' administrators and that "recognition, achievement, and advancement are major forces in motivating them to lift their performance to approach their maximum potentials." In operational terms, this investigator concluded, "Encouragement and support for school administrators who desire to be creative, to experiment with new educational programs, and to delve into different educational endeavors are needed to allow more opportunities for achievement."

Applying these concepts to this study, if school improvement depends fundamentally on the improvement of teaching, efforts to make school more effective should focus on ways to increase teachers' motivation and capabilities. Effective teachers are described as having the capabilities to do the following: (a) optimize academic learning time, (b) reward achievement in appropriate ways, (c) utilize interactive teaching practices, (d) hold and communicate high expectations for student performance, and (e) select and use appropriate types of instruction. In addition to those capacities, caring and flexibility are attributes which define effective teachers who can create a good social or psychological and physical climate in the classroom. Exemplary teachers appear able to integrate professional knowledge (subject matter and pedagogy), interpersonal knowledge (human relationships), and intrapersonal knowledge (ethics and reflective capacity) (Collinson, 1996).

Right from the beginning of studies on school and teacher job effectiveness, teacher's professional development was identified as a potentially important influence on student learning. In recent years, quality teaching and quality professional development have been given a central place in studies of school change and improvement. Commitment to teaching and the workplace are believed to be enhanced by psychic rewards (acknowledgement of teaching competence), meaningful and varied work, task autonomy and participatory decision-making, feedback, collaboration, administrative support, reasonable work load, adequate resources and pay, and learning opportunities for pro-

viding challenge and accomplishment (Firestone & Pennel, 1993; Johnson, 1990; Rosenholtz, 1989). But extrinsic incentives such as merit pay or effective teaching awards have not been shown to affect teacher effectiveness.

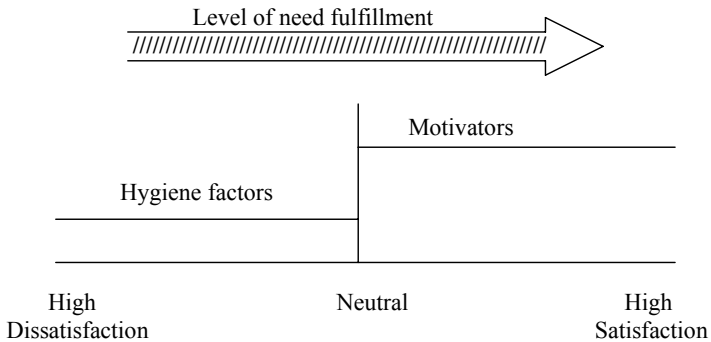


Fig: 3.3.2: Herzberg's Two-factor Theory of Motivation. Source: Schoderbek et al. (1988, p. 269)

The two-factor theory reveals that the hygiene factors are extrinsic or simple; they evolve from the working environment while the actual satisfiers are intrinsic and give a greater effectiveness by designing and developing ways to meet their higher level needs. In other words, studies have found that intrinsic rewards such as giving employees greater opportunity, responsibility, authority and autonomy were more effective than extrinsic rewards. Alternatively, a person's ability to perform is a powerful force in determining whether he or she effectively attains an adequate level of accepted performance in the school. However highly motivated to perform a person may be, he or she needs to possess the necessary ability to attain the expected level of performance. A person's ability to perform is generally composed of two key elements. These are the person's aptitude and the learning opportunities that permit the person to develop his or her abilities¹¹ (Ukeje, Okorie, & Nwagbara, 1992, p. 269).

¹¹ The current global movement in the reform of education seems to focus on a number of issues that include standards, quality and teacher preparation. With regard to the latter, while teacher education curricula in most parts of the world attempt to strike a balance between content and professional training, the emerging scenario is that of training expert teachers. Three types of knowledge identified as necessary for expert teaching are content knowledge, pedagogical knowledge and pedagogical content knowledge. For Nigeria to embark on a satisfactory and effective public education reform, it is essential that its most valuable human resource (i.e. teachers) must be comprehensively and adequately developed. Attention must be paid to both pre-service and in-service to raise an excellent quality-oriented teaching force. Teacher educators and researchers make important and well-informed decisions about what should be included in pre-service and in-service teacher development programmes. However, it is also important to take into account the teachers' own perceptions about the areas in which they feel

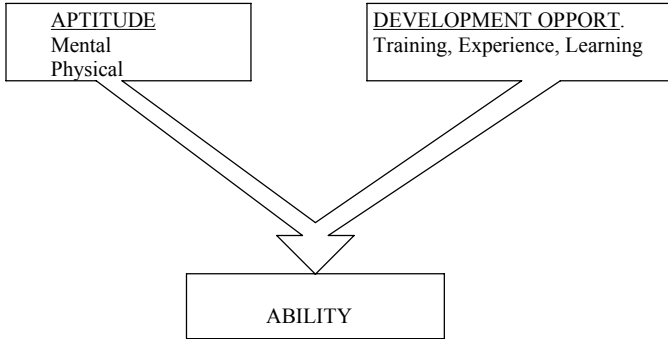


Fig: 3.3.3: Combination of Aptitudes and Development Opportunities Yields ability.
Source: Ukeje, Okorie and Nwagbara (1992, p. 269).

From the forgoing, it is clear that for teachers to effectively perform their duties, they need adequate training in order to increase their competencies. This might be done through formal or informal methods. Literature also reveals that Herzberg *et al.*'s two-factor theory is of paramount importance to manpower planning in education. Through the process of 'manpower planning' an institution ensures that it has the right number of persons and the right kind of people at the right place at the right time, doing things for which they are economically most useful although it does not involve anticipating needs and implementing plans. Manpower in education itself is the aggregate of skills and aptitudes resulting from education and training that equip teaching staffs with the capacity to plan, organize and carry out education processes.

3.4 Evaluation of School Improvement

Across many countries, economic, social and political forces have combined to create a climate in which educational reform is expected and in which schools feel continued pressure to improve. The global drive for improved educational performance has resulted in a form of accountability that places tightly prescribed targets at the center of systemic change as a result of constant evaluation. World-wide educational reform has embraced standardization as the solution to raising standards and improving economic competitiveness

confident and knowledgeable and those in which they do not. One practical avenue of sourcing such information is the teacher in training who is learning to acquire and display expertise (Olugbemi, 2000, pp. 287–309).

(Harris & Muijs, 2005, p. 1). Research studies have laid emphasis on the relationship between evaluation, school improvement, and school effectiveness. According to Cook, Shadish and William (1987), educational evaluation is meant to produce knowledge about the value of educational management and its component parts, that is, knowledge that can be used to make schools more responsive to the problems in education; in other words, they are intended to improve schools. Therefore, the main objective of educational evaluation is for improvement. How to improve the school is based on the criteria of school effectiveness. Without continuing improvement there is little school effectiveness. Evaluation is often used as a strategy for school improvement, and school improvement can be regarded as action for promoting school effectiveness. Both concepts are said to be related to each other (Xiaorong, 2001, p. 28).

However, certain themes were elicited from my theoretical data. The first theme was the importance of the internal processes of the school which include good leadership and good cooperation of the school staff. The second theme was regarding the quality of teaching and learning processes, which includes the learner as a responsible subject of his or her own learning with the teacher as a guide and organizer of the learning processes. The third factor is the school's readiness to build up contact with its environment. (buildings, equipments and technology). According to Bosah (1997, pp. 135–145) in his discussion of improving school plant provision in Nigerian schools, the quality of a building needs to be established—each building should be put to use and the adequacy of classroom space should be established against the number of students and teachers using the classroom. The equipment and technology provided in schools should also be commensurate to the need of the school, and their maintenance is obviously an important issue (Idu, 1997, p. 95).

The staff working in a school determine the effectiveness of that school. The recruitment, selection and retention of the right caliber of staff needed for the successful operation of the school system necessitate attention (Idu, 1997, p. 94). Any effort for building school effectiveness and improvement begins with the head teacher, the teachers, and other supporting staff. Of course, there are other factors—these are what Halinen (1995) refers to as ‘the ethos of the school’ or the joint effort the school’s staff makes in promoting its professionalism on behalf of every student to ensure their learning and well being (Halinen, 1995, p. 9). The question of school improvement and quality of education has become a key subject of debate and research throughout the western world. Like other domains, education is seeking ways and means of defining and evaluating school effectiveness.

Another important development in education is the growing significance in building teacher competence in the making of effective schools. It is believed that school effectiveness and improvement occur when schools produce good

results at the student level and other ways such as high teacher motivation (Halinen, 1995, p. 11).

However, for there to be effective school according to Sheerens and Creemers (1989, pp. 691–706), schools should be stimulated to be effective. The school should be encouraged to learn, to reorganize itself, to change its internal conditions and to become better at the process of management development. Sheerens and Creemers further suggest that school improvement should always be combined with the careful collection of data and the evaluation of such data with the ultimate criterion of enhancing the outcomes of education in terms of the growth of the knowledge and skills of students. In this way, school improvement and its evaluation processes can contribute to the enlargement of our knowledge base about what matters in schools and classrooms.

School improvement consists of organizational development, leadership and management development, teacher and teaching development, and consequently student development (Xiaorong, 2001, p. 29). Halinen (1995) proposed a mini model for managing the school's key resources:

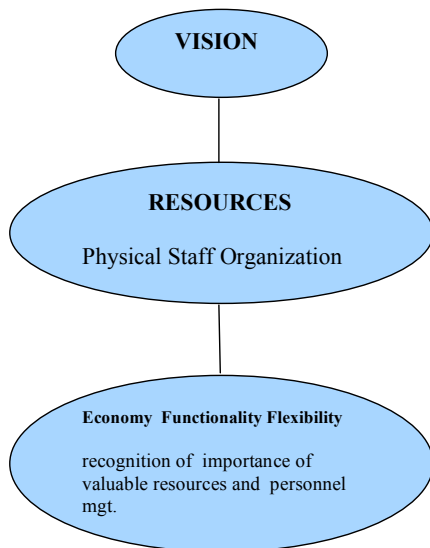


Fig: 3.4.1: Managing the Key Resources. Source: Halinen (1995, p. 20).

It is the leader's responsibility to ensure that the functionality of the resources is maintained and that they are used economically and flexibly. In other words, a school's facility and equipment must be well-maintained. The school, according to Halinen (1995), must be able to respond to changing situations

(Flexibility). Its network of cooperation and communication must work properly (Functional) and without redundancy and overlapping (Economy). It is the leader's task to protect subordinates from work overload, making sure that each person is allocated as even an amount of work and responsibility as possible. In addition, the leader must ensure that the professional skills of the staff are maintained, for example, through training. The school leader must also make the staff recognize the valuable special resources of the school and encourage use of them.

Furthermore, according to research, leadership development is a key to school improvement. Leadership is defined essentially as decision-making (Fullan, 1984; Harris & Muijs, 2005). Hanson (1979, p. 214) defines educational leadership as the decision-making process. Numerous researchers (e.g., Anyamele, 2004; Austin, Dwyer & Freebody, 2003) also emphasize the importance of staff development for school improvement. There would hardly have been school improvement without an ongoing professional development of teachers. The importance of the professional development of a teacher is—increased knowledge base, the new social complexities in which schools find themselves today, and the continued need for self-renewal. The plans for change within the school must be accompanied by professional development in a collaborative way. If evaluation of schools' effectiveness focuses on the involvement in that aspect of teachers' professional development and issues surrounding the personnel growth of the staff, the staff may be involved and work together in the acquisition of important professional and organizational skills. This may result in their ability to review and solve educational problems (Xiaorong, 2001, p. 30).

Teachers are partners and prime movers in the process of school improvement. They will act out their approaches to their work from their needs and aspirations. It is in this way that teachers' involvement in school management is enhanced. Thus, professional competence may foster teacher involvement in school management and provide the staff with the chance to participate in decision-making and create a kind of ownership. Teachers, as experts and owners, are committed to an improvement effort, and carry out the actions calling for a decision when they have the opportunity to be involved in decisions concerning a developmental project (Hopkins, 1984; Schmuck & Runkel, 1985).

Additionally, Reid, Hopkins and Holly (1987, p. 11) identified four fundamental factors underlying successful school improvement processes:

- A feel for the improvement process on the part of leadership
- A guided value system
- Intensive interaction and communication
- Collaborative planning and communication

In all, this review tends to agree that the major factors that affect school improvement are: (1) providing information for decision-making, (2) collaborative planning and communication, (3) enhancing school leadership and management and (4) promoting staff's professional development.

3.5 Professional Quality

3.5.1 The Concept of Quality

To begin with, during the past three decades, quality has been at the top of most programs and has been one of the basic means of competition. Quality is a key concept in the future success of national economies. For the survival of mankind, quality must pervade all our activities, whether in business or in service. However, notwithstanding the importance attached to the concept of quality, it is still a concept that is not easily defined (Hick, [n.d]). Today, quality is regarded as an essentially contested issue that competing voices and discourses by front-line academics and managers view differently. This leads to the idea by some scholars (e.g., Anyamele, 2004) that quality has suffered over the years by being used to describe attributes such as beauty, goodness, expensiveness, freshness and, above all, luxury. Quality, then, is a slippery concept because it has such a variety of meanings and the word implies different things to different people (see Munro-Faure & Munro-Faure, 1992).

The significance of the term "quality" in an educational context, including its political importance has increased substantially. It is, however, given a normative interpretation. A dictionary will include such definitions of the word as "*degree of excellence*", or "*relative nature or kind or character*". When quality means "degree of excellence", two aspects are encompassed: that of judgments of worth and that of position on an implied scale of good and bad. To judge the quality of a school, for instance as "poor", "mediocre", or "excellent" means both applying, whether roughly or precisely, a certain notion of merit and identifying again more or less appropriately where that school is positioned relative to other schools (OECD, 1989, p. 28). Nevertheless, the concept of "quality" in education conjures up many metaphors including a functionalist one that refers to the curriculum, content, methods of teaching and assessment and evaluation policies and procedures. As a result, the quality in education debate seems to focus on the functionalist or instrumentalist definition of education (Zajda, 1995, p. i; Creemers, 1994c). By whatever means, if we accept that no single definition is possible in education unlike in the business world, it follows that the best approach to quality is to look for observable characteristics of educational programs which are valued. Zajda (1995), citing Berquist and

Armstrong, offers seven observable criteria for a 'high quality' academic program, they include:

1. Attractive: It does something that brings people to it.
2. Beneficial: It does something that is helpful to the individuals and the community involved in it.
3. Congruent: It does what it says it will do.
4. Distinctive: It is responsive to the unique characteristics of the institution and its people and this is unlike most other programs.
5. Effective: It does what it does very well and can demonstrate its effectiveness to others.
6. Functional: It provides learners with attributes needed to perform successfully in today's society.
7. Growth-producing: It enhances growth in a number of important directions of learning (Zajda, 1995, p. iii).

In a similar way and for a similar reason, quality in teaching means possessing the competencies to teach effectively. The competencies required include the ability to measure students' educational achievements and ensuring that parents are satisfied with the educational development of their children and wards. Conversely, two variables are seen by school effectiveness and quality improvement researchers (Creemers, 1994b; Haron, 1995; Hämäläinen & Jokela, 1993; Hämäläinen & Häkkinen, 1995; Scheerens, 1994; Scheerens & Creemers, 1989) as very important for the improvement of educational quality: (1) pedagogical techniques and (2) effectiveness of school management. Other macro institutional variables should be considered as supporting variables whose main function should be to strengthen the basic process of teaching and learning in the classroom, to improve students' performance in the "Three Rs". Essentially, improving the quality of education will be improving the quality and quantity of the above basic inputs; that is, improving students' learning achievement qualitatively or quantitatively is dependent on the qualitative or quantitative improvement of the teacher.

3.5.2 The Concept of Quality in Education and Effectiveness

A difficult aspect of quality oversight arises when problems are found in terms of educational effectiveness. That is, definitions and broad criteria generally fail to offer sufficient guidance about where to draw the line between what is adequate and what is not. Effectiveness is not one-dimensional but depends on the way that various resources work in combination. Fundamentally, it requires a look at outcomes and what an institution accomplishes. It means questions

about whether school graduates are well prepared, whether they have both the knowledge and skills that they and society expect as a result of their studies (Chapman & Austin, 2002, pp. 209–210). According to Bacchus, “quality of education” often means raising the level of academic performance of pupils, usually as measured in test scores, in the various subjects which form part of their school curriculum (Bacchus, 1995, p. 7). In actual fact, teachers are a very vital force in educational effectiveness at the classroom instructional level. They are charged with the responsibility of implementing the school curricular and the pedagogical techniques sufficiently as well as showing what Creemers (1994b) and Wheldall and Glynn (1989) called effective instructional behaviours. However, OECD (1989) citing Darling-Hammond and others has identified four quite distinct characteristics of what is expected of teachers:

1. Teaching as labor: The activities of teachers should be rationally planned and programmatically organized by administrators, with the teacher merely responsible for carrying out the instructional program;
2. Teaching as craft: Teaching is seen in this conception as requiring a *repertoire* of specialized techniques, and in addition to mastering the techniques, the teacher must acquire general rules for their application;
3. Teaching as art: Based not only on professional knowledge and skills, but on a set of personal resources uniquely defined; techniques and their application may be novel, unconventional, and unpredictable;
4. Teaching as profession: The teacher needs not only a *repertoire* of specialized techniques, but also the ability to exercise judgement about when these techniques should be applied and hence a body of theoretical knowledge (OECD, 1989, p. 19).

If the role of a teacher is as stated above, it now becomes unclear who exactly is a good teacher and what is expected of him or her (OECD 1992). However, according to Perry (1994), the necessary conditions for quality teaching include the performance of the teacher which requires professional expertise. A professional’s level of capability is not static but constantly changing partly because of rapid changes in the environment caused by new technical, social or institutional claims, but also because the individual’s personal development continues and new job demands arise. From the later perspective competence can be viewed as a cut-off point on the learning and developing continuum that has several stages, starting with selection and education, continuing in the process of professional education and training, and finally reaching the status of demonstrating competence or showing competence on the job (Leino, 1996, p. 75). The changing role of teachers calls for new knowledge and capabilities. Recent research on teaching and learning appear to give particular emphasis to deep knowledge of the subject to be taught and an understanding of and ability

to use a range of pedagogical approaches. Teachers are also expected to have knowledge of the social development of children and of their management function (Hämäläinen & Jokela, 1993).

Campbell, *et al.* (2004) refer to teachers' job competencies as the impact that classroom factors (e.g. teaching methods, teacher expectations, classroom organization and use of classroom resources) have on students' performance. In addition, they look at teachers' efficacy as the power to realize socially valued objectives, especially, but not exclusively, the work concerned with enabling students to learn. According to them, four issues flow from this definition. The contexts and conditions for which students are enabled to learn can differ; students differ; the content of which objectives for learning are achieved can differ; and the values underlying learning and effectiveness can differ. It was also plausibly suggested that the concept of teacher effectiveness move from beyond the generic to incorporate the idea that teachers can be effective with some students more than others, with some subjects more than others, and their professional work more than others. Campbell and his colleagues recognized this differentiation but concluded that a distinctive characteristic of a teacher is "the power to teach", that is, the ability of the teacher to adjust general pedagogical principles in the light of his or her judgment about the needs of individuals or of particular contexts.

Nonetheless, in Creemer's (1994b) model of educational effectiveness, he argued that it is the school factors that create the conditions in which effective teaching and learning occur. Therefore, teachers' behavior could be affected by the school factors. However, he additionally believes that effective instruction is the basis for a theory of educational effectiveness (see also Scheerens, 2000). Correspondingly, a teacher's role is vital to the issue of quality in school and as such, teachers are regarded as prime movers in the improvement of quality in education. That is why researchers call for professional development of teachers to reduce areas of waste and improve the quality of Nigerian secondary schools.

3.5.2.1 Qualities of Good Teaching

The best teachers according to McCormick (1996, pp. 46–49) captivate students with subject matter drawn out of themselves. Students catch their excitement like the wake of a passing train. The very best teachers do not tie students down; they pull students along. They are as corny and they are visionaries. Still, what I find most attractive about these idealists is how they love or come to love their students. Unlike being a great scholar, being a great teacher requires a passion for one's field of study *and* for one's pupils. After all, teaching is not just about ideas; it is about engaging hearts and minds in the process of learning. Brain (1998) asked the following questions in his search for what

makes a good teacher: What are the qualities that combine to create an excellent, memorable teacher? Why do some teachers inspire students to work three times harder than they normally would while others inspire students to skip class? Why do students learn more from some teachers than others? For those who aspire to become better teachers, these are important questions. In addition, he identified the issue of “emphasis on teaching” as focusing on four essential qualities that distinguish exceptional teachers (1) knowledge, (2) communication skills, (3) interest, and (4) respect for students.

Quality teachers according to McCormick (1996) are the teachers who inspire students to compete against themselves, to take on tasks that seem to exceed their grasp, to discover and develop their real mettle as thinkers. At the same time, the very best teachers also seem to be the ones who never stop learning themselves; they are the folks who never quit reading new books, listening to new voices, or discussing new ideas, and whose quest for understanding is never finished. Biggs (2003) asserts that the very best teachers are lifelong students, people who still know how little they really understand about life and how much they have left to learn about all the important questions. Additionally, McCormick (1996) posited three features of an excellent teacher. First, high-quality teachers have a passion in their lives and a deep regard for their students. That is, they love their students. Second, they lead challenging and demanding lives that set high standards and inspire their charges. In other words, they are prophetic. Third, they are always fully engaged in the mystery of life, with hearts and minds full of wonder and awe, open to learning new things and understanding new realities.

Katz (1988) and Reiger and Stang (2000, pp. 62–64) argued that in order to be effective in the classroom teachers need to be curious, imaginative, empathetic, interesting, friendly and hardworking, thereby creating a learning environment that enhances and strengthens the learning disposition of the students. In the same vein, Hight (1963) and Stones (1966) argued that a good teacher is a man or woman of exceptionally wide and lively intellectual interest. In other words, they are an interesting man or woman. As such, he or she will make the work interesting for the students, in just the same way as he or she talks interestingly or writes an interesting letter. Much teaching consists of explaining. We explain the unknown by the known, the vague by the vivid. One of the most important qualities of a good teacher is “humor which serves a variety of purposes. The most obvious one is that it keeps the pupils alert and attentive because they are never sure what is coming next. A teacher with a poor memory is ridiculous and dangerous. A good teacher is a determined person. It is very difficult to teach anything without kindness.

In conclusion, the quality of good teaching is getting most students to use the higher cognitive level processes that the more academic students use spontaneously. It is teaching works by getting students to engage in learning-re-

lated activity that helps them attain the particular objectives set for the unit or course, such as theorizing, generating new ideas, reflecting, applying and problem-solving.

3.5.2.2 *Qualities of Good Learning*

Learning is regarded as the central issue of the twenty-first century, the most powerful, engaging, rewarding and enjoyable aspect of our personal and collective experiences (Tomlinson, 2004, p. 47). Thus, the need for quality learning is essential. However, experimental psychologists often use a nonsense syllabus to study aspects of learning. Such syllabi are intended to be devoid of meaning so that the subjects of the experiment will be learning material with which they have had no previous acquaintance. The subjects of the experiment may have to respond to the experiment's demands by saying or writing the syllabus they have previously learned. When comparisons are made between learning rates using nonsense words and meaningful material, subjects have the most difficulty with nonsense words. Similar results are obtained if the experiments are concerned with the retention of learning (Stones, 1966, p. 192). Though Stones further noted that in the classroom this kind of learning is of little value, thus, the aim of teaching is completely opposed to the aim of the experimenter.

In any case, some traditional metaphors for learning perceive the learner as an empty vessel or a blank slate to be filled with knowledge. These metaphors have exerted a strong influence on the ways in which we think of teaching and learning. Such views of teaching are reflected in classroom practices that call for the teacher to be the focus of classroom activities and for students to be passive observers. Teachers have long been the standard method of instruction, reinforcing the notion of knowledge as a product to be passed from an instructor to students. Studies of classrooms repeatedly show that nearly 90 percent of time in classrooms is filled with teacher talk and students note taking. However, cognitive researchers argue that knowledge is not simply passed intact from teacher to learner, but rather learners actively construct it. They draw on their previous knowledge, cognitive capacity, and personal experience to integrate new information into the existing knowledge base to further their understanding and influence future learning. Based on such an understanding, national reports and research findings on student learning have advocated actively engaging students in learning using a variety of teaching strategies in the classroom (<http://ftad.osu.edu/Publications/TeachingHandbook/chap-5.pdf>).

Meanwhile, Carroll (1963) advocates that to find out if teachers' activities are effective, it is essential to examine education at classroom level from the standpoint of school learning. He proposed a model to account for school learning. His major premise was that school learning is a function of time. As

a result, Carroll developed a theory that takes students' learning in school as the point of departure. Carroll's model was criticized for being an instructional model more than a learning model because it does not provide information about how learning itself takes place, only that learning takes time and depends on multiple interrelated factors. In the active model of learning, the structure of learning is more complex and the main interest is in the process by which the learner reaches an understanding of this structure. Underlying the active model of learning is the view that learning, or coming to know, is an active process of mind or experience (Wilson, 1981, p 25). Research carried out during the past three decades however, has sought to describe students' conception of learning, and more recently, teachers' conception of teaching. These studies identified conceptions of learning, which have had a significant impact on the teaching-learning culture in educational institutions in many parts of the world.

Anyamele (2004, p. 136) citing Holloway provides a useful framework for a discussion of the process of learning. They defined learning as the 'transformation of internal representations'. Learning may be said to have occurred if the mental processes by which one represents reality and internal understandings have been changed in enduring ways that are adaptive or advantageous to the individual. They argue that any learning situation involves an interaction of three factors: a task to be accomplished, a method of learning it, and a learner. They, in addition, suggested that the model of learning the teacher operates on would be reflected in the interaction of these three factors. One main distinction they marked is between 'active' and 'passive' learning. The passive model reflects behaviorist assumptions about the processes of learning and is based on a static conception of knowledge as a copy of reality which has to be committed in its present form to the memory of the learner. In this view of knowledge, the task of the learner is a straightforward one. Knowledge in this circumstance is objective, external and quantitative in the sense that the more one learns the better his chance of being regarded as a competent student. Here, learning can be assessed in terms of what the student has achieved, the time taken on the task, and the relative efficiency of different 'treatment'. The criterion of learning is usually in terms of performance on an external test (Wilson, 1981).

Nevertheless, Stones (1966) and Gbamanja (1989) elucidated a catalogue of the principles of learning which should serve as guide for teachers to improve their methodological competencies. They branded them the principles of learning, which I summarized as:

1. Students learn best by being actively involved. If students are made to participate in learning activities rather than read about such activities, they will learn better.

2. Positive or reward reinforcement is more likely to result in students learning than negative reinforcement. A teacher who gives compliments and encourages students is more likely to obtain higher achievement than one who tells them their work is poor or ridicules them for poor achievement.
3. A situation which offers fresh and stimulating experience is a kind of reward that enhances learning.
4. Learning is transferred to the extent the learner sees possibilities for transfer and has opportunities to apply the knowledge.
5. Meaningful material is easiest learned and best retained.
6. Learning is enhanced by a wide variety of experiences which are organized around purposes accepted by the students, hence teachers are advised to teach in-depth.
7. Learning is increased when provided in a rich and varied environment. The richer the classroom in terms of instructional materials and laboratory and school surroundings in offering opportunities for learning the greater the level of students' achievement.
8. Details must be placed into a structured pattern or they are forgotten.
9. Learning from reading is increased if time is spent on recalling what has been read rather than on re-reading.

Creemers (1994c) pointed out that some of these models of school learning have been sufficiently supported empirically during the last 10 years. Therefore they can be used as a point of departure for the evaluation of factors that contribute to learning. Furthermore, it is possible to extend these models of school learning to educational theories contributing to effective education by adding elements at classroom level and at school level. On the whole according to Creemers, "despite all the variations in teachers' instructional behaviors, curricula and grouping procedures, in the end the goal is of central importance to student learning" (p. 190). Bruce and Gerber (1995, pp. 443–458) characterized the different ways in which students experience learning as the increase in knowledge, memorizing, acquisition of facts, procedures which can be retained or utilized in practice, abstraction of meaning, and an interpretative process aimed at understanding reality.

Bruce and Gerber (1995, pp. 443–458) further assert that the first two of these ideas are related to surface approaches to learning, the next two conceptions relate to deep approaches to learning, with the fifth being somewhere in between. An analysis of the results of the same study shows six different ways in which student learning is experienced or understood by teachers. These conceptions are presented by categories of description each of which is labeled to capture the conception's essential meaning:

1. Learning is seen as acquiring knowledge through the use of study skills in the preparation of assessment tasks.
2. Learning is seen as the absorption of new knowledge and being able to explain and apply it.
3. Learning is regarded as the development of thinking skills and the ability to reason.
4. Learning is seen as developing the competencies of beginning professionals
5. Learning is seen as changing personal attitudes, beliefs, or behaviors in responding to different phenomena.
6. Learning is seen as a participative pedagogical experience.

The above discussion shows what learning is, how it is achieved, and how the accomplishment of learning is demonstrated. These categories are internally related, and they indicate how learning is understood.

4 Research Methodology

This chapter explains the research methodology used in this study. It begins with an introduction to the significance of research methodology. This is followed by a description of the research design, population, sampling, and sample size; it also involves a compact description of the research instruments used in this study. The validity and reliability of this investigation are described, as well as the data collection methods. The last section is comprised of well-constructed data analysis techniques. This study employed both qualitative and quantitative techniques. Precisely, the methodology used in this research to reach conclusions revealed the strength of this research work. The study is empirical; although it made use of documents and observation, it relied heavily on data from interviews and questionnaires. This study is a process of reasoning which draws a general conclusion from a set of premises based mainly on experience and empirical evidence (Strauss, 1987; Miles & Huberman, 1994; Creswell, 1998).

4.1 Introduction

By research methods, we mean the range of approaches used in educational research to gather data, which is to be used as a basis for inference and interpretation for explanation and prediction (Miles & Huberman, 1994; Mouly, 1978). Traditionally, the word refers to those techniques associated with the positivistic model of eliciting responses to predetermined questions, recording measurements, describing phenomena and performing experiments (Cohen & Manion, 1994, p. 38). However, while the term methodology is sometimes applied to the methods and techniques used by social researchers, the methodological aspects of a study more accurately refer to the philosophy of science embedded both within these methods and within the researcher's approach to data collection and analysis (Pole & Lampard, 2002, p. 290). To Kaplan (1973), research methodology is used to describe and analyze the research processes, throwing light on their limitations and resources, clarifying their presuppositions and consequences, relating their potentialities to the twilight zone at the frontiers of knowledge. It is to venture generalizations from the success of particular techniques, suggesting new applications, unfolding the specific bearing of logical and metaphysical principles on concrete problems, as well as suggesting new formulations.

Robertson (1987, p. 29–30) sees research methodology as a system of rules and principles that guide scientific investigation. Research methodology pro-

vides guidelines for collecting evidence about what takes place and for explaining why it takes place, and it does so in a way that enables other researchers to check the findings. In the words of Galtung (1977, p. 13), research methodology is perceived as the organized method employed by a researcher towards the making and completion of a research goal. Generally, the method(s) used must be scientific and specific in relation to the questions and issues at hand, which should also be straightforward and generalizable to the research, but relevant to other future researchers. The idea here is that research methodology establishes a form and relation toward the making of a research plan and contributing to the organized frame of a research goal.

On this basis, it might be inferred that the aim of a research methodology is to help us comprehend in the broadest term possible the process of a scientific inquiry as well as the product itself. Research methodology can best be perceived as the process of arriving at dependable solutions to problems through the planned and systematic collection, analysis, and interpretation of data. It is the most important tool for advancing knowledge, promoting progress, and enabling man to relate more effectively to his environment, accomplish his purposes and resolve his conflicts. In sum, research methods in my opinion are merely the means of formulating the research data and outcomes.

4.2 Research Design

Most educational research methods are descriptive (Cohen & Manion, 1994). Descriptive research according to Best (1970) is the “conditions or relationship that exist; practices that prevail; beliefs, point of views, or attitudes that are held; processes that are going on; efforts that are felt; or trends that are developing.” Sometimes, descriptive research is concerned with how what exists is related to some preceding event that has influenced or affected a present condition or event. The descriptive research method is primarily concerned with portraying the present. In fact, the descriptive research method in educational research is not exactly a method because many approaches of data collection are grouped together. However, they have one element in common—each endeavors to depict the present position of a given situation. The main difference between various types of descriptive research is in the process of description (Verma & Beard, 1981, p. 57).

The process of descriptive research goes beyond mere collection and tabulation of factual data. It is not only a structural attempt to obtain facts and opinions about the current condition of things, but it involves elements of comparison and relationships of one kind or another. Descriptive research may not answer all of the fundamental questions, but it provides useful data which can serve as a basis for further research using more rigorous experimental design.

Thus, the discovery of meaning is the focus of the whole process (Ibid, p. 58).

Yin (1989, p. 29) stated that research design of a study is the logical sequence that connects the empirical data to a study’s initial research questions and hypotheses and ultimately to its conclusions (see Fig 4.2.1). As a result, I included specific research design features from the broad empirical and theoretical perspectives to assess the quality and verify my 1997 study. This is a study that integrates both quantitative and qualitative estimation design, aimed at emulating or improving best available practice, process and performance to aid improvement in quality of secondary education in Nigeria. This perspective is very useful since it will help me to understand and explain the way in which school effectiveness and improvement functions.

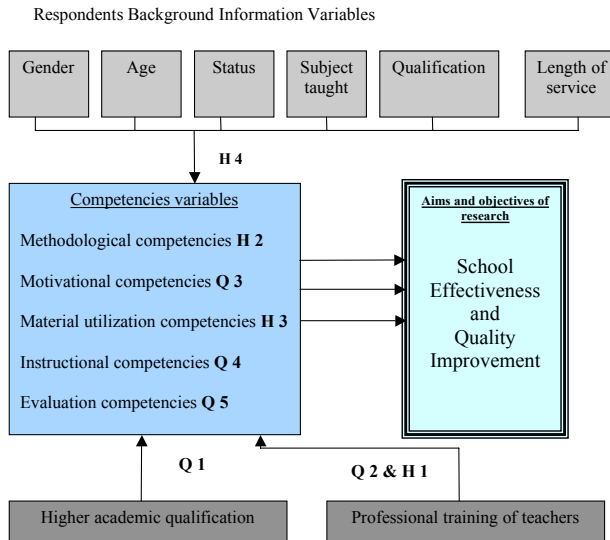


Fig: 4.2.1: Research questions, hypotheses and design summarized

The fundamental purpose of this research is to develop new knowledge about the phenomenon of this study. More precisely, the purpose of this research is to develop our confidence that a particular knowledge claim about educational phenomena is true or false. This is because researchers attempt to design a study that will yield strongest possible evidence to support or refute a knowledge claim.

Researchers sometimes mistakenly come to believe that research planning or design is unnecessary (Strauss, 1987, pp. 297–298). However, Kerlinger (1973) pointed out that:

“Research design sets up the framework for “adequate” tests of the relations among variables. Design tells us, in a sense, what observations to make, how to make them, and how to analyze the quantitative representations of the observations. Strictly speaking, design does not “tell” us precisely what to do, but rather “suggests” the directions of observation making and analysis. An adequate design “suggests” for example, how many observations should be made, and which variables are active and which are attribute. We can then act to manipulate the active variables and to categorize the attribute variables. A design tells us what type of statistical analysis to use. And finally, an adequate design outlines possible conclusions to be drawn from the statistical analysis” (p. 301).

It was on the previously mentioned ground that two designs were fashioned “Survey and Case Study Research”. The research designs chosen for this study are relevant because they are plan, structure and strategy conceived to obtain answers to this study’s research questions and hypotheses. It is also presumed that the outcome of this study will not be the generalization of the result obtained, but give a profound understanding of the experiences from the perspectives of the selected participants for this study (Borg & Gall, 1989; Creswell, 1998; Hopkins, 2000; Maxwell, 1996; Maykut & Morehouse, 1994; Strauss, 1987).

4.2.1 Survey Research

Survey research is considered a method of systematic data collection (Borg & Gall, 1989, p. 416). The purpose of survey research is to describe specific characteristics of a large group of persons, objects, or institutions (Jaeger, 1988, p. 303). Surveys are one of the most commonly used methods of descriptive research in education and the other behavioral sciences. A survey involves the gathering of limited data from a relatively large number of cases at a particular time. This method is frequently employed to indicate prevailing conditions or particular trends. It is not concerned with characteristics of individuals as individuals, but it is concerned with providing information about population variables (Verma & Beard, 1981, p. 59). Nworgu (1991, p. 55) observed that in survey research a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. Turning to Kerlinger (1973), the survey or study design, the so-called flow plan or chart of survey research, is the check of the reliability and validity of the sample and data gathering methods—Survey researchers use a “flow plan” or “chart” to outline the design and subsequent implementation of a survey. The flow plan starts with the objectives of the survey, lists each step to be taken and ends with the final report (p. 414). There seems to be little or no disagreement over the meaning of survey research.

Therefore, this study is essentially a descriptive survey research. It involves a study which is aimed at collecting data and describing it in a systematic manner, including the characteristics, features or facts about the given population in this study. It is aimed at describing certain variables in relation to the population. As a correlational descriptive survey, it seeks to establish what relationship exists between two or more variables. Here it is directed at testing the hypotheses investigating the perception of teachers' academic and professional training on their job effectiveness in Nigeria. The descriptive survey method is used because it seeks to elicit the opinion of heads of departments and teachers in secondary schools on whether academic and professional training has an effect on teachers' job effectiveness.

My choice of survey method is because survey focuses on people, the vital facts of people and their beliefs, opinions, attitudes, motivations and behaviors (Kerlinger, 1973). Survey research¹² has contributed much to the methodology of the social sciences. The most important contribution perhaps has been the rigorous sampling procedures, the overall design and the implementation of the design of studies, the unambiguous definition and specification of the research problems, and the analysis of the data. It allows for standardization and uniformity both in the questions asked and in the method of approaching subjects, making it far easier to compare and contrast answers by respondent groups. It also ensures higher reliability than some other techniques (Dilbert, 2004).

4.2.2 Case Study Research

I also used the case study approach in this study because it has been noted as suitable for theory creation or cases in which the theory is at an early formative stage and for sticky practice-based problems where the experiences of the actors are important and the context of action is critical (see Benbasat *et al.*, 1987; Eisenhardt, 1989; Järvinen, 2001). However, Creswell (1998, p. 186) believes that there is no standard format for reporting case study research.

¹² Survey research is a research approach designed to collect systematic descriptions of existing phenomena in order to describe or explain what is going on; data are obtained through direct questioning of a sample of respondents. According to Palmquist (1993), surveys represent one of the most common types of quantitative social science research. In survey research, the researcher selects a sample of respondents from a population and administers a standardized questionnaire to them. The questionnaire, or survey, can be a written document that is completed by the person being surveyed, an online questionnaire, a face-to-face interview, or a telephone interview. Using surveys, it is possible to collect data from large or small populations (sometimes referred to as the universe of a study).

There are several other definitions of case study, but Benbasat *et al.* (1987) presented a comprehensive definition that draws from a variety of sources. They defined case study as a research approach that examines a phenomenon in its natural settings, employing multiple methods of data collection to gather information from one or few entities (people, groups, or organisations) on a phenomenon that is not clearly evident at the outset. In support of case study, Yin (1994), in his popular book on case study research, considered investigation of a contemporary phenomenon or event in its real-life context, especially when the boundaries between the phenomenon and the context are not clearly evident. In a case study, the researcher does not or cannot control or manipulate the situation. Case study method does not necessarily require step-by-step data analysis, and this allows for various interpretations of research data. Admittedly, interpretation could introduce bias and affect the outcome of the research. However, case study method allows the use of multiple methods of data collection such as interviews, questionnaires documentary reviews, archival records and direct participant observations (Okunoye, 2003, pp. 63–64; Yin, 1994). The triangulation¹³ of these data sources could reduce the problem of bias and greatly increase validity (Cohen & Manion, 1994, pp. 233–251).

In another instance, Palmquist (1993) has extensively examined case study research and considered this method as the interplay of all variables in order to provide as complete an understanding of an event or situation as possible. This type of comprehensive understanding is arrived at through a process known as ‘thick description’, which involves an in-depth description of the entity being evaluated, the circumstances under which it is used, the characteristics of the people involved in it, and the nature of the community in which it is located. Unlike quantitative methods of research like the survey, which focus on the questions of who, what, where, how much, and how many, and archival analysis, which often situates the participant in some form of historical context, case studies are the preferred strategy when how or why questions are asked. Likewise, they are the preferred method when the researcher has little control over the events and when there is a contemporary focus within a real life context. In addition, unlike more specifically directed experiments, case studies require a problem that seeks a holistic understanding of the event or situation in question using inductive logic—reasoning from specific to more general terms.

¹³ According to the research methods glossary, this term is used in a research context to describe the use of a variety of data sources or methods to examine a specific phenomenon either simultaneously or sequentially in order to produce a more accurate account of the phenomenon under investigation. Triangulation: means the collecting of information from a diverse range of individuals and settings using a variety of methods. This strategy reduces the risk of chance associations and of systematic biases due to a specific method and allows a better assessment of the generality of the explanations that one develops (Maxwell, 1996, p. 93–94; Denzin, 1970) (see also, Fielding & Fielding, 1986).

4.3 Research Population

In a more general sense, a research population includes all members or elements, be they human beings, animals, trees, objects, events, etc., of a well-defined group. It defines the limits within which the research findings are applicable. In other words, it should be defined in such a way that the result of the investigation is generalizable unto it. A research population is categorized into target and accessible population. A target population is classified as all the members of a given group to which end the investigation is related, whereas the accessible population is looked at in terms of those elements in the target population within the reach of the researcher (Pole & Lampard, 2002).

The research population for this study is drawn from Rivers State (accessible) of Nigeria (target). It is one of the States in the south-south geo-political zone of Nigeria. The population comprises of principals, subject heads and teachers from ten (10) randomly selected secondary schools. The reasons for choosing subject heads is that they directly supervise teachers' activities as regards teaching and therefore stand a better chance of measuring their teachers' input and output. The services of the supervisors of education are not left out. It was relevant that the researcher choose Rivers State because it is a surrounding that he is familiar with and will not find it very difficult to access the chosen respondents with the help of his research assistant. This is one of the reasons why the number of responses received was high.

4.4 Sampling

A sample is the smaller group of elements drawn through a definite procedure from a specified population; the elements making up this sample are those that are actually studied. Kerlinger (1973, p. 118) gave a comprehensive definition of random sampling—it is that method of drawing a portion (sample) of a population or universe so that all possible samples of *fixed* size n have the same probability of being selected. This definition is general and thus satisfactory.

My choice to put into use the simple random sampling is because it is by far the easiest and simplest probability sampling technique in terms of conceptualization and application. It does not necessarily require knowledge of the exact composition of the population, so long as we can reach all the members of the population. However, when a sample is used as a way of estimating the characteristics of a population, a consequence is that the sample is unlikely to be exactly representative of the population. Even when random sampling is used, a certain amount of sampling error will usually occur. For example, a random sample of women will usually be slightly taller or slightly shorter on average than the average height of women in the population. However, when

a sampling process is not random, an additional source of potential error, i.e. bias, exists (Pole & Lampard, 2002, p. 293).

Rivers State is made up of twenty-three (23) local government areas. Ten (10) schools were randomly selected from the twenty-three (23) local government areas. The names of all the 146 public schools were written on folded pieces of paper and selected randomly. The ten (10) schools selected are different in sizes and types. They may be considered representatives of the different schools. A total number of three hundred and fifty questionnaires (350) were distributed, and out of which three hundred and fifteen (315) were returned, from which three hundred (300) questionnaires were selected. Included in this numbers are ten (10) principals and twenty (20) supervisors of education from the post primary schools board and the Ministry of Education who were also randomly selected. Fifteen of the questionnaires were not used because of errors in the ways they were filled out by the respondents (see table 4.4.1).

Table 4.4.1: Categories of Respondents and the number of Responses Used

Categories of Respondents	Number of Responses Used	
Teachers	270	90.0%
Principals	10	3.3%
Supervisors	20	6.7%
To Number of Responses	300	

4.5 Validity of the Study

The quality of research is related to the possession of the quality of strength, worth, or value (Keeves, 1997, p. 279). A valid research finding is one in which there is similarity between the reality that exists in the world and the description of that reality. Validity is concerned with the degree to which a test appears to measure what it purports to measure (Borg & Gall, 1989, p. 256). A measure is valid if it measures what it is intended to measure (Zeller, 1997; Zeller & Carmines, 1980). According to Kerlinger (1973, p. 457), the commonest definition of validity is epitomized by question: what are we measuring? The emphasis in this question is on what is being measured. Validity refers to the degree of success with which a technique or other instrument is measuring what it claims to measure (Verma & Beard, 1981, p. 87). Therefore, it is a relationship between what a test purposes to measure and what it actually measured.

In this research endeavor, I use terms in a fairly straightforward, common-sense way to refer to the correctness or credibility of my description, explanation, interpretation, conclusion, or other sort of account. I think that the com-

nonsense uses of terms are consistent with the way they are generally used by researchers, and it does not pose any serious philosophical problem. The use of the term “validity” does not imply the existence of any objective truth to which an account can be compared. However, the idea of objective truth is not essential to a theory of validity that does what most researchers want it to do, which is to give them some grounds for distinguishing accounts that are credible from those that are not. Nor are we required to attain some ultimate truth in order for our study to be useful and believable (Maxwell, 1996, p. 87). Maxwell, citing Campbell, Putnam and others, argued that we do not need an observer-independent “gold standard” to which we can compare our account to see if it is valid. All we require is the possibility of testing these accounts against the world, giving the phenomena that we are trying to understand the chance to prove us wrong. The key concept for validity is the validity threat: a way you might be wrong. These threats are often conceptualized as alternative explanations, or what Huck and Sandler (1979) called rival hypotheses. However, validity is a component of one’s research design which consists of the strategies one uses to rule out these threats (Maxwell, 1996, p. 88).

The instruments used in this research were valid because the researcher has taken time to comply with the formalities and procedures adopted in framing a research questionnaire (see Nworgu, 1991, pp. 93–94). To validate the instrument the questionnaire was given to the researcher’s supervisors who read through and made necessary corrections. The second process that was used to validate the research instrument was that the questionnaire was pre-tested and the responses from the respondents were used to improve on the items. In summary, the validity of this study rests on an overall evaluative judgment founded on empirical evidence and theoretical rationales of the adequacy, appropriateness of inferences and action based on the test scores. It is an inductive summary of both the adequacy of existing evidence for and appropriateness of potential consequences of test interpretation and use (Messick, 1988 1994, p. 34; Xiaorong, 2001, p. 54).

4.6 Reliability of the Study

The quality of a research is necessarily dependent on the consistency with which the observations are made. Consistency in turn is dependent on the precision with which an observable is specified (Keeves, 1997, p 281). Kerlinger (1973, p. 442) is of the view that words that are synonyms for reliability are: dependability, stability, consistency, predictability and accuracy. He defines reliability in three different ways. One approach is epitomized by the question: If we measure the same set of objects repeatedly with the same or comparable measuring instrument, will we get the same or similar results? This question

implies a definition of reliability in stability, dependability, and predictability terms. This is the definition most often given in elementary discussions of the subject. A second approach is epitomized by the question: Are the measures obtained from a measuring instrument the “true” measures of the property measured. This is an accurate definition compared to the first definition, it is removed from common sense intuition, but it is also more fundamental. These two approaches or definitions can be summarized in the words stability and accuracy. The third approach to the definition of reliability is that it is an approach that not only helps us better define and solve both theoretical and practical problems, but also implies other approaches and definitions like “errors of measurement”. Reliability by definition refers to the level of the internal consistency or stability of the measuring devices over time. It concerns the consistency with which an instrument measures whatever it measures. In addition, reliability can be defined as the relative absence of errors of measurement in a measuring instrument. ⁶

The strength of the instrument used in this study was reliable because it was able to elicit the required information concerning teachers’ job effectiveness in Nigerian secondary schools. However, a true measure of reliability should be based on statistical data¹⁴. To make the research instrument in this study worth relying on, it was pre-tested by administering the questionnaire to a group outside the sample. This was done by means of the pre-test posted design. From their responses, some changes were made to the structure and some of the questions. Statistically testing the reliability of the measurement instrument is to provide non-random results. A measurement to assess reliability was seen as suitable in this investigation since the respondents, especially teachers, answered the questions because they were directly affected in that the study focused on them as regarding their professional competencies. A quantitative analysis of the inquiry was performed using the SPSS 11.5 computer program to statistically test the reliability of the research instrument because in research statistics when a research instrument’s reliability has been assured it gives the bases for continuity. In the analysis, the sum variables were used, because the reliability is very high compared to a single variable. The reliability estimates for the sum variables were computed by the following: $(\text{Mean square variance between subjects} - \text{residual variance}) / (\text{mean square variance between subjects})$ (Koponen, 1977, p.104; Kautto-Koivula, 1993, p.161). (see table 4.6.1).

¹⁴ A number of techniques can be used to ensure the reliability of a standardised measuring instrument such as an attitude questionnaire, personality test or pressure sore risk calculator. These include test-retest, split-half and alternate forms. There are also statistical tests that can be used to assess reliability such as Cronbach Alpha and the Spearman rho correlation coefficient test.

The reliability of the variables in this study might be termed to be high enough judging by the fact that it varies between 0 and 1 and the nearer the result is to 1-, and preferably at or over 0.8- the more internally reliable is the scale (Bryman & Cramer, 2001, p. 63). The results from the table reveal differences in the paired reliability estimates, which is normal. However, the cumulative reliability of (0.91) shows a strong reliability of the research instrument.

Table 4.6.1. The reliability of paired variables for academic and professional teachers in the questionnaire

Variables		Reliability Estimates
METHODOLOGICAL COMPETENCIES		
1.	(a) academic qualification use problem-solving methods effectively (b) professional qualification use problem-solving methods effectively	.95**
2.	(a) academic qualification adopt the use of individual teaching method effectively (b) professional qualification adopts the use of individual teaching method effectively	1.0**
3.	(a) academic qualification dramatize (Demonstrates) teaching situation effectively (b) professional qualification dramatize (Demonstrates) teaching situation effectively	1.0**
MOTIVATIONAL COMPETENCIES		
4.	(a) academic qualification demonstrates familiarity with co-teachers effectively (Exchange ideas) (b) professional qualification demonst. Familiarity with co-teachers effectively (Exchange ideas)	.76*
5.	(a) academic qualification encourages co-teachers to work effectively (b) professional qualification encourages co-teachers to work effectively	.76*
6.	(a) academic qualification use reward and punishment wisely (b) professional qualification use reward and punishment wisely	1.0**
7.	(a) academic qualifications guide co-teachers on how to plan and carry out their jobs professionally (b) professional qualification guides co-teachers on how to plan and carry out their job prof.	1.0**
MATERIAL UTILIZATION COMPETENCIES		
8.	(a) academic qualification selects appropriate teaching materials (b) professional qualification selects appropriate teaching materials	1.0**

9.	(a) academic qualification prepares and uses teaching materials effectively (b) professional qualification prepares and uses teaching materials effectively	1.0**
10.	(a) academic qualification operates projected tools effectively' (b) professional qualification operates projected tools effectively	.73*
INSTRUCTIONAL PROCESS COMPETENCIES		
11.	(a) academic qualification apply the use of contemporary knowledge, ideas etc. to their job (b) professional qualification apply the use of contemporary knowledge, ideas etc. to their job	.63*
12.	(a) academic qualification use appropriate questioning skills (b) professional qualification use appropriate questioning skills	1.0**
13.	(a) academic qualification develops course curricula properly. (The contents of the course) (b) professional qualification develop course curricula properly. (The contents of the course)	1.0**
14.	(a) academic qualification ensures effective time management (b) professional qualification ensures effective time management	1.0**
15.	(a) academic qualification show sufficient mastery of subject matters (b) professional qualification show sufficient mastery of subject matters	.73*
16.	(a) academic qualification effectively manages and arrange classroom (b) professional qualification effectively manages and arrange classroom	1.0**
17.	(a) academic qualification clearly states their objectives (b) professional qualification clearly states their objectives	1.0**
TEACHING EVALUATION COMPETENCIES		
18.	(a) academic qualification constructs various evaluation instruments effectively (b) professional qualification constructs various evaluation instruments effectively	1.0**
19.	(a) academic qualification employs various evaluation techniques correctly (b) professional qualification employs various evaluation techniques correctly	1.0**
20.	(a) academic qualification assesses students' behavior effectively (b) professional qualification assesses students' behavior effectively	.81**
21.	(a) academic qualification use evaluation data to improve job situations (b) professional qualification use evaluation data to improve job situations	1.0**

22.	(a) academic qualification keeps records of individual students accurately (b) professional qualification keeps records of individual students accurately	.76*
23.	(a) Do you agree or disagree that academic qualification improves teacher's job effectiveness? (b) Do you agree or disagree that professional qualification improves teacher's job effectiveness?	.81**
24.	(a) In your opinion is the ability to perform effectively in teaching inborn? (b) In your opinion is the ability to perform effectively in teaching acquired?	1.0**
INTERACTION PROCESS COMPETENCIES		
25.	(a) academic qualification interacts with their students respectfully (b) professional qualification interacts with their students respectfully	.69*
Cumulative Alpha (Reliability)		.91**

* accepted as reliable

** accepted as very reliable

4.7 Data Collection

There are two main sources of data collection in educational research: primary and secondary sources. The data collected for this research are from both sources. A primary source is an original document or account that is not about another document but stands on its own. For example, interviews which come straight from participants' replies. Primary sources enable a researcher to get as close as possible to what actually happened during a historical event or period. A secondary source are those that do not have a direct physical relationship with the event being studied, which are made up of information that cannot be described as being an original source data. A secondary source would thus be one in which the person describing the event was not actually present but who obtained description from another person or source such as textbooks, quoted materials, and so on. Best (1970) pointed out that secondary sources of data are usually of limited worth because of the errors that result when information is passed on from one person to another. Nevertheless, secondary sources of data are still very relevant in educational research. Cohen and Manion (1994) opined that the value of secondary sources should not be minimized. There are numerous occasions where a secondary source can contribute significantly to more valid and reliable sources than would otherwise be the case because education is primarily concerned with the individual's physical, social, intellectual

and emotional growth, in which developmental studies continue to occupy a central place in the methodologies used by educational researchers.

Interviews, questionnaires, documents and observation were the ways through which data were gathered. The data from documents and interviews were intended to give information in the qualitative analysis section, while the data from questionnaires was intended to provide information in the quantitative analysis (inferential statistics) section. Inferential statistics is concerned with gaining knowledge of a population's characteristics from information collected from a random sample of a population. In other words, it is concerned with drawing inferences or generalizations about the characteristics of a population based on data collected from a random sample of that population. Therefore, with inferential statistics, we can draw conclusions that apply beyond the actual subjects studied and extend to other subjects that belong to the same population. Other than that, our conclusions can only validly apply to those elements or subjects which have actually been studied.

It should be obvious that any research whose aim is to draw conclusions that can apply only to the actual elements or subjects studied will be of limited applicability; and this can hardly be the aim of any meaningful research. Rather, meaningful research should be interested in conclusions that are based on a limited number of subjects or elements actually studied. Generally, this is what we desire to achieve in research; and only inferential statistics can help us realize such a desire. To this extent, inferential statistics have contributed immensely to the development of educational and behavioral science research by providing efficient ways of handling data and dealing with complex educational problems. Our understanding of educational effects has been widened through the application of inferential statistics (Nworgu, 1991, p. 150).

However, Pole and Lampard (2002) argued that statistical inference is the process by which researchers use a sample to learn or make inferences about patterns and relationships in a corresponding population. Statistical inference relies on significance testing, which in turn requires that random sampling be used so that the inferences made cannot be a reflection of biases in the sampling process (p. 294).

4.7.1 Interview

Interview is a face-to-face interpersonal role situation in which one person, the interviewer, asks a person being interviewed, the respondent, questions designed to obtain answers pertinent to the research problem (Kerlinger, 1973, p. 481). While Cohen and Manion see interview as a research technique that is normally considered one of a range of survey methods in social research—the purposes of the interview in the wider context of life are many and varied. It

may thus be used as a means of evaluating or assessing a person in some respect: for selecting or promoting an employee; for effecting therapeutic change as in the psychiatric interview; for testing or developing hypotheses; for gathering data, as in surveys or experimental situations; or for sampling respondents' opinions, as in doorstep interviews (Cohen & Manion, 1994, p. 271).

To this end, my resolve has been to produce a clear view about every piece of information obtained during the research period and find some unifying characteristics that will portray a holistic feature of them all. Therefore, I used interview for gathering data, as in surveys or experimental situations; or for sampling respondents' opinions. As a doorstep interview, it was a face-to-face meeting with the respondents, which was unstructured to meet the realities on ground in terms of job effectiveness.

The interviews for this research were scheduled to last for forty-five minutes in a convenient and peaceful atmosphere in the respective schools, the Ministry of Education and Post Primary Schools Board. However, the interviews lasted beyond the expected scheduled time. After the actual interviews, some of the respondents had separate appointments with me on my request to discuss some personal and pressing issues that influence the educational system in Nigeria. Overall, the interviews lasted for a period of four months.

At the inception of the interviews, I discussed with my interviewees my purpose in carrying out this research; in addition, a leaflet was handed to the participants stating my reasons and the basis for the research and guidelines for the conduction of the interviews. However, despite the leaflet and my explanations, I found some of the participants very suspicious of participating in the interview process and my intentions as a researcher. In addition, some persons expressed their intents directly to me about the difficulties they had in participating in a project like this because they are suspicious that it might be used against them in the future. It was in this process that I found out that one of the supervisors I interviewed has a Master's degree in one of the academic fields. Some persons also expressed dismay at me and told me that, "in whatever capacity I intend to carry out this study, as long as this country (Nigeria) is concerned, nobody is interested in whatever and however good your research findings are; it would make little or no impact toward the educational development of the country."

However, I tried as much as possible to convince them of the importance and implications of the research effort. I also tried to let them know the importance of research to national development. Despite the fact that I was well prepared, I was astonished at the difficulties I encountered in the process, but I did not allow it discourage me. I made every effort possible to explicitly discuss any doubt or questions people expressed, and I tried tirelessly to get them to work with me reassuring them of confidentiality. Still, I was looked at as a stranger and they observed me as much as I did them. However, some

people cross-examined me to find out if I actually knew what I was doing as a researcher in education, which I established, and they were convinced.

On the second appointment, which I demanded, I was quite prepared because I was a bit nervous about how the participants would view and respond to my questions this time. I was glad to find that it went as smoothly as possible. When I met with some of them a few times during the distribution of the questionnaire and the first interview sections, a sort of rapport was established. We knew each other better than the first time we met. This was manifested in the discussion, which was more open and welcoming unlike the first session of the interview process in which I had to be more active and verbally coax them to make them speak. However, most of the comments at the end of each day's interview were positive. Following my conviction, all of the interviewees were interested and anxiously looking forward to the result of the final research work.

Nevertheless, the initial step that I adopted in this study with particular reference to the qualitative data was first listening to the tapes prior to the transcription as a method of analyzing the data. After the transcription, I read the interview transcripts repeatedly and wrote observational notes: memos, categorizing strategies (such as coding and thematic analysis) and noted contextualization strategies. I was regularly writing memos while doing the analysis; memos not only captured my analytic thinking about the data I collected allowing me to facilitate my thinking, but they stimulated my analytical insight. Another approach that helped me in generating themes from my data was the categorization strategy through the use of coding method. Its main objective was to crack the data and reorganize it into categories that facilitated the comparison of data within and between the categories, which aided me in my analysis. The next stage is the contextualization strategy—this is not the stage of me fracturing the data, rather it refers to linking the data or looking for various methods to identify the relationships among the different elements of my data. This enabled me to look for relationships that connected statements and events within a context into a coherent whole.

Finally, I sorted out ways to display the obtained data in a way that will have meaning for my audience. Thus, tables were employed to make the ideas and analysis visible and permanent and facilitate my thinking about the relationships among different elements. The tables reduced and presented the data in a form that allows it to be grasped as a whole, which gave it the most detailed presentation. The main reason I achieved the goal of data analysis in this research study was that I tried as much as possible to graph my data on the same day I collected it. From day to day, the points on the graph tell me about my progress. It is like a fox pursuing a hare. The graph is the hare's track, and I must stay close to that hare. I had to react and change course frequently. Since

nature is complex, I let it lead me, trying not to get too far ahead, so that I did not have to backtrack (Heinrich in Maxwell, 1996, p. 77).

4.7.2 Questionnaire

The most natural tool with which to compare interview is the so-called questionnaire. Questionnaire is a term used for almost any kind of instrument that has questions or items to which individuals respond. Although the term is used interchangeably with “schedule”, it seems to be associated more with self-administered instruments that have items of the closed or fixed-alternative type (Kerlinger, 1973, p. 487). The questionnaire is in no small measure the most frequently used instrument in educational research. Its popularity is demonstrated by the number of published studies and students’ projects in education that employ this instrument for data collection. The one I used in this research is a structured or fixed response questionnaire as against the unstructured or open-ended questionnaire.

Nworgu’s (1991, pp. 93–94) characteristics of a good questionnaire were applied in designing the questionnaire for this study. The characteristics are: relevance, consistency, usability, clarity, quantifiability and legibility. As a result, a questionnaire was designed with the help of my supervisor to elicit information from the respondents that to help me gather information on teachers’ job effectiveness in relation to their competencies.

A suitable design was structured along a four-point likert-type scale (summed) of strongly agree (4), agree (3), disagree (2) and strongly disagree (1). A summated rating scale, one type of which is called likert-type scale 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). The simplicity of the questionnaire was the result of choosing different categories of people as my respondents thereby necessitating a simplified questionnaire.

4.7.2.1 Section A of the Questionnaire (Contents)

Section “A” of the questionnaire focuses on items such as gender, age, length of service, status, subject taught, academic qualifications and professional qualifications.

4.7.2.2 Section B of the Questionnaire (Contents)

Section “B” focuses on possible competencies which may or may not be perceived as being capable of improving teachers’ job effectiveness, such as:

- Methodological Competencies
- Motivational competencies
- Material utilization competencies
- Instructional process competencies
- Evaluation competencies
- Interaction process competencies

4.7.3 Observation

Observation was another research instrument used in my data collection. A non-participant observation was employed in this case where I was not a member of the setting in which the observation took place (Nworgu, 1991, p. 81). Since no systematic observation was undertaken whereby I participated fully in the lives and activities of the subjects and thus became a member of the group in order to share experiences by not observing what was happening but also feeling them. In short, the type of observation used in this study did not imply a research strategy of immersion by me in the research setting, with the objective of sharing in people's lives while attempting to learn their symbolic world. However, some observations were made of physical settings of the schools and the behaviour of those working in them in the form of descriptive data. Descriptive observation involves concentrating on observing the physical setting, the key participants and their activities, particular events and their sequence and the attendant processes and emotions involved (Anyamele, 2004, p.164).

I was able to gather data as it emerged from the research setting, and taking all of this into account, observation is perhaps the most demanding of all research methods, necessitating a great deal of thought and practice. The problem here, of course, is that practice can only effectively occur in real research situations (Pole & Lampard, 2002, p. 71).

4.8 Data Analysis Techniques

In method literature, there is not one single right way or most appropriate way to analyze qualitative or quantitative data. Analysis implies and indeed requires a principal choice (Coffey & Atkinson, 1996, pp. 2–4). For example, in analyzing and interpreting both qualitative and quantitative data—it is the process of systematically organizing the materials collected, bringing meaning to them so that they tell a coherent story and writing it all up so that others can read what one has learned. Based on this premise, the data collected was analyzed using

both the qualitative and quantitative methods to enable me to give a reasoned meaning to my study.

4.8.1 Qualitative Analysis

In qualitative analysis, the data is usually gathered using less structured research instruments. The findings are more in-depth since they make greater use of *open-ended questions*. The results provide many more details regarding behaviour, attitudes and motivation. The research is more intensive and flexible, allowing the researcher to probe since he or she has greater latitude. However, the results are based on smaller sample sizes and are often not representative of the population. The research can usually not be replicated or repeated given its low reliability, and the analysis of the results is much more subjective (Dilbert, 2004).

Ou Yongsheng says “qualitative research for the most part uses participant observation and in-depth interviews to enter the world of the subjects, systematically record what they see and hear, and then analyze what they have recorded and supplement it with other materials, such as school memoranda, records, school journals, photographs and other articles. It is a flexible research method” (Ou Yongsheng, 1989). Creswell (1994, 1998) defined qualitative research as:

“An inquiry process of understanding a social or human problem, based on building a complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in a natural setting” (Creswell 1994, p. 2; 1998, p. 15).

Creswell emphasized a “complex, holistic picture,” a reference to a complex narrative that takes the reader into the multiple dimensions of a problem or issue and displays it in all of its complexity.

According to Punch, qualitative research is an empirical research where data is not in the form of number (Punch, 1998, p. 4). Gay and Airasian (2000, p. 627) see qualitative research as the collection of extensive data on many variables over an extended period of time, in a naturalistic setting, in order to gain insights not possible using other types of research. This definition has little or no difference from the one cited by Creswell. However, Gall, Gall and Borg (1999, p. 13) defined qualitative research as “making little use of numbers or statistics but instead rely heavily on verbal data and subjective analysis”. Some critics of this method argue that there are a lot of replications in qualitative research.

However Leiviskä (2001, p. 182) argued that qualitative research is not to immaculately replicate what has gone before; in fact, such replication is

impossible, given the dynamic nature of the social world and given that the researcher is not an instrument in the experimental sense. In fact, for qualitative studies, the concern shifts from the objectivist and positivist perception to a consideration of how thoughtfully and dependably the researcher conducted the study, rather than judging whether replication would yield the same results. This standard of practice assesses the extent to which an outsider would agree with the results of the study given the data collected and displayed (Rossman & Rallis, 1998).

In any case, Critics of qualitative methods have mentioned a number of what they perceive to be weaknesses of this method. First, it is claimed that qualitative research is unscientific since it is alleged to be full of bias. Second, qualitative research lacks the rigors of quantitative studies, and third, qualitative research lacks measures of validity and reliability (Silverman, 2001). It has been argued that qualitative research is full of unquantifiable data and, therefore such data cannot be subjected to a statistical analysis. It is argued that without statistical analysis, a study loses its scientific flavor. However, it should be mentioned that figures alone do not make much sense unless they are explained qualitatively. Furthermore, mere figures do not render a study scientific (Bogdan & Biklen, 1992). Further doubts about the strengths of qualitative research are linked to the idea of the generalizability of the findings. However, not all studies are concerned with generalization of findings. Another criticism leveled against the use of qualitative research is that it is a personal experiment that cannot be reproduced and thus cannot claim to have any kind of scientific status. Nevertheless, it is still possible to employ specific methods in order to have the findings of fieldwork reproduced, falsified or verified (Kamwendo, 2004; Dilbert, 2004). However, Creswell (1998, p. 3) believes that qualitative research has reached the same point in its development as quantitative research.

4.8.2 Quantitative Analysis

Gay and Airasian (2000, p. 627) see quantitative research as the collection of numerical data in order to explain, predict and/or control phenomena of interest. A more simplistic definition was the one given by Punch (1998, p. 4) when he depicted quantitative research as an empirical research where the data are in the form of numbers. An up to date definition was the one given by Creswell (1994) where he stated that quantitative is:

“An inquiry into a social or human problem, based on testing a theory composed of variables, measured with numbers, and analyzed with statistical procedures, in

order to determine whether the predictive generalizations of the theory hold true” Creswell (1994, p. 1).

Gall, Gall and Borg (1999, p. 4) see quantitative research as relying heavily on numerical data and statistical analysis. Quantitative analysis is built upon statistical materials relating to samples and focuses on the analysis of a case-variable matrix containing survey data, which has either been collected by the researcher or which was collected by other researchers and has been obtained from them either directly or via a data archive which also considers the analysis of tabulated official statistics and other published tables or quantitative materials (Pole & Lampard, 2002, p. 210). Pole and Lampard’s study further revealed that quantitative data analysis is far from being simply a technical exercise. It involves a process of decision-making and data manipulation which is guided by a mixture of the following—theoretical ideas, the researcher’s substantive insight, his or her degree of experience as a data analyst and the data itself.

In conclusion, therefore, quantitative research data is usually gathered using more structured research instruments. The results provide less detail on behaviour, attitudes and motivation. The results are based on larger sample sizes that are representative of the population. The research can usually be replicated or repeated, given its high reliability, and the analysis of the results is more objective (Dilbert, 2004). Finally, quantitative research is distinguished from qualitative research primarily because of the large numbers of people who are “sampled” and the type of questions they are asked. Generally, sample sizes of 100 are adequate for sampling “yes/no” questions to get results that are 95 percent reliable as being accurate for the entire market of buyers. To increase the accuracy to 97 percent to 99 percent, the sample sizes would have to increase to 400 to 2,000 or more, depending upon the subject matter and complexity of questioning (CCH, 2004).

4.8.3 Qualitative and Quantitative Analyzes at Crossroad

The selection of an appropriate research method has always been a dilemma for researchers and evaluators. While the quantitative-qualitative research debate ravages, what is obvious is that there is no one best research method for all research and evaluations. Different research purposes require the use of different research methods separately or in concert with each other. For all practical purposes, both quantitative and qualitative methods have different but complimentary roles to play in a research process and outcome. The fray between champions of these distinguishable research approaches is essentially ideological and political. Basically, these two approaches differ in their ways of conducting research, and each tends to claim superiority over the other.

Ironically, each tradition overtly discredits the other as if it is infallible. The stage is always charged so that, given the chance, these champions would fight at any setting to defend their research philosophies. Fueling this charged situation is the subconscious luring of graduate students into these dichotomous camps of research methodologies and paradigms, especially from the standpoint of the research orientations of the professors—instructing or advising (Olusegun, 2001, pp. 3–10).

To carry this idea one-step further, according to Reichardt and Cook (1979, p. 23) “researchers can not benefit from the use of numbers if they do not know in common sense terms what the numbers mean”. Punch (1998, p. 240), warned that these differences should not obscure the similarities in logic which makes combining the approaches possible. In spite of the researcher’s recognition of the distinctions that exist between the qualitative and the quantitative methods of research findings, both methodologies are increasingly compatible and have profound roles to play in educational research.

In brief, I tend to disagree completely with those who favor one method at the expense of the other because no single methodology is most appropriate for a particular research design. Thus, it will be to the interest of a researcher to combine both methodologies (quantitative and qualitative) to better comprehend the purpose for which a study is carried out. Similarly, according to Allen-Mearns (1995, p. 5–8), researchers must discard the idea that the two paradigms are inherently incompatible or that one is better or more accurate than the other, and must creatively integrate them. The educational preparation of social work practitioners and researchers must include knowledge about both methodologies and the importance of contextual analysis and computer-assisted models of qualitative analysis. In support of this, Olusegun (2001) maintains that “research being a truth-finding construct aimed at verifying and authenticating phenomena, evidence abounds that the use of a combination of both quantitative and qualitative research methods results in a stronger validity to outcomes”. Since strict adherence to the qualitative-quantitative divide is not helpful, it is better to see qualitative and quantitative methods as complementing each other rather than fiercely opposing one another. Rather, study objectives and the kind of data being sought should dictate which approach could be followed.

Therefore, in this study, the combination of qualitative and quantitative methods added rigor, breadth and depth to the study. This is also in line with Kamwendo’s (2004) findings. In any case, there is nothing about a research method per se which makes it weak or strong. The argument about research method depends on two factors: first, the relationship between theory and method, and second, how the researcher attends to the potential weakness of the method (Hartley, 1994; Kamwendo, 2004).

5 Presentation, Interpretation and Data Analysis

This chapter focuses on the empirical data presentation, interpretation and analysis. The first step is to present the results of the experimental data in its raw form drawn from interviews and questionnaires. The analyses of the data involved the use of multiple statistical procedures: Percentages Mean Point Value, T-test of significance, One-Way Analysis of Variance (ANOVA), and Cross Tabulation. The data for this study is in table form, and the data collected was analyzed to answer the specific research questions and hypotheses in this treatise. The second step is the discussion of the information from the respondents and making use of evidence from literature to support them. The clear merit of this chapter in my opinion is that the gained results are connected to the information given in the literature review.

5.1 Research Question 1. Higher Academic Qualification and Teachers' job Effectiveness.

The first research question is "To what extent does higher academic qualification improve teachers' job effectiveness"? The purpose of this research question is to assess the respondents' perception of the role of teachers' higher academic qualification and their job effectiveness and to show if there is a connection between higher academic qualification and teacher job effectiveness. To answer this question, the responses on item 23 of section "B" of the questionnaire were tallied and analyzed and the result is as presented in Table 5.1.1. The statistical analysis of respondents' answers to this item shows that higher academic qualification increases teacher effectiveness on the job (see Appendix D, table 23).

Table 5.1.1: Responses on whether higher academic qualification improves teachers job effectiveness.

<i>Competency</i> (Variable)	<i>Trained Teachers</i> (Professionally Qualified)		<i>Untrained Teachers</i> (Academically Qualified)	
	Mean	SD	Mean	SD
23	3,77	0,43	2,31	0,85

Kerry and Wilding (2004), Teddlie and Reynolds (2000) and Teddlie *et al.* (2002) argued in favor of teachers' teaching style and their effectiveness in re-

lation to their academic and professional qualification. Teddlie and colleagues stated that professional teachers who are as well academically qualified as they are professionally qualified are uniformly skilled in lesson presentation. Teddlie *et al.* began with an overview of what was to be accomplished: presenting lessons in a variety of manners, soliciting and answering questions and providing opportunities for guided individual practices (Teddlie *et al.* 2002). Highlighting the need for academic level improvement and professional development, Teddlie and Reynolds (2000) see the maximizing of class time, successful grouping and organization of students, exhibiting best teaching practices and the adopting of these practices to a particular classroom, and the factors that determine the process of effective teaching as the products of higher academic and professional qualification. This is true because when one is highly educated in his or her subject matter, it increases the chances of effective teaching and learning procedures.

The interview transcript also revealed that school principals are aware of the difference it makes if highly qualified teachers are employed to handle instructional processes in schools. For students to attain high academic success the assistance of professional and highly academically qualified teachers is required. However, Teddlie and Reynolds are of the opinion that a good teacher must be equipped professionally to carry on effectively in the teaching job. They further added that a teacher who aspires to study further acquires additional knowledge, which is why one does not expect a master's degree holder to perform at the same academic level as an NCE holder.

Similarly, the interview transcript of supervisors revealed that teachers who possess higher academic qualifications and are professionally qualified teachers perform better in terms of educational research because they have a wider sense of teaching. However, they concluded that professionally trained teachers are better equipped in instructional processes, unlike those who do not have professional teaching qualifications. They believe that professional teachers are considered to better manage educational problems and solve them more effectively.

5.2 Research Question 2. Professional Training and Teachers' Job Effectiveness

The second research question is "To what extent does professional training of teachers' improve their effectiveness on the job"? The essence of this research question is to find out if teacher's professional training actually affects their job effectiveness. This question was answered using mean, standard deviation and variance (see tables 5.2.1 and 5.2.2). Responses on the competencies statement items 1–22 of the research instrument (questionnaire) were tallied along

“agree and disagree.” The table shows that trained teachers consistently scored higher than untrained teachers did at almost the same mean level in all the variables tested. This visible impression is an indication that distinguishes the professional teachers from the non-professional teachers in the area of teaching competencies. It was suggested in this study according to education effectiveness researchers (Scheerens, 1992, 1994, 2000; Creemers, 1994; Hämäläinen & Jokela, 1993) that professional training of teachers should not be undermined. That is, teachers ought to be professionally competent before they can be called expert in their job. The disparities in the means of the respondents’ answers to this research question threw some expression on the direction education should follow.

Table 5.2.1: Responses on whether professional training of teachers improves their effectiveness on the job

<i>Competencies (Variables) Items</i>	<i>Trained Teachers (Professionally Qualified)</i>			<i>Untrained Teachers (Academically Qualified)</i>		
	Mean	SD	Variance	Mean	SD	Variance
8	3,74	,44	,19	1,90	,82	,67
14	3,74	,46	,21	2,17	,91	,82
16	3,73	,44	,20	2,25	,90	,82
4	3,72	,53	,28	1,71	,77	,59
15	3,72	,46	,21	2,43	,93	,87
7	3,71	,53	,28	1,77	,80	,65
12	3,70	,46	,22	2,01	,83	,70
13	3,68	,47	,22	2,01	,88	,78
5	3,67	,52	,27	1,66	,72	,53
9	3,67	,51	,26	1,96	,74	,55
17	3,67	,53	,28	2,11	,92	,85
11	3,66	,50	,25	2,35	,85	,73
1	3,65	,54	,29	2,07	,85	,72
10	3,64	,49	,24	2,33	,80	,64
19	3,60	,49	,24	2,14	,86	,73
22	3,59	,50	,25	2,43	,76	,58
3	3,56	,56	,31	1,75	,75	,56
20	3,56	,50	,25	2,34	,81	,66
21	3,56	,50	,25	2,18	,92	,55
6	3,55	,56	,31	1,83	,76	,57
18	3,53	,53	,28	2,10	,90	,81
2	3,47	,73	,54	1,84	,73	,53
Total	3,64	0,51	0,26	2,06	0,83	0,68

This study observed that academically qualified teachers are unskilled and as such not competent to carry out effective instructional processes. The incompetent teacher does not know how to react to threatening situations in the classroom when they arise. Thus, they are 'skilled incompetent'. Probst and Buchel (1997, p. 67) writing on the barriers to learning, cited Argyris as saying that people dislike losing control over their actions and like to be praised when they have done well. Nevertheless, when a threatening or painful situation arises, there is always the danger of losing control or not being praised. Most untrained teachers therefore, follow a theory of action which says that they must stay in control and remain master of the situation. To stay in control, they often have to tell lies or invent stories so as not to lose face. The mechanisms they use to stay in control or to conceal painful and threatening situations have been termed 'skilled incompetence'. Probst and Buchel (1997, p. 68) defined skilled incompetence as the use of strategies based on theories of action aimed at avoiding loss of face. Thus explanations, distortions, inexactitudes, omissions, excuses and so on are skillfully deployed in the interests of keeping what one has.

Probst and Buchel further maintained that problems which are threatening or potentially embarrassing to the incompetent teacher are counter productive by defensive styles of argument which leads to misunderstandings, distortions, silences and concealments which in turn leads to errors in teacher-student interaction. The results of this kind of behavior are generally not intended by the teachers but have arisen as a result of the deficiencies in his or her inability to apply the various forms of teaching methodology that enhance teaching and learning. It is always counterproductive and it takes no less than seconds, which means that it is usually unconscious and difficult to control (Probst & Buchel, 1997).

Professional competency researchers (e.g. Short, 1984; Stoof, 2005) have argued that the competence of professionals derives from their possessing a set of relevant attributes such as knowledge, skills and attitudes. These attributes, which jointly underlie competence, are often referred to as competencies. To be precise, competency is a combination of attributes underlying some aspects of successful professional performance though the attributes of individuals do not in themselves constitute competence (Eraut, 1994).

The above discussion shows a correlation between professional training and competence. Eraut (1994) acknowledged that education entails not just the accretion of knowledge but the constant structuring and restructuring of knowledge and cognitive skills. It involves the ability of a teacher to acquire information by talking to students and interpreting the importance of the information obtained to achieve results from the students. It also involves the ability to use specialized procedures and techniques to effectively affect student's developmental processes.

The interview data also shows strong support for these arguments. Professional training of teachers teaches the skills, rudiments, and techniques that will affect teaching, and which bring about effective application of curriculum in schools, preparation of effective lesson plans and thus, create a great deal of professional competence. They scored 5 as shown in table 5.2.2. Other interview findings such as the application of professional ethics, effective utilization of instructional process, and the development of effective evaluation methods are essential products of professional training and they scored 4. Therefore, it was concluded that teachers' pedagogical training results in professional competencies. In all, Stoll and Fink (1996, p. 161) argued that there exists links between teachers' professional development and students' academic improvement.

Table 5.2.2: Respondents' interview perception of professional training of teachers' and their effectiveness on the job

S/n	Teachers	No	Principals	No	Supervisors	No
1	The professional training of teachers expose them to various methodological competencies	3	Professional teachers tend to organize class-room effectively	3	Professional training results to effective utilization of instructional process	4
2	Professional training of teachers teaches the skills, rudiments, and techniques that will affect teaching	5	The application of professional ethics	4	Professional training brings about effective application of curricular in schools	5
3	Professional training improves teaching and learning situation	2	Professional training of teachers have a great deal of professional competence	5	Enthusiasm and the devotion to teaching greatly affects teaching effectiveness	3
4			Professional teachers prepares an effective lesson plan	5	Professional training of teachers helps them develop effective evaluation methods	4
5					Teachers pedagogical training results to professional competencies	4

5.3 Research Question 3. Teachers Motivational Competence and their Effectiveness in Ensuring Students and Co-teachers Educational Achievements

The third research question is “How do teachers’ motivational competencies improve their job effectiveness?” The rationale underlying this research question is to unearth the extent to which teachers influence co-teachers and students to achieve positive outcomes. To answer this question, the responses on items 4, 5, 6 and 7 of section “B” of the questionnaire were tallied and analyzed, and the results are as presented in Table 5.3.1. The statistical analysis of respondents’ answer to these items showed that teachers with professional qualifications demonstrate familiarity with co-teachers and students, and as such motivate co-teachers to work effectively and students to learn effectively. The application of the wise use of punishment is regarded as an essential part of professional teaching and it is likewise shown from the study that professional teachers guide co-teachers on how to apply rewards and punishment effectively (see Appendix D, tables 4–7).

Table 5.3.1: Response on Whether Motivational Competencies of Teachers Improves Their Effectiveness.

<i>Competencies</i> (Variables) Items	<i>Trained Teachers</i> (Professionally Qualified)			<i>Untrained Teachers</i> (Academically Qualified)		
	Mean	SD	Variance	Mean	SD	Variance
4	3,72	,53	,28	1,71	,77	,59
5	3,67	,52	,27	1,66	,72	,53
6	3,55	,56	,31	1,83	,76	,57
7	3,71	,53	,28	1,77	,80	,65
Total	3,66	,54	,28	1,74	,76	,58

In line with the result, co-teachers’ review is an intentional process of gathering information and evidence about the effectiveness of the teaching-learning process in the educational environment and how positively they encourage fellow teachers in carrying out their teaching jobs effectively. The purposes include providing assurance that students are able to achieve what the course requires them to achieve and to improve teaching practices. Co-teachers offer the capacity to critically review and improve enhanced teaching through the exchange of ideas. They give a teacher someone to resort to and provide constructive critical feedback about teaching; teaching should be regarded as a fundamental aspect of the academic role expected of teachers: co-teachers are a valuable source of formative feedback on whether goals are achieved. Similarly, Dunkin (1997, pp.37–51) citing the work of Scriven drew attention to the

fact that if a school system institutes a system of assessment in order to encourage the professional growth and development of its teachers, it is engaged in formative evaluation. They concluded that this type of feedback process has yielded positive results.

Respondents' answers regarding the use of punishment during instructional process show a positive response because the use of power in schools is regarded as important in determining high student achievement. Teachers use this method to influence student's compliance in the classroom. This was evident in the Cheng, Cheung and Tam (cf. 2002) study; however, their investigation was limited to grade 6 students. Cheng (1994a, pp. 221–239) viewed power base as the use of reward power, coercive power, position power and personal power or professional power in the classroom to ensure students' compliance. It is also accepted by many researchers especially in Africa and Asia as a valuable tool for effective teaching and high student achievement (Cheng, Cheung and Tam 2002).

5.4 Research Question 4. Instructional Processes Competencies and Teachers' Job Effectiveness

The fourth research question is "What type of instructional processes do teachers use to improve their effectiveness"? The idea here is to examine the connection between teachers' instructional process and their input towards teaching effectiveness as well as determine teachers' expectation as to what constitutes effective instructional process. To this end, responses on the competency statement items 11–17 of the research instrument (questionnaire) were also tallied along "agree and disagree" to answer this question using mean, standard deviation and variance (see tables 5.4.1). It is evident from the result that the respondents have positive attitudes towards professional development with particular reference to how teachers apply various instructional techniques to achieve instructional objectives (see also Appendix D. tables 11–17).

Table 5.4.1: Response on Whether Instructional Processes Competencies Improve Teachers' Job Effectiveness.

Competencies (Variables) Items	Trained Teachers (Professionally Qualified)			Untrained Teachers (Academically Qualified)		
	Mean	SD	Variance	Mean	SD	Variance
11	3,66	,50	,25	2,35	,85	,73
12	3,70	,46	,22	2,01	,83	,70
13	3,68	,47	,22	2,01	,88	,78
14	3,74	,46	,21	2,17	,91	,82
15	3,72	,46	,21	2,43	,93	,87
16	3,73	,44	,20	2,25	,90	,82
17	3,67	,53	,28	2,11	,92	,85
Total	3.70	,47	,23	2,19	,88	,80

According to Creemers (cf., 1994, p. 18), instructional effectiveness and research on teaching show that the important conditions for effective teaching include direct instruction (i.e., a conglomerate of factors such as reinforcement, highly structured learning tasks and frequent monitoring of students' progress), time of task (including homework assignments) and opportunity to learn (i.e., closeness of achievement measurement and content covered). However, Fraser *et al.* (1987) argued that it is the amount of instruction, enhanced by using school days more effectively or increasing homework which particularly leads to improvement in students' outcomes. Creemers (1994c) added that successful methods of instruction which lead to greater student achievement are mastery learning with an emphasis on reinforcement and feedback, co-operative learning, personalized and adaptive instruction, the use of advance organizers, high teacher expectations, longer wait time and good questioning techniques.

Changes brought about in science and technologies have influenced the context of education. Therefore, instructional processes should witness the same turn around in order to meet these compact challenges. Correspondingly, Ruohotie and Grimmert (1996) states that the environmental changes, rapidly developing technology, the restructuring of education and the demographic flux in the work force has called for increased professional competence. The lack of the use of professional teachers in teaching and learning processes in Nigeria has undermined the developmental processes of the child and his or her academic achievement. In fact, the unbalanced system of education in Nigeria has resulted in low morale among teachers as well as difficulty in recruiting qualified teaching staffs to carry out instruction in schools, and the mass movement of professional teachers out of the educational system. These problems show us that it is time to be worried about the current state of Nigerian education as well as its future.

Yet even as the schools struggle to recruit quality teachers, the expectations of those teachers continue to rise. They need to be experts in one or more specific subjects, and this demands an increasing level of professional qualifications. To be able to move ahead with these inherent challenges they must continually update their expertise and knowledge. In order to provide tomorrow's world with the knowledge and skills on which economic and social progress so critically depend, educational institutions and teachers need to respond by developing and delivering appropriate educational content. Moreover, teachers' subject-matter expertise must be complemented with pedagogical competence with a focus on the transmission of a range of high-level skills, including the motivation to learn, creativity and co-operation. This is because technology is becoming a new feature of professionalism in teaching, requiring an understanding of its pedagogical potential and the ability to integrate it into the teaching and learning processes. Finally, professionalism in teaching can no longer be regarded as an individual competence but must include the ability to function as part of a "learning organization" and the capacity to move in and out of other careers and experiences that can enrich teaching ability (OECD 2001, p. 11).

Furthermore, we hear and talk about gifted teachers and gifted classrooms. What makes a teacher gifted? Moreover, what makes their classrooms special? Do they have certain inherent abilities, qualities that make their classrooms more successful than others? Alternatively, do they use techniques that make learning more interesting and permanent for their students? It leaves us asking, "Can teachers be trained to provide an enriched environment and teach a curriculum in such a way that every child is challenged to perform far above grade level?" Surely, training will introduce them to some of these instructional methods (cf., Miranda & Landmann 2001, pp. 230-235). Banjo (cf., 1960) stressed that with training those who are intuitive teachers are open to the elements of the necessary knowledge, skills and attitudes demanded of the teaching profession. Emphasizing that devotion to duty, love of children and the desire to always improve on the past effectiveness is inculcated in instructional competence. Thus, Banjo concluded that a trained teacher is supposed to be fair, friendly, polite, firm and upright to his or her pupils while performing his or her instructional duty.

There is an outstanding argument here; it puts forward clearly the need for professionally competent teachers to handle instructional processes, which is a very significant attempt to improve the quality of education. However, while we do not undermine the input of gifted teachers in educational development, we recognize that their inputs are limited.

5.5 Research Question 5. Appropriate Use of Evaluation Techniques and Teachers Job Effectiveness

Research question 5 asks “To what extent do teachers employ and use various evaluation techniques effectively?” This research question is aimed at assessing teachers’ appropriate use of the various evaluation techniques at their disposal to determine if the reason for carrying out the evaluation is achieved. It is also aimed at examining the connection between teachers’ evaluation process competencies and their input towards teaching effectiveness. Thus, teachers were evaluated on competency statement items 18-22 of the research instrument (questionnaire) which were tallied along “agree and disagree” to answer this question using mean, standard deviation and variance (see tables 5.5.1). The result from the study revealed that professional teachers tend to employ and use appropriate evaluation methods more than untrained teachers. For instance, the construction of various evaluation instruments, the use of evaluation data to improve job situations, keeping records of individual students accurately and assessing students’ behavior effectively is a first-hand competency of a professionally qualified teacher. The Cross Tabulation analysis in this study further explains this (see Appendix D. tables 18–22).

Table 5.5.1: Response to how teachers employ and use various evaluation techniques effectively.

Competencies (Variables) Items	Trained Teachers (Professionally Qualified)			Untrained Teachers (Academically Qualified)		
	Mean	SD	Variance	Mean	SD	Variance
18	3,53	,53	,28	2,10	,90	,81
19	3,60	,49	,24	2,14	,86	,73
20	3,56	,50	,25	2,34	,81	,66
21	3,56	,50	,25	2,18	,92	,55
22	3,59	,50	,25	2,43	,76	,58
Total	3,57	,50	,25	2,24	,85	,67

According to Sanders *et al.* (1990), the scope of a teacher’s professional role and responsibilities for student assessment may be described in terms of some standards in making sure that students are evaluated properly, and a number of standards focus on classroom-based competencies. These activities imply that teachers need competence in student assessment and sufficient time and resources to complete assessments in a professional manner. It is only when teachers understand the techniques of evaluation or assessment that they will be capable of realizing their benefit to their students (cf. Amalaha 1979, p. 251).

Furthermore, every standard that follows is an expectation for assessment knowledge or skill that a teacher should possess in order to perform well in his or her evaluation effort. As a set, according to Gbamanja (1989) and Sanders *et al.* (1990), the standards call on teachers to demonstrate skill at selecting, developing, applying, using, communicating, and evaluating student assessment information and student assessment practices. The standards are that:

1. Teachers should be skilled in choosing assessment methods appropriate for instructional decisions.
2. Teachers should be skilled in developing assessment methods appropriate for instructional decisions.
3. Teachers should be skilled in administering, scoring and interpreting the results of both externally-produced and teacher-produced assessment methods.
4. Teachers should be skilled in using assessment results when making decisions about individual students, planning teaching, developing curriculum, and school improvement.
5. Teachers should be skilled in developing valid pupil grading procedures that use pupil assessments.
6. Teachers should be skilled in communicating assessment results to students, parents, other lay audiences, and other educators.
7. Teachers should be skilled in recognizing unethical, illegal, and otherwise inappropriate assessment methods and uses of assessment information

However, there are many ways of getting evidence about behavior changes in a student as a result of a particular curriculum program. Consequently, any way of getting valid evidence about the kinds of behavior represented by educational objectives laid out in a school curriculum is considered an appropriate evaluation procedure (Amahala 1979; Gbamanja 1989; Sanders *et al.* 1990).

5.6 Hypothesis 1. Job Effectiveness Between Teachers' Who Have Professional Training and Those Without

Hypothesis 1 states, "There are no significant differences in the job effectiveness between teachers who have professional training and those without". The essence of this hypothesis is to test the degree to which professional and non-professional teachers are effective in their teaching jobs. This hypothesis was tested through the responses on items 1–25 on section "B" of the research questionnaire. The 25 variables have subsections (a) and (b); subsection (a) represents academic qualification while subsection (b) represents professional

qualification. An analysis of the three basic statistical indicators, means, standard deviation and variance were carried out. The overall mean of the respondents' answers for "Trained Teachers" (Professionally Qualified) is 3.65 with an average standard deviation of 0.50 and a variance of 0.25 while the respondents' mean answers for "Untrained Teachers" (Academically Qualified) is 2.09 with an average standard deviation of 0.83 and a variance of 0.68. The average range of all the scores is from 3.77–3.47 for "Trained Teachers" and 2.48–1.66 for the "Untrained Teachers" (see table 5.6.1). The results reveal that those who have professional training perform better than those without; as a result, the hypothesis was rejected; therefore, upholding the alternative hypothesis.

In general, the analysis of hypothesis 1 suggests a positive attitude towards professional development. In support of this result, teacher effectiveness researches (e.g. Creemers 1994; Creemers, Stringfield & Guldemond 2002; Teddlie & Reynolds 2000) have identified positive feedback; good lesson structure through emphasizing key points; checking for pupil understanding to establish the appropriateness of instruction; a high quantity of high-quality questioning; the use of academic-related questions; motivating students through probing and elaborating on their answers and showing high expectations of what children can achieve as being associated with differential student gain within schools. The above-mentioned instructional methods are central to professional teachers' job effectiveness because they are qualities that teachers are able to apply in the classroom situation in order to achieve results.

Although it is clear that many factors that have formed the intellectual backbone of teacher effectiveness, the research and practice movement internationally emphasizes that the quality of teachers' classroom management, their instruction and their classroom climate helps explain the variation in student's achievement gains in diverse countries across the world (Reynolds *et al.* 2000). However, they commented positively in line with this research's findings and that of Creemers (1994), Creemers, Stringfield and Guldemond (2002) and Teddlie and Reynolds (2000), by observing that the discrete behaviors exhibited by teachers, such as clarity, questioning, high expectations, a commitment to academic achievement and lesson-structuring, that have formed the core constructs of the teachers' job effectiveness tradition, partially explain why the less effective schools of the world differ from the typical and the more effective.

Table 5.6.1: Mean, standard deviation and variance of respondents' answers to APQTJE

Competencies (Variables) Items	Trained Teachers (Professionally Qualified)			Untrained Teachers (Academically Qualified)		
	Mean	SD	Variance	Mean	SD	Variance
23	3,77	,43	,19	2,31	,85	,72
8	3,74	,44	,19	1,90	,82	,67
14	3,74	,46	,21	2,17	,91	,82
16	3,73	,44	,20	2,25	,90	,82
4	3,72	,53	,28	1,71	,77	,59
15	3,72	,46	,21	2,43	,93	,87
24	3,72	,45	,20	2,15	,92	,85
7	3,71	,53	,28	1,77	,80	,65
12	3,70	,46	,22	2,01	,83	,70
13	3,68	,47	,22	2,01	,88	,78
5	3,67	,52	,27	1,66	,72	,53
9	3,67	,51	,26	1,96	,74	,55
17	3,67	,53	,28	2,11	,92	,85
11	3,66	,50	,25	2,35	,85	,73
1	3,65	,54	,29	2,07	,85	,72
10	3,64	,49	,24	2,33	,80	,64
19	3,60	,49	,24	2,14	,86	,73
22	3,59	,50	,25	2,43	,76	,58
25	3,59	,49	,24	2,48	,76	,58
3	3,56	,56	,31	1,75	,75	,56
20	3,56	,50	,25	2,34	,81	,66
21	3,56	,50	,25	2,18	,92	,55
6	3,55	,56	,31	1,83	,76	,57
18	3,53	,53	,28	2,10	,90	,81
2	3,47	,73	,54	1,84	,73	,53
Overall Total	3,65	0,50	0,25	2,09	0,83	0,68

(N=300).

However, it is also obvious that many of the concepts that formed the intellectual backbone of the school effectiveness research and practice movement internationally, concerning the quality of the head teacher or principal, the nature of school expectations and the extent to which the school level portray the quality of the classroom experience in explaining why some schools are effective in a wide variety of different country contexts (Reynolds *et al.*, 2000; Reynolds & Packer 1992). Muijs and Reynolds', Harris and Muijs' discovery provides substantial evidence regarding the importance of such factors as student's expectations of their teachers' performance, high-quality questioning

and application and opportunities to practice as factors that enhance teacher effectiveness in the classroom (Muijs & Reynolds, 2001; Harris & Muijs, 2005).

Finally, the use of behavior incentive systems to manage student behavior, the giving of positive academic feedback, the continuous monitoring of the whole classroom, effective management and arrangement of the classroom and effective time management are all considered to be necessary attributes for a teacher. Other factors that may improve teachers' effectiveness are emphasizing key points of the lesson, checking for understanding from students, questioning skills, probing further when answers are incorrect and the elaboration on answers. These all greatly motivate students to learn. The encouragement of both students and co-teachers, the exhibition of enthusiasm and interaction process competencies are practicable moves towards assessing teachers' effectiveness.

5.7 Hypothesis 2. Effectiveness of Professional and Non-professional Teachers towards their Methodological Competencies

The second hypothesis states, "There are no significant differences in the effectiveness of professional and non-professional teachers towards their methodological competencies". This research hypothesis is intended at discovering from the respondents' view if significant differences exist in the methodological competencies of professional and non-professional teachers.

Table 5.7.1: Means and standard deviations of differences between professionally trained and non-professionally trained teachers towards their methodological competencies.

<i>Competencies</i> (Variables) Items	<i>Trained Teachers</i> (Professionally Qualified)		<i>Untrained Teachers</i> (Academically Qualified)	
	Mean	SD	Mean	SD
1	3,65	,54	2,07	,85
3	3,56	,56	1,75	,75
2	3,47	,73	1,84	,73
Total	3,56	0,61	1,89	0,78

The table above reveals that the cumulative mean and standard deviation scores for the professionally trained teachers ($M= 3.56$, $SD= 0.61$) are higher than those of the non-professionally trained teachers ($M= 1.89$, $SD= 0.78$). This shows that there are significant differences in the effectiveness of profes-

sionally trained teachers and non-professional teachers in the area of methodological competencies. The findings likewise revealed practical evidences that professional teachers tend to apply correct teaching methods in the teaching and learning process. This lends sufficient support to Janneck and Bleek's argument that current work practices in the education industry are characterized by a strong emphasis on comparative work in small multidisciplinary teams. At the same time, special knowledge or "professional competence" becomes obsolete more rapidly and the ability to acquire the skills relevant for teaching "just in time" grows in importance. Therefore, social and methodological competences gain importance just as professional competences. Obviously, those competences cannot be learned individually in lectures or traditional seminars, but require "teaching practice" and being engaged in a real-world context. This problem is addressed by offering educational projects to our student teachers with a didactic concept that focuses on authentic teaching practice. These cooperative projects allow them to acquire the aforementioned three key competences in an integrative manner (Janneck & Bleek, 2004).

The evidence from these results makes me believe that there is a relationship between "teaching practices" and "methodological competence" since methodological competence produces facts as input to instructional process and instructional process establishes requirements to stimulate rational input in student's academic achievements. Teaching practice and method courses given to student teachers at the faculty of education of a university or teacher education institute assist student teachers in gaining relevant methodological skills that aid teaching and learning, which could result in effective schooling. The analysis also reveals that student teachers should focus on educational measurement and evaluation, psychology of education, philosophy of education, sociology of education, educational management, educational planning and other education courses that will expose them to the rudiments of being an effective teacher because methodological competence is very much associated with rigor. This also gives backing to Law and Clover (2000) when they wrote that in the current changing environment of the educational system, professional competence is called for in promoting educational development.

From the preceding discussion, the findings have shown that there are multifaceted roles that teachers play in effecting quality in teaching. The information contained in the data shows that there are differences in the way trained and untrained teachers go about their roles in the instructional process. Also, it is suggested that much importance should be attached to developing untrained teachers in the process of teacher training because quality teaching scored high in the evaluation of an effective teacher. This lends support to the works of Darling-Hammond (1983, 1987); Scheerens (1992, 1994 and 2001); Creemers (1994); Darling-Hammond, Wise and Klein (1995) and Leino (1996).

5.8 Hypothesis 3. Effectiveness of Professional and Non-professional Teachers' Towards their Material Utilization Competencies

The third hypothesis states, "There are no significant differences in the effectiveness of professional and non-professional teachers towards their material utilization competencies". This research hypothesis is designed to assess teachers' appropriate use of instructional materials during instructional processes and its input towards teaching effectiveness. Thus, teachers were evaluated on the competency statements 8–10.

Table 5.8.1: Means and standard deviations of differences between professionally trained and non-professionally trained teachers towards their material utilization competencies.

<i>Competencies</i> (Variables) Items	<i>Trained Teachers</i> (Professionally Qualified)		<i>Untrained Teachers</i> (Academically Qualified)	
	Mean	SD	Mean	SD
8	3,74	,44	1,90	,82
9	3,67	,51	1,96	,74
10	3,64	,49	2,33	,80
Total	3,68	0,48	2,06	0,79

The results of the means and standard deviations in table 5.8.1 between professionally trained and untrained teachers indicates that a variety of techniques are needed for teachers to effectively utilize instructional materials in the teaching and learning process. Therefore, this hypothesis is rejected, and the alternative hypothesis is upheld.

In support of the result in "hypothesis three", Abdal-Haqq (1995), Barker, *et al.* (1995), Ayersman, *et al.* (1996), Basu (1997), and Lancaster (1999) indicated that teachers who are professionally trained demonstrate a sound understanding of classroom technology operations and concepts and use productivity tools to enhance professional tasks such as correspondence, students' assessment, classroom materials and lesson presentations. Thus, teachers need to demonstrate introductory knowledge, skills, and understanding of concepts related to the use of materials needed for instructional process and the continual growth in technology knowledge and skills to stay abreast of current and emerging technologies that support student learning and informed decisions regarding the use of technology in support of student learning. To give credence to these findings, according to an Internet source¹⁵, a course like 'edu-

¹⁵ <<http://faculty.uca.edu/~ãaront/1220syl.pdf>>

cational technology' is designed to equip student teacher candidates with the knowledge and skills necessary to use technology in the field of education. It is established to maintain rigorous standards for teacher candidates' knowledge and performance and to ensure that all students' teachers achieve the predetermined aims and objectives of education. Working from a solid content background, professional teachers demonstrate proficient and flexible use of different ways of teaching that actively engage all students in learning.

Teacher candidates are well versed in the characteristics of students of different ages, abilities, and cultural backgrounds. They are skilled in integrating technology into instruction and creating an environment in which all students can be successful and want to learn. Teacher candidates know when and how to assess learning through various forms of traditional and authentic assessments. They are well prepared for successful careers in teaching and are expected to act in a professional manner in all circumstances with students, colleagues, parents/guardians, and community members. As professional educators, teacher candidates value collaboration and seek opportunities to work with other professionals and community members to improve the educational experiences for students.

Nevertheless, the same Internet source proposed four basic steps in the preparation of a teacher education program, which this study presumes will go a long way in increasing professional teachers' job effectiveness.

- The teacher candidate should be able to design and organize instruction and assessment procedures for all students based upon a thorough knowledge of subject matter, pedagogy, and students.
- The teacher candidate should be able to use appropriate, effective classroom practices, procedures, and pedagogies to create and manage a productive learning environment.
- The teacher candidate should be able to demonstrate strong communication skills, employ effective teaching strategies and methodologies, integrate technology into instruction, and use a variety of assessment measures to affect student learning.
- The teacher candidate should be able to engage in professional development, demonstrate ethical conduct in working with all constituencies (students, colleagues, parents/guardians, and community members), and reflect upon instruction and student learning to assess teaching effectiveness.

However, it is saddening to say that Nigeria in particular and other Sub-Saharan African countries are far behind in terms of educational technology. The educational technology bases of these countries are still at the embryonic stage.

5.9 Hypothesis 4: Relationship between Variables and the Respondents' Background Information

To test to what degree differences exist between the attitudes of the respondents' background information towards APQTJE, the null hypothesis states, "There are no significant differences in the opinions of respondents' background information towards APQTJE." Whereas, the alternative hypothesis states, "There are significant differences in the opinions of respondents' background information towards APQTJE." The reason for the alternative hypothesis is that when the null hypothesis is false, the alternative hypothesis is likely. A One-Way Analysis of Variance (ANOVA) set at $p < 0.05$ was employed to test the null hypothesis. The independent variables are: Gender, Age, Status, Subject Taught, Academic Qualification, Professional Qualification and Length of Service. The data obtained was computed and the result shows that no significant difference existed in the respondents' opinions. Hence, the null hypothesis is true and it was accepted (see tables 5.9.1 – 5.9.7).

Table 5.9.1: Analysis of variance for Gender

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Gender	Female	126	42,0	2,87	,67	1,49	0,496
	Male	174	58,0	2,88	,66		

Based on the analysis of variance conducted, with gender as independent variable on items 1–25 in section "B" of the research questionnaire as dependent variables, both female and male respondents have no significant gender effect on APQTJE. The mean score of 2.87 for female and 2.88 for male, with an F-ratio of 1.49 and F-probability of 0.496 illustrates that both male and female respondents hold professionalism as a response to the development of any educational system.

Table 5.9.2: Analysis of variance for Age

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Age	20–29	49	16,3	2,80	,69	1,84	0,279
	30–39	110	36,7	2,87	,66		
	40–49	120	40,0	2,89	,66		
	50–above	21	7,0	2,81	,61		

The opinion of respondents towards APQTJE by different age groups also reveals that there are no significant differences in their perceptions (see Table 5.9.2). From the table, it can be seen that the means and standard deviations of the respondents run at the same score level while the F-ratio and F-probability equally depict likewise. Age at this stage did not have an effect on their views. Thus, all the respondents regardless of their age differences held professionalism as utmost.

Table 5.9.3: Analysis of variance for Status

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Status	Principals	20	6,7	2,88	,66	1,02	0,457
	Teachers	270	90,0	2,87	,67		
	Supervisors	10	3,3	2,90	,58		

Respondents' status was also classified into three categories: Principals, Teachers and Supervisors from the Ministry of Education and the Post Primary Schools Board. The results indicated no significant differences in their opinions. They held professionalism as the only prospect for Nigeria's educational system; this is shown in their means scores of 2.88, 2.87 and 2.90 respectively. In addition, with an F-ratio of 1.02 and an F-probability of 0.457, it became noticeable that the null hypothesis is true, because it has 46 times in 1000 to occur.

Table 5.9.4: Analysis of variance for Subject Taught

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Subject Taught	Social Sciences	91	30,3	2,84	,66	1,88	0,358
	Sciences	136	45,3	2,87	,67		
	Humanities	73	24,3	2,90	,65		

Respondents were grouped into three categories based upon subject taught: Social Sciences, Sciences and the Humanities. Their mean consistently lie in the same mean score level of between 2.84–2.90. The mean score for teachers that teach social science subjects is 2.84, that of the science subjects is 2.87 and the humanities subjects is 2.90. Thus, no significant differences existed in their views going by the indications of the F-ratio of 1.88 and the F-probability

of 0.358. The different categories of teachers based on the subject taught hold professionalism in high esteem.

Table 5.9.5: Analysis of variance for Academic Qualification

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Academic Qualifications	OND	2	0,7	3,03	,64	1,76	0,299
	HND	20	6,7	2,80	,67		
	Bachelor's Degree	36	12,0	2,90	,66		
	Master's Degree	18	6,0	2,97	,64		
	PhD	0	0,0	0,00	,0		

From the above table, not many differences exist in the mean scores of those who hold academic qualifications. This does not mean that there is a differential which will necessitate the rejection of the null hypothesis. The insignificant differences can only be observed in the mean scores of holders of OND and HND, 3.03 and 2.80 respectively. The disparity in their means is not sufficient to falsify the hypothesis. Since the figures lie at the same mean score level, the overall result appears to show to advantage that the respondents have a positive attitude towards the professional development of teachers (see table 5.9.5).

Table 5.9.6: Analysis of variance for Professional Qualification

Respondents Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Professional Qualifications	NCE	39	13,0	2,80	,65	1,90	0,239
	B.Sc (Ed.)	75	25,0	2,81	,66		
	B.A (Ed.)	26	8,7	2,93	,61		
	B.Ed.	61	20,3	2,90	,66		
	M.Ed.	22	7,3	2,98	,64		
	Doctor of Education	2	0,7	3,06	,31		

The background information on professional qualifications and their judgment towards APQTJE disclosed a similar situation. The pictorial representation also showed that professionalism should be the watchword for educational in-

stitutions (see table 5.9.6). The inequality between NCE, B.Sc (Ed) and Doctor of Education holders is not adequate to meet the need to falsify the null hypothesis. The slight shift in the positive view of the mean rating of holder of Doctor of Education might be because of their experience as well as their extensive educational background. NCE holders might also have been influenced by their low educational qualification. My inability to falsify the null hypothesis was also because of the F-ratio not exceeding *1.90* with an F-probability of *0.239*, because it has 24 times in every 1000 to occur.

Table 5.9.7: Analysis of variance for Length of Service

Respondents' Background variables	Groups	Freq.	%	Mean	SD	F Ratio	F Prob. Sig.
Length of Service	1-5	50	16,7	2,87	,69	2,02	0,320
	6-10	100	33,3	2,87	,67		
	11-15	68	22,7	2,84	,68		
	16-above	82	27,3	2,89	,63		

Respondents' background information on length of service did not cleave to a contrary view. The region of rejection was not reached either. None of the four categories in years of service had a mean score of more than 2.89. Therefore, the results reveal that all four categories of teachers based on their length of service showed a positive attitude towards professionalism.

The overall ANOVA analysis of all the respondents, irrespective of their gender, age, status, subject taught, academic qualification, professional qualification and length of service had unwavering support for professional development. These decisions were reached because in analysis of variance, the observed variability in the sample is divided into two parts: variability of the observations within group mean and the variability of observation between group means. These two estimates differ in a very important way: the between-groups variance will be correct only if the null hypothesis is true. If the null hypothesis is false, the between-groups estimates of variance will be too large. The within-group estimates of variability do not depend on the null hypothesis being true (Marija 1997, pp. 284–285). I also looked at how much the observed sample means vary by comparing the between-group estimates and the within-group estimates of variability since the between-group estimates are not sufficiently larger than the within-groups estimates. Moreover, since the null hypothesis is true, one expects the ratio of the between-group mean square to within-group mean square to be close to 1 given that they are both estimates of the population variance. Based on this, a decision was made.

5.9.1 T-Test Analysis of Paired Sample Statistics of Respondents' Perception of APQTJE

To further verify my analytical information, a T-test analysis of paired samples was conducted. The t-test analysis was aimed at determining if there are significant differences between respondents' means. As a result, the variables were paired just as they appeared in the questionnaire hence 1a and b, 2a and b, 3a and b, ..., 25a and b. The result showed that there are significant differences between academically qualified and professionally qualified teachers in all the variables. SPSS version 11.5 displayed it as 0.000 significant levels. This does not mean that the probability is 0. It is less than 0.0005. Table 5.9.1.1 shows the highest t-value as -22.53 and the lowest t-value as -36.84, $p < 0.000$, meaning that professional competence lies in the hands of trained teachers. Therefore, I had sufficient reasons to reject H_0 , which states that there are no significant differences in the job effectiveness between teachers with professional training and those without.

Table 5.9.1.1: Two-tailed test of difference between paired means

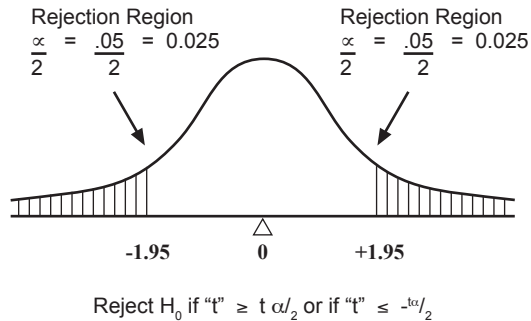
Paired Variables	Paired Mean	SD.	Std. Error mean	T	Df	Significance (2-tailed)
4a and b	-2.01	.98	.057	-35.19	299	.000
5a and b	-2.01	.95	.055	-36.84	299	.000
13a and b	-1.67	1.060	.061	-27.34	299	.000
7a and b	-1.94	1.005	.058	-33.39	299	.000
8a and b	-1.83	.99	.057	-32.15	299	.000
3a and b	-1.81	.88	.051	-35.69	299	.000
6a and b	-1.71	.97	.056	-30.48	299	.000
9a and b	-1.71	.91	.053	-32.45	299	.000
12a and b	-1.69	.96	.055	-30.65	299	.000
2a and b	-1.62	1.038	.060	-27.08	299	.000
1a and b	-1.58	.99	.057	-27.48	299	.000
14a and b	-1.57	1.059	.061	-25.67	299	.000
17a and b	-1.56	1.066	.062	-25.34	299	.000
24a and b	-1.56	1.091	.063	-24.82	299	.000
16a and b	-1.48	1.036	.060	-24.80	299	.000
19a and b	-1.46	.93	.053	-27.36	299	.000
23a and b	-1.46	.91	.053	-27.63	299	.000
18a and b	-1.43	.95	.055	-26.13	299	.000
21a and b	-1.39	.95	.055	-25.22	299	.000
10a and b	-1.31	.95	.055	-23.78	299	.000
11a and b	-1.31	1.005	.058	-22.53	299	.000
15a and b	-1.29	.99	.057	-22.54	299	.000

20a and b	-1.21	.90	.052	-23.25	299	.000
22a and b	-1.16	.85	.049	-23.65	299	.000
25a and b	-1.12	.82	.047	-23.71	299	.000

Df= N-1
N=300

Decision Rule:

For a two-tailed test, according to Nworgu (1991, p.155.), Marija (1997, p. 230) and Bryman and Cramer (2001, p. 108), we “reject” on both tails of the normal curve. The critical values are those that cut off an area on each tail of the curve that is equal to $\alpha/2$. Bearing in mind the t-test at $p < 0.05$ level of significance, the critical values of “t” for a two-tailed test will be those values which cut off an area equal to $0.05/2$ on both sides of the normal curve. These values are -1.96 and +1.96 respectively as shown in the diagram below:



According to Pole and Lampard (2002, p. 293), significance in a statistical analysis means the significance of an observed pattern is assessed using significance testing¹⁶. In any case, statistical significance as assessed in this fashion only relates to the researcher’s level of confidence that a pattern observed in the sample also exists in the population. For a more simplistic analysis and easy comprehension of my data analysis, cross tabulation was employed. It is one of the simplest and most frequently used ways of demonstrating the presence or absence of a relationship (Bryman & Cramer, 2001, p. 159). For further details of the information contained in this procedure, which explains the levels of agreement and disagreement of individual items in this investigation, see APPENDIX D, tables 1–25.

¹⁶ I made sure to establish at the outset when using statistical analysis to test a hypothesis for 0.05 level significance level. The significance level of 0.05 depicts the probability that an observed difference or relationship would be found by chance only 5 times out of every 100. It also indicates the risk of the researcher making a Type I error. A Type I error occurs when a researcher rejects the null hypothesis when it is true and concludes that a statistically significant relationship/difference exists when it does not actually exist.

5.9.2 Descriptive Analysis of Respondents' Perceptions of the Qualities of Good Teaching

This analysis is based on item 26 of the research questionnaire on the qualities of good teaching. The respondents were asked to check the options as it applies to them and not what they think it should be. The variables were ranked in order of the most important qualities 1, 2, 3... to the least important, such as 9, 10, and 11. Based on their responses, the variables with the least mean were taken as the most important qualities because of the value attached to them. Thus, the results revealed that knowledge bases of subject matter followed by teaching skill (presentation, explanation etc.), and general knowledge bases were regarded as the most important factors, up to interaction between students and teachers and approachableness as the least important qualities (see table 5.9.2.1).

Table 5.9.2.1: Respondents' Perception of Qualities of Good Teaching

Variables	Rank	Mean	Std. Dev.
Knowledge bases of subject matter	1	2,03	1,81
Teaching skill (presentation, explanation etc.)	2	3,57	2,19
General knowledge base	3	4,19	2,84
Enthusiasm and devotion to teaching	4	4,91	2,50
Organization (effective learning environment)	5	5,86	2,46
Appropriate utilization of teaching tools	6	6,06	2,35
Demonstration of teaching situation	7	6,62	2,30
Ability to motivate students	8	7,28	2,47
Ability to assess and evaluate students' and their own work	9	8,15	2,54
Interaction between students and teachers	10	8,60	2,17
Approachableness	11	9,14	2,65

Quality teaching makes up one of the most important factors that determine teachers' job effectiveness. In this part, the respondents interviewed were simply asked to use their background and experience to explain in their own terms what the qualities of good teaching are. This question was aimed at obtaining their perceptions towards the determinants of quality teaching.

Table 5.9.2.2: Respondents' interview perception of the qualities of good teaching

S/n	Teachers	No	Principals	No	Supervisors	No
1	Teaching that creates rapport between teachers and students	4	Teaching that makes teachers to read constantly	2	Teaching that Produces students that to can affect changes	3
2	Teaching that motivates students to study	4	The application of teaching rudiments	3	Teaching that is within the curriculum	4
3	To have teaching skills and knowledge base of subject matter	5	The effective use of teaching innovations and new teaching methods	4	Teaching aimed at all round development of students minds	3
4	Meeting the aspiration of current situations	3	Teaching that stimulates students to learn	4	Creating effective environment and evaluation of students	5
5	Effective time and classroom management; effective use of problem-solving methods	4	Instructional process that is carried out by highly qualified teachers	5	Teaching that brings low drop out rate among students	5
6	Good teaching is being equipped to effectively carry on in teaching	2	Creating a good environment for the students to learn	3	Teaching that are result-oriented; changes in most of the things about students	4

Table 5.9.2.2 shows that the respondents interviewed defined quality teaching in terms of teaching skills and knowledge base of subject matter, instructional process that is carried out by highly qualified teachers, creating effective environments and evaluations of students, and teaching that carries a low drop out rate among students. These are followed by teaching that creates rapport between teachers and students, teaching that is within the curriculum, the effective use of teaching innovations and new teaching methods, effective time and classroom management, effective use of problem-solving methods, teaching that is result-oriented, changes in most of the things about students and teaching that stimulates students to learn. These findings are in agreement with findings from the studies by Bajah (1976); Pillai (2001); Perry (1994); Firestone and Pennel (1993); Stoll and Fink (1996); Pratte and Rury (1991) and Ololube (1997, 2004, 2005). These explanations scored 5 and 4 respectively on the table. Other findings show quality teaching as one that scores 3 in the evaluation of teaching effectiveness such as teaching that produces students

that can affect changes, teaching aimed at the all around development of students' minds, meeting the aspiration of current situations, and creating a good environment in which students can learn. These are supported by the works of Highet (1963), Beare, Caldwell and Millikan (1989), Arene (1990) and Owens (2004).

To further support the above findings, I quote one of the respondents interviewed as saying "the development of students involves all round development of the mind. In most of the professions, you have areas that might encounter one or two problems. The idea of going into a profession makes it possible for one to succeed in most of the areas. It connects almost all the subject areas. I have joy in developing human beings. As you produce the kind of people that will actually think and better society, it gladdens your heart. Learning happens when there is a change, changes in most of the things about the students or learners. If there is no change, learning has not taken place, it requires hard work, and the ability to read meaning in a situation and create a good environment for the student that will lead to changes in the child's attitude. We expect a change; if there is no change; we have not achieved much". This gives theoretical and empirical support to these findings.

6 Discussion of Results

This chapter is a description and discussion of the practices in education that demonstrate the importance of goal achievement within a system of school effectiveness and improvement. The discussion is based on the data from the respondents. I made use of evidences from literature to support the arguments. The obvious advantage of this chapter is that the results are connected to the literature reviewed.

6.1 Teacher Education and Training

Teacher education and training or staff development as some authors call it is a key component in school effectiveness and improvement; however this concept is not simply defined. Different academic studies have viewed staff development in various ways. Some of these studies show a narrow view of staff development on improvement of teaching (Teather, 1979; Möhle, 1979). Piper and Glatter (in Teather, 1979) define staff development as “a systematic attempt to harmonize individual’s interests and wishes, and their carefully assessed requirements for furthering their careers with the forthcoming requirements of the organization within which they are expected to work”. However, Stoll *et al.* (2001, p. 187) see staff development as suited to the school’s need. Thus, the goal of staff development should be continuous improvement as well as the acquisition of higher qualifications. This is evidenced in research question 1. The respondents’ for this study agree that higher academic qualification improves teachers’ job effectiveness. The study showed that in more standard terms that teachers who hold higher academic qualification have good background knowledge of the subject matter because of their training in the subject area. Yet, this does not suggest that they have better academic qualification than the trained teachers do. However, we should recognize that good education is an essential part of success; that is why modern organizations encourage their employees to acquire higher qualification.

Subsequently, in research question 2, the response that professional training of teachers improves their effectiveness on the job was pointed out when 74.2% of respondents opined that trained teachers are better equipped for their job than untrained teachers. This goes to show that professionally trained teachers generally have better initiatives to carry out their jobs and render teaching services effectively. The findings further revealed that a professionally trained teacher tends to be enthusiastic, have more devotion to teaching and understand students better than an untrained teacher.

Teacher education and training is an effort for teachers to learn teaching-related behaviors in order to improve their performance. Lawal's discussion of the importance of teaching practice as a means of teacher training education cited Martin and Westcott and Haines's work as saying that "teaching practice is a very significant program of teacher education which gives students the opportunity to put into practice what they learn in theory. Teaching Practice is an apprenticeship or internship which constitutes the gateway to one of the world's greatest professions—teaching." Teaching practice has a specific goal to attain: to offer opportunities for prospective teachers to increase their professional competence as they assume gradually fuller responsibilities as a teacher under the guidance of experienced personnel and accordance with readiness and heads (Lawal, 2003). As time passes by, additional training is encouraged to provide teachers with the opportunity to acquire new knowledge and skills to improve their effectiveness on the job.

In the same way, teachers' professional development is the sum total of formal and informal learning experiences throughout one's career from pre-service teacher education to retirement. This development, of course, depends on a combination of motivation and opportunities to learn. Continuous staff training is the cornerstone of meaning, improvement and reform in schools. Therefore, the link between professional development and school effectiveness shows that teacher's development depends not only on individuals but also on the teachers and administrators.

Professional development expands knowledge and skills that will contribute to growth and enhance students' learning (Fullan 1991, pp. 318–326). Fullan and Watson (1997) argued that systems that sustain high-quality professional development are more result oriented. This is because, through continual professional development, teachers will learn innovations in education which will help them improve on their competencies.

It becomes apparent that teacher training is vital to the success of the modern day educational system. Rapidly changing techniques and technology in teaching require that teachers possess the right knowledge, skills and abilities to cope with these new trends. Some of the training techniques frequently used are: Orientation—the process of familiarizing new teachers with the school, their job and their work unit—that enables them become productive members of the education system. On-the-job training is done while the teacher performs job-related tasks. This type of training is a direct approach and offers the Ministry of Education the fastest returns in terms of improved performance. However, some authors argued that this method (on-the-job training) is not a better way to improve teachers' performance. While some are of the view that on-the-job training is essential for maintaining the high performance levels of teachers. The next method is in-service training which involves the acquisition

of additional qualification while in service, such as the sandwich programs organized by the Faculty of Education of Universities.

6.2 Professional Teaching

The result on the analysis of data based on hypothesis 1 was rejected because the overall mean score of 3.65, with a standard deviation of 0.50 and a variance of 0.25 for trained teachers was in divergence with that of untrained teachers' mean of 2.09, with a standard deviation of 0.83 and a variance of 0.68. Moreover, the t-test of paired samples of the variables showed that the t-value was less than the t-critical value of -1.96, using the 95% level of significance in a two-tailed test. For that reason, the null hypothesis was rejected, thereby upholding the alternative hypothesis because it was accepted that professionally trained teachers have more abilities considered necessary for their job than the untrained teachers do. It is suggested that such factors as successful development of course outlines, planning unit instruction, teaching skills (e.g., presentation and explanation), appropriate utilization of teaching tools and the development of teaching aids and careful evaluation of students' performance are highly regarded as constant activities of the professionally trained teacher while untrained teachers tend to focus more on subject matter alone.

Thus, teachers' professional quality is commonly used in making judgments about the quality of their work. Medley (1982) and Medley and Shannon (1994) distinguished between teacher effectiveness, teacher competence and teacher performance. Teacher effectiveness is a matter of the degree to which a teacher achieves desired effects upon students. Teacher performance is the way in which a teacher behaves in the process of teaching while teacher competence is the extent to which the teacher possesses the knowledge and skills (competencies) defined as necessary or desirable qualifications to teach. These dimensions are important because they influence the type of evidences that are gathered in order for judgments about teachers' competencies to be made (Dunkin, 1997). The above three distinctions are synonymous with professional teaching.

Take for instance, the teaching of gifted children. There are several conditions that have to be met before teaching can commence, if not the child will waste his or her talent. According to Singapore's Ministry of Education (2003), teachers of the gifted should be strong in their subject content and have knowledge of the nature and needs of gifted children. These teachers should be intelligent, intellectually curious, highly imaginative, creative, energetic, and enthusiastic, open to new ideas, flexible, and should have respect for individual potential. They should possess the skills to facilitate learning among the gifted

children they work with to meet their needs. Therefore, the new GEP teachers have to complete three compulsory courses:

- Foundation course in gifted education, which exposes teachers to the concept of education for the gifted
- Curriculum differentiation for the gifted, which equips teachers with the skills to differentiate their enriched curriculum from the mainstream in order to cater to the needs of the gifted.
- Affective education for the gifted, which emphasizes the development of the affective domain of GEP pupils

(Singapore's Ministry of Education, 2003).

6.3 Teachers' Methodological Competencies

The statistical analysis of hypothesis 2 shows that there are significant differences in the effectiveness of professional and non-professional teachers in the area of their methodological competencies. The trained teachers take into account the individual differences that exist among students because of their knowledge of educational psychology and as such involve themselves in many activities that help them if they find themselves in a difficult situation. For instance, the problem with the 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 to achieve what other children are achieving or difficulty in reaching the academic standard set (cf., Amalaha, 1979). Special interest in these students is regarded as part of the professional teachers' job, an assumption that is very unlikely for many non-professional teachers as professional teachers tend to monitor more closely the progress of each student and ensure that concepts and processes are understood (cf., Beare, Caldwell & Millikan, 1989).

The use of specialised teaching methods includes the ability to use these methods to instruct students effectively. For example, the effective use of the questioning method of teaching is a technique used to sensitize and ascertain if learning objectives are met. Also, the effective use of the demonstration method of teaching is a method used in order to aid students' easy understanding because the competence in teaching stems from the capacity to reach out to different categories of students (cf., Reid, Hopkins & Holly, 1987; Gbamanja, 1989). Therefore, special skills are essential to teach in government maintained schools, for example in the United Kingdom, Qualified Teacher Status is required. Routes to QTS are:

- The Postgraduate Certificate in Education (PGCE). Normally a one-year full time Higher Education course following completion of a language degree in which there is continuing subject knowledge enrichment but the main focus is on teaching method and theory of learning.
- The Bachelor of Education (B.Ed) degree—a four-year course generally associated with primary training in which the specialist subjects are combined with teaching theory and practice.
- The Graduate and Registered Teacher schemes, in which trainees are employed by their training schools, receive formal teacher training during about 20% of their working week and are externally assessed at the end of their training period

(The National Center for Languages, 2003).

The idea here is that for one to be regarded as a competent teacher in the UK, teaching skills are required. This can only be achieved through professional training which will expose future teachers to methodological competencies.

6.4 Teachers' Motivational Competencies

The results from the data analyses on co-teachers demonstrating familiarity with their counterparts and encouraging each other to work effectively revealed that professionally trained teachers are inclined to stimulate themselves more than academically trained teachers. Likewise, professionally qualified teachers are more likely to encourage co-teachers effectively in their collaborative effort. Collaboration is seen as part of teacher preparation programs. This begins with the understanding that all teachers will be able to work with each other. The argument is that every teacher needs to study teaching techniques, subject areas, disability, individualization, accommodation and skills for collaboration in the school system to be effective. In addition, they are essential parts of effective schooling (Friend, Reising & Cook, 1993). Teacher-to-teacher interactions are powerful instruments in student's motivation processes because as co-teachers interact and tell each other the problems they encounter in their various classes they tend to critically review and develop enhanced teaching through the exchange of ideas as well as make useful suggestions to each other on how to handle various situations (cf. Stiggins, 1986, pp. 51–58; Stiggins & Duke, 1990; Dunkin, 1997, pp. 37–51).

Equally, the results from this empirical study suggest that teachers with professional qualification motivate their fellow teachers more effectively regarding how to plan and carry out teaching assignments. The respondents' rating displayed a compatible view with other research studies in the West. A large

number of the respondents (82.2 %) observed that even if teachers do their work, they do not do it *well*. To help them do a more effective job, co-teachers give them specific guides to use and plan their job effectively to accomplish objectives. For example, co-teachers bringing their resources—skills, training and perspectives—to their jobs is an effective way of improving themselves. These resources are combined to strengthen teaching and learning opportunities, methods and effectiveness (Suzanne, 1997). One advantage that is clearly developed from this relationship according to Dieker and Barnett (1996) is that professionally qualified teachers have expertise in many areas and combining these skills makes them more effective in meeting their own needs as well as those of their students. Therefore, teacher-to-teacher motivation is an important ingredient for success in schooling; however, additional skills will be needed to realize the goals teachers set for themselves and their classes.

A plausible explanation for respondents' answers on the use of rewards and punishment during instructional process is that power in schools is seen as important in determining high student achievement. Teachers use this method to influence students' compliance in the classroom. This was evident in Cheng, Cheung and Tam (cf. 2002, pp. 138–155); however, their investigation was limited to grade 6 students. Cheng (1994a, pp. 221–239) viewed power base as the use of reward power, coercive power, position power and personal power or professional power in the classroom to ensure students' compliance (see also Freiberg & Freebody 1995; Austin, Dwyer & Freebody 2003). Power is also accepted by many researchers especially in Africa and Asia as a valuable tool for effective teaching and high students achievement (cf., Cheng, Cheung & Tam, 2002, pp. 138–155). This is what Cheng (2000, pp 207–225) called cultural factors. According to Cheng, these cultural factors extend to the cultural forces shaping the features of school processes and dominating the effectiveness of education in terms of students' academic achievement.

Interestingly, the result concerning teachers' interaction process competences also showed a positive outcome in favour of professionally trained teachers. This is evident in all the statistical approaches employed in analysing the data obtained for this study. These responses display attitudes that are compatible with school effectiveness and improvement efforts. Collins Concise Dictionary defines interaction as: to act on or in close relationship with one another; a mutual or reciprocal action. Whereas, Freiberg and Freebody (1995, p. 198) describe classroom interaction as sequences of directives and compliance through which the classroom participants work interactively towards the visible completion of a task through the production of answers. Austin, Dwyer and Freebody (2003, p. 26) conclude that in this directive-compliance sequence, the teacher gives a directive and selects a student as respondent, the student responds and teacher denotes whether or not the response complies with the directive.

In Amalaha's study (1979) "*children's behavioral problems*", he found that students manifest cognitive and social problems in school, and as a result the classroom teacher should be involved in assisting the student in solving them. Due to lack of effective early stimulation, students may show weakness in some areas of their study. Therefore, they need care, respect, acceptance, support and recognition (Beare, Caldwell & Millikan, 1989, p. 154). In such a situation, teachers need to have full grasp of the situation and then embark on remedial instruction with the help of their co-teachers to alter the effects of lack of stimulation. On the other hand, some children are problem behavior cases. Problem behavior according to Amalaha (1979, p. 232) 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, achieve self-reliance, or adhere to the values prescribed by a system. Many students come to school having developed problem behavior because their parents allow them to get what they want when they exhibit this behavior, an example of which is the 'temper tantrum.' In such a case, according to Amalaha, the reinforcement of problem behavior results in the repetition of the behavior. Hence, the student brings this attitude to school to confront the classroom teacher.

Similarly, according to Stones (1966, p. 383), when students come with specific emotional problems, it is important that teachers realize that they exist and they are 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 student and will react more strongly to failure. Encouragement and success in their schoolwork, the sympathetic understanding of their teachers, and a friendly cooperative atmosphere in the classroom will help them to develop more confidence.

The question now is that what can teachers do to help? To help students with this problem, according to Amalaha (1979) citing Gibson is to find out what the students *acceptable* interests and capabilities are and then find a group of the same grade with similar interests 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. It helps to give the child factual knowledge through the assistance of professional teachers. However, Stones (cf., 1966, p. 385) advocates 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.

6.5 Teachers' Material Utilization Competencies

Turning to hypothesis 3; from the study, it was found that professional teachers select appropriate teaching materials, prepare and use teaching materials effectively, as well as operate projected tools effectively more often than the non-professional teacher. The educational environment has changed remarkably due to advancement in the teaching and learning process. If teachers plan and implement the teaching-learning activities as their main body of education with their students, it is a fundamental point for them consider the materials they must use to succeed in their instructional process which is aimed at assisting students Zones of Proximal development. Though material utilization intelligence has increased outstandingly due to the requirements of times and environmental factors, teachers' actual competence in material utilization is not high enough to meet these challenges.

Teaching consists of the planning and operating of a curriculum by teachers and learning activities by students (Sung Ik Park, 2000). Schools have much to learn by examining the informal pedagogy of everyday life. The principles of good teaching are no different in school than in the home and community. When true teaching is found in schools, it observes the same principles that good teaching exhibits in informal settings (cf., Tharp & Gallimore, 1998, p. 93). Good teaching according to Tharp and Gallimore (1998, p. 97) consists of assisting students through the Zones for Proximal Development (ZPD). Teaching occurs when assistance is offered at points in the ZPD at which performance requires assistance with the help of instructional materials. Therefore, before children can function as independent agents, according to Tharp and Gallimore (1998, p. 98), they must rely on adults or more capable peers for outside regulation of task performance. The amount and kind of outside regulation a child requires depends on the child's age and the nature of the task: that is, the breadth and progression through the ZPD for the activity at hand. This assistance in performance has been described as *scaffolding*, a metaphor first used by Wood, Bruner and Ross (cf., 1976) to describe the ideal role of a teacher. Scaffolding, however does not simplify the task; it holds the task difficulty constant while simplifying the child's role by means of graduated assistance from the adult/expert (Tharp & Gallimore, 1998, p. 99). Mercer and Fisher (1998, p. 115) see scaffolding as not just any assistance which helps a learner accomplish a task, it is help which will enable a learner to accomplish a task which they would not have been quite able to manage on their own, and it is intended to bring the learner closer to a state of competence which will enable them eventually to complete such tasks individually.

Conversely, some educational researchers have suggested that the concepts themselves cannot map well on the pedagogic realities of the classroom education. Other researchers have remarked that the principles of scaffolding or ZPD

are different and that the teacher must treat each child's learning individually. It is further argued that it is an unrealistic aspiration as far as most teachers and most classroom situations are concerned. Mercer and Fisher (1998, p. 113) accepted the ground for these criticisms, but regarded them as stimuli for research rather than reasons to forsake the neo-Vygotskian framework. Within a neo-Vygotskian framework, learning and problem-solving are seen as context-bound processes, so that the level of understanding achieved by individuals in specific settings is recognized to be, in part at least, a function of those settings as dynamic contexts for cognitive activity (Crook 1991). Nevertheless, according to Mercer and Fisher (1998, p. 114), through establishing a ZPD, a teacher or researcher may gain valuable insights into how a child may be encouraged to progress through the appropriate use of the right kind of instructional material. The planning of effective learning activities can be easier, less time consuming and often immeasurably expanded in potential scope when teachers know precisely what type of instructional materials are available to them and when to draw upon them to influence their instructional competencies. Although it was further argued that children do not carry their ZPDs with them when they leave a classroom as a new task with a different teacher may generate quite different 'zones' for the same group of children scholars involved in educational research and the in-service training of teachers have found the concept of 'scaffolding' a very useful tool in analytic discussions of teachers' pedagogic strategies (Tharp & Gallimore, 1998; Mercer & Fisher, 1998).

6.6 Quality Teaching

Quality teaching constitutes one of the major facets in educational processes. The aim of the question on item 26 of the questionnaire was to obtain information from respondents on quality teaching. They were simply asked to identify how they would define quality teaching, which also required them to identify how they can improve quality teaching in schools. This question was also meant to obtain teachers' sensitivity on the improvement of quality teaching for school effectiveness. The responses offer a broad range of strategies for achieving the climate and support needed for effective teaching in schools, especially detailing the special roles of school teachers in fostering high quality teaching. It was revealed that teachers' knowledge of the subject matter is paramount, followed by teaching skills (presentation and explanation), general knowledge base and enthusiasm and devotion to the teaching profession. The organization of an effective learning environment and the appropriate utilization of teaching tools are essential components of quality teaching. Respondents' interview perception of the qualities of good teaching showed that teachers viewed quality teaching as:

Teaching that creates rapport between teachers and students
 Teaching that motivates students to study
 To have teaching skills and knowledge base of subject matter
 Meeting the aspiration of current situations
 Effective time and classroom management; effective use of problem-solving methods
 Good teaching is being equipped to effectively carry on in teaching

At the same time “Principals” perceived quality teaching as:

Teaching that makes teachers to read constantly
 The application of teaching rudiments
 The effective use of teaching innovations and new teaching methods
 Teaching that stimulates students to learn
 Instructional process that is carried out by highly qualified teachers
 Creating a good environment for the students to learn

Supervisors from the Ministry of Education and Post Primary Schools Board regarded quality teaching as:

Teaching that Produces students that can affect changes
 Teaching that is within the curriculum
 Teaching aimed at all round development of students minds
 Creating effective environment and evaluation of students
 Teaching that brings low drop out rate among students
 Teaching that are result-oriented; changes in most of the things about students

From the tables above, respondents defined quality teaching in terms of methods used, its basis within the curricular content, the content of teaching, level of teaching innovation and methods and facilities used in the teaching-learning encounter, teaching that brings about attitudinal change in the student and which elicits positive response and feedback, and instructional process that is carried out by highly qualified teachers. Other findings show quality teaching as scoring high in the evaluation of teaching effectiveness, meeting the aspirations of the institution, being result-oriented by ensuring an impartation of knowledge in teaching-learning process, and teaching that was carried out by highly qualified teachers in their areas of specialization (MacBeath & Mortimore, 2001; Oloolube, 1997, 2004; Perry 1994; Sanders *et al.* 1990).

It is obvious that professionally trained teachers are the pillars of education because of the kind of services they offer. The calibers of personnel determines

the outcome and growth of the system. During and after the course of their training, professional teachers are informed of their roles in the discharge of their duties, how best to achieve the aims and objectives of an educational system. This is in concurrence with Odor (cf. 1995) when he emphasized that “no matter the availability of educational infrastructure in the school system, they mean nothing if there are no competent teachers. To ensure the successful operation of the school system, professionally qualified teachers are desirable for schools to perform effectively”. In other words, there is a great need for a sound professional background.

In the same stratum, Fafunwa maintained that:

“An unqualified teacher is an enemy to the students’ progress and a danger to the child’s up bringing. For a non-professional to handle any subject in school is a very delicate problem because it concerns the intellectual, moral and emotional phases of the child’s life” (Fafunwa, 1985).

Nevertheless, the relationship between the categories of students and teachers is an aspect of schooling that neither teachers nor students can ignore (Austin, Dwyer & Freebody, 2003, p. 28). Freiberg and Freebody (1995 p. 198) described the relationship between students and teachers as classroom interaction and as a sequence of directives and compliance through which classroom participants work interactively towards the visible completion of task through the production of answers. Austin, Dwyer and Freebody (2003 p. 26) further explain this form of directive-compliance sequence as when a teacher gives directive and selects a student as respondent, the student responds and the teacher denotes whether or not the response complies with the directives (see also Heap, 1992b pp. 23–28).

In general, we recognize that some of the major problems affecting secondary school educational productivity in Nigeria are poor management and control of teacher education programs, teacher training and retraining, the selection and organization of curriculum content, curriculum implementation and evaluation, the development, distribution and use of teaching materials, and the relevance of the curriculum to the needs of society. Not surprisingly, there is also a problem with poor motivation and discipline (Adeniyi, 2001, pp. 7–11). Educational production is the determination of schooling quality as reflected in students’ educational performance (Bishop & WöBmann, 2001). Adeniyi further argued that the parameters which influence the level of schooling quality achieved in the model of educational production are mainly driven by the institutional setting in the schooling system (Adeniyi, 2001, p. 15).

7 Summary, Major Findings, Conclusions, Implication of Findings and Recommendations

This chapter discusses the main outcomes of the study. It provides background for educational development policies and practices and discusses the relationship between theory and practice. It begins with a summary of the research investigation, major findings, implication of findings, conclusions and positive recommendations. This study aims at bringing about practical improvement, innovative changes and professional development practices in schools. This school effectiveness and quality improvement research conducted in Nigerian secondary schools has the same main aim as that of Harris and Muijs (2005), Kerry and Wilding (2004), Sheerens and Creemers (1989), and Stoll and Mortimore (1997), bringing about practical improvements, innovative changes and professional development practices in schools.

7.1 Summary

While conducting this study, there were some overall objectives which the researcher aimed to achieve. In the first place, it was aimed at investigating secondary school teachers' academic and professional qualification and improving their quality and effectiveness. This study analyzed competency roles in theory and what actually happens in practice in secondary school management. In addition, the study was aimed at enabling Nigerian secondary schools' management to identify 'best practices' available and learn from what is obtainable in functioning educational systems elsewhere. In addition, it is aimed at educational effectiveness, which embraces a range of quality functions such as staff academic and professional development and the improvement of educational processes of teaching and learning. Best practices encourages using common measures of teaching improvement such as student evaluations/assessment and feedback in order to produce continuously more conducive teaching environments. Specifically, I sought tentative answers to the research objectives in relation to the research questions and hypotheses put forward in this study. This study is grounded in the functionalist conception of education and its affect on society in general.

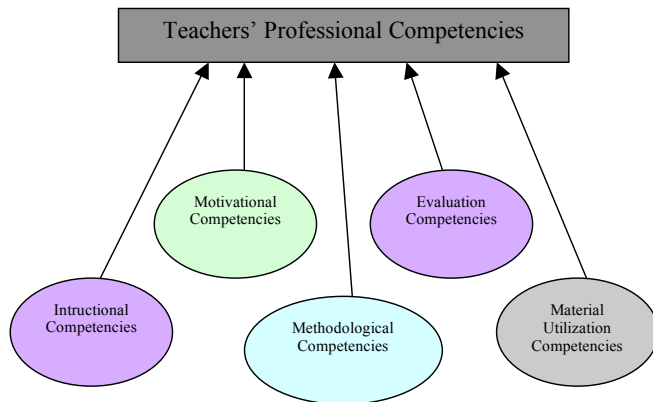


Fig: 7.1.1: Sources and Types of Teaching Competencies

A far-reaching literature review was carried out. The order in which this was done was: an introduction, theoretical underpinning, teachers' professional competencies, *vis-à-vis* methodological competencies and the act of teaching, motivational competencies, instructional process competencies, teachers' material utilization competencies, teachers' evaluation competencies, school effectiveness and improvement and finally professional quality (see Fig. 7.1.1). This study used quality creative writings especially from the West as a framework to bring together many approaches to achieving sustainable excellent schooling. The study covered a lot of ground from both theoretical and empirical data, by viewing teachers teaching processes and facts. The theme of these perspectives is that professional teachers play a vital role in school effectiveness and improvement.

After a review of the related literature, research methodology and instruments were designed. My supervisors and other experts in educational research ascertained the validity of the research instruments by reading through and making corrections where necessary. The questionnaires were pre-tested and the participants commented on the items before it was finally administered to the respondents. The research instrument was valid; the researcher has taken time to comply with the formalities and procedures recommended in framing a questionnaire. The reliability of the research instrument was statistically tested using SPSS version 11.5 (see reliability of the study, section 4.6). The data for this study was obtained by means of questionnaires and interviews designed for teachers and principals of the selected schools and supervisors of education from both the Ministry of Education and the Post Primary Schools Board. The data collected was analyzed to answer the specific research questions and hypotheses. The analysis of data involved the use of the following procedures:

Percentages mean point value, One-Way Analysis of Variance, T-test of significance, and Cross-tabulation.

The major findings from this study revealed that the basic roles of secondary school teachers are similar across the globe. Analysis of both literature and empirical findings showed that teachers' role in improving efficiency and effectiveness in secondary schools is crucial in changing school circumstances. Having examined teacher education, school effectiveness and improvement from these perspectives, I concluded that other countries' "best practices" should be emulated by developing countries in general and Nigeria in particular. Excellent schools have effective management systems based upon and designed to meet the needs and expectations of an educational system. The systematic implementation of the policies, strategies, objectives and plans of secondary schools are facilitated and guaranteed through a clear and incorporated progression. These progressions are effectively organized, managed and improved on a constant basis.

The respondents showed considerable positive attitude in their teaching quality improvement strategies in Nigerian secondary schools' effectiveness and improvement. However, we have also seen from the results that the Nigerian Ministry of Education and Post Primary Schools Board need to do and learn more from new management cultures practiced in Finland and elsewhere in the West on the ways they manage their schools.

7.2 Summary of Major Findings

The discussion of the major findings follows the main research objectives of the study. These objectives were met by reviewing related literature in the field of teacher education, school effectiveness and improvement and teachers' teaching related competencies, and the empirical work I carried out on secondary school improvement in Nigeria. In short, the data collected and its subsequent analysis yielded the following eight major findings:

1. Teachers with higher academic qualification are more effective than teachers with lower academic qualification. Higher academic qualification is regarded as part of teachers' work role for advancement because it improves their work production.
2. Teachers' professional training improves their job effectiveness and competencies. Professional competency is the result of possession of sets of relevant attributes such as knowledge, skills and attitudes. Competency is a combination of attributes underlying some aspect of successful professional performance.

3. Teachers with professional qualification motivate students to study harder, and they demonstrate familiarity with co-teachers thereby motivating co-teachers to work effectively. The application of the wise use of punishment is seen to be part of professional teaching and it is similarly shown from this study that professional teachers guide co-teachers on how to plan and carry out their job effectively.
4. It is evident from the results of this study that the respondents have positive attitudes towards professional development with particular reference to how teachers apply various instructional techniques to achieve instructional objectives. This study showed that successful methods of instruction, or those that lead to greater students' achievement, are mastery learning with an emphasis on reinforcement and feedback, cooperative learning, personalized and adaptive instruction, effective time and classroom management, application and the use of contemporary knowledge, longer wait time and good questioning techniques.
5. Professional teachers tend to employ and use appropriate evaluation methods more than untrained teachers. Examples of these methods are the construction of various evaluation instruments, the use of evaluation data to improve job situations, keeping records of individual students accurately and assessing students' behavior effectively.
6. There are significant differences in the job effectiveness between trained and untrained teachers.
7. There are significant differences between trained and untrained teachers' effectiveness in their methodological competencies such as individual teaching methods, problem-solving methods and the dramatization of teaching situations.
8. There are significant differences in the effectiveness of professional and non-professional teachers in the area of material utilization competencies.

This study agrees that professional accountability is likely the best option in helping Nigeria's educational system to move ahead, and professional accountability is preferred the world over to foster educational development (see chapter 2).

7.3 Implication of Findings

In light of the findings derived from this study, it may be concluded that: teachers should in fact be knowledgeable in their subject areas, possess teaching skills, and have general knowledge bases. They need not be geniuses, but they need plenty of practical judgment and common sense. Learners do not expect

their teachers to have an extraordinary memory, but they do expect them to be able to think in the right direction.

It is impossible for teachers to become adequately proficient in performing all the diverse duties of teaching through academic training alone. Extreme competencies such as methodological, motivational, material utilization, instructional, teaching evaluation and interaction process are prerequisites for excellent job performance. These skills can, apparently be learned as the respondents strongly believed that the ability to teach diligently is not in-born. However, the ability to teach with enthusiasm may be both natural and acquired. The natural aspect of teaching only serves as a foundation of or basis for sound professional acquisition. Thus, the in-born aspect of teaching is only a natural inclination toward teaching. Therefore, an effective teacher is not one who simply shows interest in teaching, but a teacher with the intellectual skills to see him through. From this study, it is expected that trained teachers should and will continue to do better than untrained teachers. As a result, being extremely competent and having great facilities in a job are what actually matters because professional teachers are experts in their field, and as professionals they pass instructions to students and are expected to judge on the examination day if students have gained the required skills. The feedback teachers are given regarding their effectiveness can be used to guide future teaching and to give a class some indication of their progress.

However, one of the most neglected aspects of explicit evaluation is self-evaluation. Ideally and logically, this should precede all other forms of evaluation. Self-evaluation can assist the teacher in improving the educational experiences he or she provides for his or her students, and to identify the professional education he or she needs to develop his or her capacity to teach well. In a natural setting, a teacher should take a regular review of where he or she is in teaching the subject. Formative evaluation gives a snapshot of learning at any particular point and allows for adjustment as much as possible, thus encouraging teaching competencies.

Another very important aspect of education that has failed to be given due care in Nigeria is in the area of the motivational competencies of co-teachers. Co-teachers' review is a process of gathering information and evidence about the effectiveness of the teaching/learning process and the educational environment. The purposes include providing assurance that students are able to achieve what the course requires them to achieve and to improve teaching practices. Co-teachers offer the capacity to critically review and improve enhanced teaching through the exchange of ideas. To resort to and provide constructive critical co-teachers' feedback about teaching, teaching should be regarded as a fundamental aspect of the academic role of teachers, and they are a valuable source of formative feedback on whether goals are achieved.

For the most part, teachers' professional competencies and their relationship to teaching quality and school improvement cover an area of increasing importance in educational policy and practice. Teachers' competencies have become a focal point for motivation and commitment among both new and experienced teachers in the West as well as their research literature. I expect that this should spread to developing countries especially in Sub-Saharan Africa. The findings in this dissertation are particularly helpful not only to practicing teachers, but also to all those involved in research on teaching, policy making, educational planners and those who work in initial teacher education programs and in-service teacher education in developing countries.

7.4 Conclusions

The motivation for this study stems from the fact that I hold an intense belief in the value of the teaching profession and its functionalist importance to society and our children getting their educational experiences right. This dissertation is not for the faint-hearted. It is an academic writing for teachers who share my conviction and for those whose daily lives are driven by the imperatives of making educational policies and planning in helping children to learn effectively. This text is addressed first and foremost to teachers who seek empirical evidence and who want to be at the very top of their profession. It is also for principals, education planners and policy makers in developing countries especially those in Africa to come to terms with the reality on the ground (Kerry & Wilding 2004, p. xv).

This research has outlined teachers' complex role and explicitly stated the significance of the need for professional and academic development in the education community. The joy and enthusiasm observed in this study led me to think that using professionally competent teachers in the teaching and learning process may be a very good course of action, not only because the students will enjoy the instructional activities, but because they are valuable factors that will enhance the intellectual growth of both the teachers and the students. From the study, it was gathered that higher academic qualification improves teachers' job effectiveness. Arene (1990) and Bosmart (1991) share the same opinion when they state that teachers' higher academic qualification helps to broaden their knowledge. Correspondingly, Aghenta (1981) and Lloyd (1980) acknowledged that higher academic qualification is obligatory in job effectiveness; good teachers must have sound knowledge of the subject they teach.

Research (Whitty, 1996) has shown that teachers' professional characteristics, knowledge and skills have a closer understanding of the activities within the school and its potential activities and strive to promote the stability of the academic environment. My research findings show that professional charac-

teristics, knowledge and skills of teachers all have a role in effecting quality teaching in our schools. Unqualified teachers should not be encouraged to remain in the teaching profession. Staff education and training are a means of professional updating, which deal with all developmental functions, directed at the maintenance and enhancement of one's professional competence (An-yamele, 2004). The respondents support the idea that staff education and training are important factors in teachers' job effectiveness and development. It was further argued that teachers who are bent on improving their competence are likely to contribute, directly or indirectly, to the growth of students' achievement. Equally, Javis (1983), Keen (1991), Creemers (1994), Kautto-Koivula's (1997), Wheldall and Glynn (1989) and Kerry and Wilding's (2004) studies concerning their experience in staff training and education clearly demonstrate the need to offer teachers better opportunity to educate and develop themselves in order to become more effective.

Whitty's (1996) model of professional knowledge and professional skills is a framework to make us understand the underlying qualities of the teacher that enables them to pull individual instructional competencies together and apply them in the professional context. The modified version brings in the general knowledge base as a way to demonstrate that they interlock with the idea of Whitty, and as a consequence the model helps to achieve sustainable excellence in all aspect of teaching performance if applied in the professional context. This model therefore is modified to fit the context of this study and to promote outstanding performances in line with modern society. The term general knowledge in the modified model refers to a conglomerate of cultural capital, institutional survey and professional duties that are essential components in teachers' job effectiveness. It involves a thorough understanding of the challenges and significance of building a reformed secondary school system as well as the ability to interact effectively with both the educational and broader community.



Fig. 7.4.1: Author's self-modified model of professional characteristics, knowledge and skills

Providing professional development especially for teachers is a challenge in teacher education. There has been no system of ongoing professional development and consequently no culture of professional development in Nigerian secondary schools. The matter of on-going professional development of teachers is particularly important given the poor performance of students in national and international examinations. In addition, another challenge for teachers in Nigerian secondary education is the need for research and development. It is necessary for teacher educators to understand the problems that plague schools and teachers to formulate relevant programs to prepare and support teachers. Therefore, there is a necessity for well-prepared and motivated teacher educators to undertake the task. Furthermore, current changes in technology, new advances in learning and the inherent challenges arising from curriculum renewal and reform require radical changes in teaching and learning methodologies. Once the desirability of adopting rich and flexible curriculum frameworks has been recognized, alternative ways of promoting teaching and learning methodologies will be necessary. This will involve moving away from a rigid, prescriptive approach in classroom work (*Pillai, 2001, p. 1*) (see also, Bamgbose, 1992; Ihebuzor, 1992; Marinho, 1992; Emenanjo, 1992, 1995).

Nigeria like other developing countries needs effective teacher education programs. Urgent action is required in the field of teacher training. Teacher training is broadly divided into what is provided before and during employment. They are pre-service or initial education, training, continuing profes-

sional development or in-service education, and training (Day & Sachs, 2004, pp. 3–32; Bolam & McMahon, 2004, pp. 33–63). Teacher training is commonly acknowledged as one of the most important factors in developing quality teachers. In-service training might take any form, such as sandwich programs organized by the faculties of education of most Nigeria universities during the long vacation for a period of 8 weeks per session, workshops, seminars, symposiums and so on, are all aimed at augmenting the inadequacies of pre-service training. Thus, the incompetencies that may occur because of low intellectual capacity and the continuous updating of teachers' knowledge, skill and interest in the teaching field may be achieved through these means.

The suggested remedy for solving the incompetence in the school system is to adequately plan the various options identified above. Existing studies and findings on effective staff development emphasize the importance of teachers or participants' involvement in the planning of in-service activities. For instance, Lawrence (1974) in his review and analysis of 97 studies on in-service education, states that in-service programs that involve teachers in the planning tend to have greater success in accomplishing their objectives than those without. In line with this, Hall and Louck's (1978), Loucks and Zigarmi (1981) and Griffin (1983) states that the best practice of in-service is one that involves clients or participants in planning their own program. Loucks and Zigarmi (1981) maintained that teachers are the best judges of what they need and are often in the best position to help ensure that activities planned are relevant (Esu, 1991). However, there are disadvantages associated with teachers' involvement in the planning process of the in-service training program. That is why some schools do not allow outsiders to take part in the organization of the program.

In-service training programs are ill planned in Nigeria; they are only given attention when there are pressing problems such as mass failure in schools in particular subject areas. This lukewarm attitude ought to pave way for more prudent and resourceful planning to ensure that education systems move ahead smoothly and eventually lead to the attainment of educational aims and objectives. According to Fafunwa (1974):

"In-service training and re-training of teachers at all levels must be embarked upon on a continuous basis, with the mind to improve teachers/classroom effectiveness and to encourage teachers through further incentives for additional experience gained, prospect for further training should be built into teacher-education programs and this should be adequately compensated for or remunerated as an additional incentive" (p. 238).

Esu (1991, pp. 189–199) suggested that in-service education for teachers should not be looked upon as something to make up for the deficiencies in knowledge and skill but rather as a means of sustaining skills and knowledge that enhance effective classroom practice or teaching. Thus, in-service educa-

tion for teachers should follow a developmental approach as opposed to the 'deficit' approach often employed by the in-service organizers. This truth has an implication for teachers' in-service education, the need to develop and keep abreast with the continual changes in their job is crucial. The deficiencies in the training programs of most schools need to be remedied through a system of staff education and training (Whawo, 1993, p. 60).

7.5 Recommendations

1. I seek to recommend the instantaneous revitalization of schools and the education of teachers through teacher education programs. According to Owens, work towards this goal is guided by three basic principles:
 - Programs for the education of the nation's educators must be viewed by institutions offering them as a major responsibility of society and must be adequately supported and promoted and vigorously advanced by the institution's top leadership.
 - Programs for the education of educators must enjoy parity with other professional education programs, full legitimacy and institutional commitment, and renewal for faculty geared to the nature of the field.
 - Programs for the education of educators must be autonomous and secure in their borders, with clear organizational identity, constancy of budget and personnel, and decision-making authority similar to that enjoyed by the major professional schools (Owens, 2004, pp. 406–407).

Higher education in Nigeria should begin to show keen awareness of the important connections between the university, teacher education, and the effectiveness and improvement of schools. It is on this ground that an effective education system can emerge.

2. Another very important issue is that of manpower. This planning requirement has greatly hampered the educational development of our school system. Manpower planning is based on the understanding that any nation that wants to achieve a specific level of social and economic growth must improve on its stock of educational manpower. The manpower requirement approach is therefore used in the determination and the provision of the quality and caliber of different categories of manpower needed for a specific level of social and economic growth and development. As a follow up, Agabi (1995) proposed basic steps involved in manpower planning of any nation. They include the following:

- An estimation of the initial stock of manpower and national output for a year within a national economy;
- A projection of the growth rate in national income or output desired during the prospective plan period;
- A derivation of the growth in demand for manpower during the plan period to achieve the desired national output, making provision for manpower attrition;
- A translation of the desired additional manpower required into numerical quantities of educational output in various programs, making the necessary adjustment for attrition;
- A determination of required future enrollment in different disciplines and programs in education; and
- A projection into the resource requirement needed to implement the desired and planned manpower-training program (p. 142).

The Ministry of Education and the Post Primary Schools Board should focus attention on the manpower requirement need of our schools; they should sufficiently make provision for planning if they want to make headway towards the achievement of educational goals. This however, depends largely on how accurate the information (data) needed to carry out the planning functions are. According to Aghenta (1987), the success of educational planning rests on the availability of accurate data with respect to total population by sex, level and type of education, and the number of students by level and sex. Other factors that are of vital importance for educational planning include number and type of graduates, school buildings and public expenditures on education.

3. The implementation stage of planning is of paramount importance to education in Nigeria. It is, as we all know, the most difficult stage of the planning process. As such, it is the stage in which administrative efficiency and effective managerial skills are most put to task. Care has to be taken at this stage in order not to mix up the original intention of the plan. This is a stage where ability to manage limited resources towards the achievement of the stated objectives comes into play. Here, the extreme politicization of implementation of the program must be avoided. Programs that are incapable of being implemented should not be ventured. What is required at this stage is adequate and accurate statistical data, adequate funding from the government and its agencies, drastic reduction in the mode and methods of embezzlement¹⁷, as well as adequate personnel.

¹⁷ This is theft of public resources by public officials. It is when a state official steals from the public institution in which he/she is employed. In Nigeria the embezzlement of public funds is one of the most common ways of economic accumulation, perhaps due to lack of strict regula-

4. A control and evaluation team should be put in place to monitor the implementation process, thereby ensuring that it is in line with the expected performance and alert the policy/decision making body for necessary action where problems exist. Attention should specifically be given to staff recruitment and selection. There should not be any room for nepotism¹⁸ and favoritism¹⁹. If we are interested in school effectiveness from the management point of view in Nigeria, we need however to go back to research and find out the pertinent factor responsible for school effectiveness. Thus, the avoidance of nepotism and favoritism are some of the 16 universal factors that determine effective schools (Davies, 1997, p. 29).
5. Merit should guide staff recruitment and the selection process; thus only those who qualify as teachers should be employed in the education system if we are to attain success. In addition, the prudential principle of staff employment stipulates that adequate staff should always be employed to render the necessary services; what is vital here is effective service, and only the proper employee who can render the right service at the right time and in the right place should be considered.
6. Employment of teaching staff should be anchored on technical expertise, as future evaluation procedures will be based on the ability to perform. There should be a high degree of specialization. It is expected that if work is shared according to area of specialization, the rate of production will be faster and more effective. Ability not personal loyalty should be the condition for employment. The incompetent should be removed as a matter of urgency. I seriously recommend that Frederick Herzberg and his colleagues 'two-factor theory' should be looked into critically, especially his motivating factors which he identified as factors capable of motivating workers. Likewise, giving teachers opportunities to grow and advance is what actually matters, and contemporary education researchers presume it as a very vital element in teachers' job effectiveness.
7. First degrees (B.A/B.Sc. Ed. or the B.Ed.) in fact are the most effective way for preparing teachers how to teach in secondary schools. People

tory systems (Dike, 2004).

¹⁸ According to Dike (2004) this is a special form of favoritism in which an office holder prefers his/her kinfolk and family members. Nepotism, [which is also common in Nigeria], occurs when one is exempted from the application of certain laws or regulations or given undue preference in the allocation of scarce resources.

¹⁹ This is a mechanism of power abuse implying a highly biased distribution of state resources. However, this is seen as a natural human proclivity to favor friends, family and anybody close and trusted (Dike, 2004).

with a liberal arts or science degree should be encouraged to pursue a postgraduate diploma program in education to qualify as a graduate teacher. Continuous evaluation and assessment of teachers is important because it will call for a better supervisory method that will ensure teachers' professional competence and growth.

8. Another very significant factor that has been most neglected in Nigeria's educational system is in the area of student-teacher relationships. The relationship between students and teachers does not matter much to us, what matters is that teaching and learning should just carry on. The Ministry of Education, Post Primary Schools Board and teachers in general should ensure that they make useful coordination of learning because making teaching and learning sufficiently important is for the good of our educational system. For example, "One thing I do not like about the courses I am taking is that I never see the connection between any of them". This comment, made by one of my students, set me to thinking, and it is food for thought. Today's increasing specialization in nearly every profession and occupation has affected teaching. Nonetheless, not all the consequences of specializing are advantageous. Teaching that gives the impression that a particular course is the most important one in the students' curricula can evoke great enthusiasm for the course and commendable accomplishment by the students. Such teaching may, however, fail to help the students coordinate that particular course with other phases of their total education. A medical specialist usually works in cooperation with a general practitioner, who sees the "whole picture". Likewise each teacher needs to keep the whole picture in view while teaching in his or her special field.

For instance, secondary-level teachers can discover without great effort what their students are learning in other courses by asking a few incidental questions and by observing the bulletin boards in other classrooms. With a little thought, nearly any day's lesson can be related to the content of some other course. Students like it when they discover that an instructor's knowledge and interest extend beyond the limits of his or her course and that an instructor has interest in the whole spectrum of their education and helps them to notice how their various courses are interrelated. Therefore, a teacher of English writing and grammar can motivate his or her students to select a theme or topic that will enable them to explore a phase of some other subject. He or she can encourage, or require them to make a list of vocabulary words that they are learning in his or her class as they notice these words in other textbooks or hear them used in other classes. Writing brief contexts in which they find the words will make

this a more useful coordination of learning. As time permits, the teacher could have the students share these uses of new words.

In the same way, all teachers can reinforce the importance of spelling, punctuation, and grammar by pointing out errors and by complimenting excellence in these areas. Teachers may wish to subtract a point or two for such mechanical errors. In literature, art, or music courses the teacher can help the students place the writers, artists, or musicians chronologically with people and events they have studied in history and mention how the political and social conditions of that period may have affected their work, and vice versa. Likewise, history teachers can reinforce these other courses; students can be encouraged to mention related information learned in other courses. Art students can be encouraged to make an occasional bulletin board for another class; the art teacher can then be contacted to grade this “extra” project if he or she wishes to do so. Foreign language teachers can have their students be alert for words and phrases that they hear or read in their other courses. Conversely, other teachers can encourage language students to explain foreign words to the rest of the class. The suggestions made here can be multiplied endlessly. They are given with the purpose of triggering ideas and encouraging teachers to plan ways of helping students see education as a “whole” process, not a daily sequence of unrelated fragments. Wisdom can be defined as “the ability to use information in accordance with the principles taught (Smith, 1990). Thus it is only through providing our students with the whole picture that we enable them to begin to achieve some sort of wisdom.

9. Teachers can make a real difference in their students’ lives but only if they take the time and care enough to do so. For example, reading a student’s whole paper, making comments throughout a student’s work makes a difference. Correcting the spelling, punctuation, and grammar says that a teacher took time with a student’s work and that they care.

Encouraging comments such as “Better than your last quiz, Jonathan!” written by the grade takes little effort, acknowledges the student’s progress, and motivates him to “keep on keeping on.” The “Open Door” Policy or availability and approachability are essential in any people-profession. When I’m in my office, I leave the door open as an invitation to “drop in.” Arriving early and not rushing off after class makes me available to my students and gives us a chance to visit. I also give students my home phone number so they can call if they have questions or problems.

Teachers must take their “Mothering” (“Fathering”) role or “*in loco parentis*” seriously. (Remembering that every student is someone’s child revives my patience as I work with adolescents.) Like a loving mom, I refuse to let students procrastinate. Spurgeon said, “Well begun is half done.” I motivate the

students to get started and to continue working on major projects by giving homework assignments “The next time you come to class, I want you to have put in another hour on your project. Your final grade will be affected if you don’t.” I pass around a sheet on which they indicate whether or not they have met the time requirement. In addition, spot-checking the project in progress encourages them to work steadily. Students appreciate this when they are able to turn in their papers on time and when they have enjoyed and actually learned something in the creative process.

Extra-Credit Encouragement: extra credit gives a student hope, and good teachers always inspire hope. Samuel Johnson wrote, “Where there is no hope, there can be no endeavor.” Reading recommended books gets my students into professional literature. An extra-credit question on an exam may help a student who blanked-out on one of the other questions. I give students a few extra-credit points if they ate breakfast on the exam day which, in addition to the better grade on the exam that they usually receive by having some “fuel in the tank”, encourages them to create healthy habits.

Teachers must listen, really listen—one of the most important acts of love is to pay attention. Listening to our students assures them that they are worthy of our attentiveness and that they are loved. Teachers should be sure to:

1. Listen with our mouths—Brief comments, inviting remarks and questions (“Umm,” “I see,” “Really?”) indicate that we are paying attention and encourage the student to continue.
2. Listen with our eyes—Making comfortable eye contact and avoiding glancing around the room show that we are listening.
3. Listen with our bodies—squarely facing the speaker and even leaning forward slightly as he talks are subtle but effective ways of showing that he has our full attention. Responding with facial expressions, smiling, and nodding in agreement indicate that we are “tuned in.” Shuffling papers, looking at our watch, or jingling the change in our pockets (men) is negative body language which speaks loudly. We don’t want the student to feel that what he says is unimportant or that we have better things to do than listen to him. Everyone appreciates the gift of time.
4. Listen with our hearts—Junior and senior high students often say one thing and mean something else. A discerning spirit helps us “read between the lines” of a student’s conversation.

In all, personal-touch teaching takes very little effort and meets the heart-needs of our students. We cannot just say that we care; we have to show it (Anderson, 1999).

(10) Finally, the aim of teacher education is to create a pedagogically thinking teacher, who at the same time is a full professional in educational issues with an adequate amount of theoretical background knowledge and a reflectively critical attitude towards the challenges encountered in the teaching profession (Tella, 1996, p. 65). Nigeria and other African countries must come to the realization that there is no substitute for good quality education (Olaniran, 2001, p. 155), and that this type of education is dependent upon initial teacher training (ITT) and continuing professional development (CPD) (Davies & Worrall, 2003, pp. 58–63; Day & Sachs, 2004; Kelchtermans, 2004). Teachers who are prepared by universities and colleges in Nigeria should be responsible for teaching the children who will be the country's movers and shakers, workers and savers, leaders and caretakers, engines of social and economic well-being. I propose that the Ministry of Education should first conduct both an internal and external audit of all the teacher education programs in the country at both the federal and state levels using the planning mechanism and feedback process *vis-à-vis* SWOT Analysis (ICMBA, 2004). I further suggest to the leadership of our universities and colleges to put the education of teachers at the top of their agendas, thereby calling teacher education the responsibility of the entire university or college. Significantly, a greater increase in research is recommended to improve teacher education programs.

7.6 Scope and Delimitations of this Study

As a result of the importance of finding an effective way to maintain and upgrade the competence of teachers in the education industry, a more profound understanding of the main determinants of APQTJE was needed. Thus, the focus of this study is to ensure that our schools are equipped with the right kind of teachers, and to learn from 'best practices' elsewhere especially Finland that will assist educational growth.

However, no matter how constructive this research work is, there are nevertheless, some limitations. First are the number of schools that could be included in the study and the generalizability of the findings. Although the researcher attempted to improve the generalizability of the results by inferring from a multiple case study, it would be 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.

This study uses the opinions of teachers in ten selected secondary schools in the randomly selected Local Government Areas in Rivers State of Nigeria. This may not represent the opinions of other teachers in other parts of Nigeria. As this is the case, it will be inappropriate for one to assume that their opinions represent those of other teachers. However, following the principles of inter-

pretation research, generalization is not sought from the setting of a population, rather it supplies an understanding of the deeper structure of a phenomenon that can inform other settings. According to Kerlinger (1973), interpretation research takes the results of analysis, makes an inference pertinent to the research relations studied, and draws conclusions about these relations. The researcher, who interprets research results, searches them for their meaning and implications. This is done in two ways: the relations within the research study and its data are interpreted or the broader meaning of the research data is sought (see, Kerlinger, 1973, pp. 234–235). It was on this ground that the researcher laid his generalization.

In any case, the reliability of this research may have been affected to some degree by the time the investigations were conducted as a national debate was in progress about the falling educational standard in the nation's educational system. In addition, since the researcher was a full-time postgraduate student in Helsinki, he needed to make his trips to Nigeria when he felt it was convenient for him. However, each time he did, it coincided with when the Teachers, Principals and Supervisors were busy with either an internal examination, National examination council (NECO) or the Senior Secondary School Certificate Examination (SSCE), and General Certificate in Education (GCE). The time of the year when two of such investigations were carried out was in December 2002 and in April 2003, and this may have affected the reliability some how. The majority of the respondents who are parents in various capacities may have been rather busy with their children for Christmas and Easter activities. They may not have completed the questionnaire as carefully as might have under normal conditions. Attempts were made to find a more convenient time to carry out the inquiry.

However, the researcher was eager to extend the scope of this study, but was constrained by finance, hence the limitation to only Rivers State. In the cause of carrying out this research, efforts were made to make my opinions clear and rely on multiple methods of information gathering, but questionnaires and interviews were the major source of my data gathering. A lot of effort, energy and time were expended to make sure that those interviewed and questioned actually responded and were interested in the study and were ready to give their feedback. Besides, some teachers may not find it necessary to categorically state their views in the questionnaire. Thus, they filled out the questionnaire in a carefree manner. From the early phases of the process, it was important to find people who were willing to discuss, support, and give honest feedback to this research.

As I noted earlier, I was confused on the most appropriate research method to use in conducting this investigation because of the increasing academic fight concerning the superiority of the quantitative over the qualitative research method. However, both research methods were used and are recognized in

conducting research in education. Accordingly, giving credence to this fact, Olusengu (2001, pp. 3–10) stated, “The selection of an appropriate research method has always been a dilemma for many researchers and evaluators. While the quantitative-qualitative research debate rages, what is obvious is that there is not one best research method for all research and evaluations. Different research purposes require the use of different research methods separately or in concert with each other. For all practical purposes, both quantitative and qualitative methods have different, but complimentary roles to play in a research process and outcome”. To this end, the researcher deemed it fit to apply both methods to get a valid and reliable result.

7.7 Contributions and Suggestions for Further Studies

The main purpose of this section is to show the rigorous investigative effort of the researcher in conducting this investigation. This treatise begins with the intent of addressing the lack of comprehensive research evidence on Academic and Professional Qualification on Teachers Job Effectiveness (APQTJE) in Nigeria. It was the researcher’s desire to contribute to knowledge through a comprehensive report regarding teacher job effectiveness in Nigeria. This eventually led to the idea of putting all effort and design possible which encompasses all aspects relating to effective job performance into the study. Because as stated at the very beginning of this research work, the success of any organization depends on the available methodological competencies, educational qualification level, and the administrative machinery established for its implementation. Also, the researcher strove to put rigor²⁰ into the study over the five years investigative period by using proven research approaches and pluralistic methodologies in the inquiries to portray the importance of this research work. The author’s aim has always been to contribute to knowledge and offer contributions to the discussion and development of issues surrounding this research topic.

Before this dissertation, no comprehensive published papers had an in-depth analysis of APQTJE in Nigeria. Since APQTJE is not common in Nigeria, this study was able to provide insights into its state. The investigator increased in amount the issues of difference in the conceptualization of APQTJE that need to be considered in any research design that relates to APQTJE. To make this study more elaborate, I not only discussed APQTJE, I also looked into other relevant issues that may perhaps influence teachers’ job performance and their relationship to the teaching and learning process. This dissertation

²⁰ When I thought about conducting this research work, I did try to make my position as clear as possible and, I also relied on multiple research methods of data collection, despite the fact that questionnaires and interviews were the main sources of my data- gathering techniques.

touches on these issues and has particular implications for the intended readers. Empirically the need to consider the environment and its influence on educational achievement it was proven, which was missing in the very few papers that came the researcher's way. With this dissertation, the researcher explained by experiment APQTJE's possibility for use in the development of Nigeria's falling educational standards. The findings and recommendations from this investigation, if put into effect, might go a long way toward the standardization of education in Nigeria and can be applied to similar situations in other parts of the world.

Any institution or organization, irrespective of size, location, economic background and mission, could use the structural plan or basis produced in this investigation. The only prerequisite is the willingness of the organization to be competitive and to participate in APQTJE. An educational administrator with adequate professional training could also adapt this structural plan and provide APQTJE solutions for educational institutions and organizations. The basis of this study could guide the Ministry of Education and the Post Primary Schools Board in their APQTJE management origination move in order to analyze the entire educational structure to determine what areas need urgent attention. The basis of this study could be used to appraise and support the argument that teachers are not born but made. It is a wider approach that requires the interaction of the Ministry of Education, teachers and students alike. In all, APQTJE management could be made appealing to educational institutions and assist them in reaping their objectives. It could also help educational institutions save both human and material resources. This is where the contribution of this investigation could play a significant role if adequately utilized.

A lot of works need to be done. Similar studies on a broader scale that covers more states of the federation (Nigeria) should be conducted to give an idea of what is obtainable in other parts of the country and the world. Therefore, further research in this area is recommended in every segment of this piece of work. Studies should also be carried out to ascertain whether there are other factors that make teachers improve their effectiveness on the job aside from academic and professional training. In the same way, I recommend that further research be conducted using the research questions and hypotheses from this study; if possible the research design of this investigation should be applied to verify if the result of this treatise is true or false. It is, therefore, suggested that these findings be viewed as tentative and subject to further investigation.

References

- Abdal-Haqq, I. (1995). *Infusing Technology into Pre-service Teacher Education*. ERIC Digest.
- Adegoroye A. (2002). *National Identity Card (NIC)*. Thisday on-line March 17, News 09.
- Adeniyi, E. O. (2001). The Situation in Nigeria; the Problem of Nigeria Educational System. In Pillai, R. (Ed). *Strategies for Introducing New Curricula in West Africa*. Final Report of the Seminar/Workshop held in Lagos, Nigeria, 12–16 November 2001.
- Aderonmu W. O. & Ehiامتolor E. T. (1985). *Introduction to Administration of schools in Nigeria*. Ibadan: Evans Brothers.
- Adesina S. (1988). *Some Aspects of School Management*. Nigeria: Board Publications.
- Adesina, S. (1980). *Aspects of Educational Management*. Ibadan; Board Publishers.
- Adesina, S. (1981). *What is Educational planning? Introduction to Educational Planning*. Ili–Ife; University of Ife Press.
- Adesina, S. (1982). *Planning and Educational Development in Nigeria*. Ibadan: Board Publishers.
- Adesina, S. (1990). *Educational Management*. Enugu: Fourth Dimension Publishing Co.
- Adeyemi, K., (1995). *Stages in Educational Planning*. In Peretomode V.F. (Ed), *Introduction to Educational Administration Planning and Supervision*. Lagos: Joja Educational Research and Publishers.
- Adigwe J. C. (1992). Problem-solving processes of Nigeria chemistry teachers. *Research in Science & Technological Education*. Vol. 10 issue 1, p.93, 12p. 9 charts, 1 diagram.
- Adigwe, J. C. (1991). Problem-Solving Processes of Pre-service Chemistry Teachers in Nigeria. *Research in Science and Technological Education*, 9(1): 107–120.
- Agabi, O. G., (1995). *Educational planning: An over view*. In Peretomode V.F. (Ed), *Introduction to Educational Administration Planning and Supervision*. Lagos: Joja Educational Research and Publishers.
- Aghenta, J. A. (1987). Educational Planning in Nigeria: Issues, Problems and Strategies: *The planner*, Vol. 1, No. 1.
- Aghenta, J. A. (1981). “*Improving the Professional Competence and Image of the School Principal*”. *Towards Efficiency in School Administration*. Institute of Education University of Benin.
- Ahamibe, C. (1979). “*Aims and Objectives of Education*” In B. O. Ukuje (Ed) *Foundation of Education*. Benin City; Ethiope Publishing Corporation, pp. 26–27.
- Ahtee, M. & Salonen, M. (1995). The Implementation of a New Science-Based Curriculum and its Effects on the School Community in a Finnish Primary School. In Hämäläinen, K., Oldroyd, D. & Haapanen, E. (Eds). *Making School Improvement Happen*. Helsinki: Department of Teacher Education, Vantaa Institute for Continuing Education, University of Helsinki.

- Aiyepetu, T. F. (1989). 6-3-3-4 *System of Education in Nigeria*. College and University Text. Onitsha: NPS educational Publishers.
- Akpe (1991). Choice of teaching subjects in pre-service teacher education in Nigeria. *A journal of education for teaching* Vol. 9(2) 1-6.
- Akpe, C.S. (1991). Choice of Teaching Subjects in Pre-service Teacher Education in Nigeria. *Journal of Education for Teaching*, 17(2): 213-219.
- Akubue A. U. & Enyi D. (2001). *Crisis and Challenges in Higher education in Developing Countries*. Ibadan: Wisdom Publishers.
- Akusoba, E. U. (1979). The teacher outside the classroom. In Ukege B.O. (Ed), *Foundations of Education*. Lagos: Academy press Ltd.
- Alaxander, R. (1992). *Policy and Practice in Primary Education*. London: Routledge.
- Alberto, P.A., & Troutman, A.C. (1995). *Applied behavior analysis for teachers* (4th Ed.). Englewood Cliffs, NJ: Merrill/Prentice-Hall.
- Allen-Mearns, P. (1995). Social service—Research—Methodology. *Social work research*, Mar95, Vol. 19 issue 1, pp. 5-8.
- Alter, C. & Hage, J. (1993). *Organizations Working Together*. Sage.
- Amalaha, B. M. (1979). The Teacher in the Classroom. In Ukeje, B. O. (Ed) *Foundations of Education*. Benin-City: Ethiope Publishing.
- Ames, C. A. (1990). *Motivation: What Teachers Need to Know?* Teachers College Record 91, 3 pp. 409-21.
- Anderson, D. (1999). "Person Touch Teaching" *Reprinted from BALANCE* Vol. 19, No 4. A publication of Bob Jones University. Used by permission. All rights reserved.
- Andy I. J. (1992). *Fundamental statistics for Educational and the Behavioural Sciences*. Ibadan: Kraft Books.
- Anowor (Ed) (2000). *The Nigerian Education system in crisis*, pp. 55-63. Enugu: Amazing Grace Publishers.
- Anyamele, S. C. (2004). Institutional Management in Higher Education: A Study of Leadership Approaches to Quality Improvement in University Management. Nigerian and Finnish Cases. *Doctoral Dissertation University of Helsinki. E-thesis*. <<http://ethesis.helsinki.fi/julkaisut/kay/kasva/vk/anyamele/institut.pdf>>
- Arene, V. N. (1990). *Personality Excellence. A Quest for Human Soundness*: Lagos, Emonse Print.
- Arenas, et al. (2002). Qualitative Methods. Document review. *The World Bank Group Online*. <<http://www.worldbank.org/poverty/impact/methods/docrev.htm>>
- Armstrong, D. G. & Savage, T. V. (1994). *Secondary Education*. New York: Macmillan College Publishing Company.
- Asmussen, K. J. & Creswell, J. W. (1995). Campus response to a Student Gunman. *Journal of Higher Education*, 66, 575-591.
- Austin, H., Dwyer, B. & Freebody, P. (2003). *Schooling the Child: The Making of Students in Classrooms*. London & New York: RoutledgeFalmer.
- Ayersman, D. J., Ackerman, E. & Zisman, P. (1996). Creating a Computer Competency Requirement for Mary Washington College Students. 8pp. In: *Association of Small Computer Users in Education (ASCUE) Summer Conference Proceedings* (29th, North Myrtle Beach, SC, June 9-13, 1996)

- Bacchus, M. K. (1995). Improving the Quality of Basic Education Through Curriculum Development and Reform. In Zajda, J., Bacchus, K. & Kach, N. (Eds) *Excellence and quality in Education*. Albert Park: James Nicholas Publishers.
- Bajah, S. T. (1976). Assessing Chemistry Teachers' perception of the Effectiveness of a Teacher's Vocation in Nigeria. *Journal of Science Teachers association of Nigeria*, 18(1), pp. 40–48.
- Bajah, S. T. (1976). *How Should we Educate Chemistry Teachers for a Changing World?* Proceedings of the 3rd International Conference on Chemical Education, Department of Chemistry, University College Dublin.
- Bamgbose, A. (1992). *Implementation strategies of the language provisions of the National Policy on Education*. Abuja, NERDC.
- Banjo, S. A. (1960). *A West Africa Teachers' Handbook*. London; University of London Press.
- Barber, M. & White, J. (1997). Introduction. In White, J. & Barber, M. (Eds), *Perspectives on School Effectiveness and School Improvement*. London: Institute of Education University of London.
- Barlow, J. (1992). *High schools aren't Working*. Houston Chronicle, E1.
- Barnes, S. J., & Sitton, M. (1996). Case Studies of successful campuses: Response to high-stakes state accountability system: State wide *Texas Educational Progress Study*. Report No.2. Austin, TX: Texas Education Agency.
- Basu, C. K. (1997). *Integration of Technology Education in Basic and General Education Curriculum in Asia-Pacific Countries*. 6pp. Paper presented at the Asia-Pacific School Principals' Forum, "Managing Schools for the 21st Century" (Manila, Philippines, February 18–20, 1997).
- Bayne-Jardine, C. (1994). Supporting Self-Development Schools. In Bayne-Jardine, C. & Holly, P. *Developing Quality Schools*. London: The Falmer Press.
- Beare, R. A. (1992). Software Tools in Science Classrooms, *Journal of Computer Assisted Learning*, 8, 221–230.
- Beare, H., Caldwell, B. J. & Millikan, R. H. (1989). *Creating an Excellent School: Some New Management Techniques*. London: Routledge.
- Beare, R. A. (1996a). An Investigation of Different Approaches to Using a Graphical Spreadsheet Model of Population Dynamics, *International Journal of Mathematical Education in Science and Technology*, 27, 4, 583–598.
- Beare, R. A. (1996b). Mathematical Modelling Using Spreadsheets, *Teaching Mathematics and its Applications*, 15, 3, 120–128
- Beare, R. A. (1996c). A Spreadsheet System for Data Analysis and Mathematical Modelling, *Computer Education*, 82, 11–15.
- Beare, R. A. & Barker, S. (1999). Teaching population strategies: an evaluation of approaches. *Journal of Biological Education*, 33, 3, 149–154.
- Benbasat, I., Goldstein, D. & Mead, M. (1987). The Case Research Strategy in Studies of Information Systems. *MIS Quarterly*, Vol. 11 No 3, pp. 369–386.
- Bereday, G. Z. (1969). *Essays on World Education: the crises of supply and demand*. New York: Oxford University Press.
- Bergem et al. (1997). Research on Teachers and Teacher Education in Scandinavia: A Retrospective Review. *Scandinavian Journal of Educational Research*, Vol. 41, Nos 3–4, 433–458.

- Bin Mohamed Ali, H. M. (1995). Becoming Professionally Competent Language Teachers—Some Suggestions International Islamic University Malaysia. *The English Teacher* Vol. XXIV October 1995.
<<http://www.melta.org.my/ET/1995/main2.html>>
- Bishop, J. H. & Wößmann, L. (2001). Institutional Effects in a Simple Model of Educational Production. *Kiel Working Paper No. 1085*.
- Bogdan, R. C. & S. K. Biklen (1992). *Qualitative Research for Education*. 2nd Edition. Boston: Allyn and Bacon.
- Bolam, R. and McMahon, A. (2004). Literature, Definitions and Models: towards a conceptual map. In Day, C. and Sachs, J. (Eds). *International Handbook on the Continuing Professional Development of Teachers*. Berkshire: Open University Press.
- Best, J. W. (1970). *Research in Education*. New Jersey: Prentice-Hall, Englewood Cliff
- Borg, W. R. & Gall, M. D. (1989). *Educational Research: An Introduction*. Fifth Edition. New York: Longman.
- Borg, A. (1980). Learning through Graphics. In R. Taylor (ed.), *The Computer in the School: Tutor, Tool, Tutee*. New York: Teachers College Press.
- Bosah, H. O. N. (1997). Improving School Plant Provision in Nigerian Schools. In Ogbonnaya, N. I. & Ajagbaonu, C. L. (Eds). *Major Concepts in Educational Administration*. Onitsha: Cape Publishers International.
- Bosmart, E. D. (1991). *An Evaluation of Job Effectiveness of Graduates of Selected Southern Nigerian Polytechnics between 1985–1989*.
- Brain, M. (1998). *Emphasis on Teaching. What is Good Teaching?* Raleigh, NC: BYG Publishing, Inc. <<http://www.bygpub.com/eot/eot1.htm>>
- Brint, S. (1998). *Schools and Societies: Sociology for a new century*. Thousand Oaks: Pine Forge Press.
- Brophy, J. (1986). *On Motivating Students. Occasional Paper No. 101*. East Lansing, Michigan: Institute for Research on Teaching, Michigan State University.
- Brophy, J. (1987). Synthesis of Research on Strategies for Motivating Students To Learn. *Educational Leadership* pp. 40–48.
- Brown, J. W., Lewis, R. B. & Harclerod, F. F. (1959). *A-V Instruction Materials and Methods*. New York: McGraw-Hill Book Company.
- Bruce, C. and Gerber, R. (1995). Towards University Lecturers' Conceptions of Student Learning. *Higher Education* 29: 444–458.
- Bryman, A. & Cramer, D. (2001). *Quantitative Data Analysis with SPSS Release 10 for Windows: A Guide for Social Scientists*. Philadelphia: Routledge: Taylor and Francis Group.
- Buch, M. B., Yaday, M.S, Joshi, D.C., & Mukhopadhyay, M. (1976). "Innovation in teacher education." *Exploring new direction in teacher education*. Bangkok: ENESCO. Regional Officer for Education in Asia.
- Buchberger, F. et al. (Ed) (2000). *Green paper on teacher education in Europe: high quality teacher education for high quality education and training*. Umea: TN-TEE

- Campbell, J., Kyriakides, L., Muijs, D & Robinson, W. (2004). *Assessing Teachers Job Effectiveness: Developing a Differentiated Model*. London and New York: RoutledgeFalmer.
- Campbell, D., & Stanley, J. (1966). *Experimental and quasi-experimental designs for research*. Chicago: Rand McNally.
- Campbell, J., Daft, R., & Hulin, C. (1982). *What to study: Generating and developing research questions*. Beverly Hills, CA: Sage.
- Carr, W. & Kemmis, S. (1986). *Becoming Critical: Education, Knowledge and Action Research*. London: The Palmer Press.
- Carrim, Nazir & Shalem, Yael (1999). Education- South Africa-Johannesburg; School management & organization- South Africa- Johannesburg. *International journal of qualitative studies in education* (OSE) Jan/Feb99 Vol. 12 issue 1, p.59, 25p.
- CCH (2004). Quantitative Research. *CCH Business Owner's Toolkit online*. <http://www.toolkit.cch.com/text/P03_3150.asp>
- CDC (2003). National Center for HIV, STD and TB Prevention Divisions of HIV/AIDS Prevention <<http://www.cdc.gov/hiv/pubs/faq/faq1.htm>>
- Chapman, D. W. & Austin, A. E. (2002). *Higher Education in the Developing World: Changing Contexts and Institutional Responses*. London: Greenwood Press.
- Cheng, Y. C., Cheung, W. M. and Tam, W. M. (2002). The Pacific Rim and Australia - Hong Kong. In Reynolds, D., Creemers, B., Stringfield, S., Teddlie, C. & Schaffer, G. (Eds) *World Class Schools: International Perspectives on School Effectiveness*. London: RoutledgeFalmer.
- Cheng, Y. C. (1994a). Classroom Environment and Student affective Performance: An effective Profile. *Journal of Experimental Education, Vol. 62 Issue 3*, pp. 221-239.
- Clark, C. M. (1995). *Thoughtful Teaching*. London: Cassell.
- Clay Helberg, M. S., (1995). *Pitfalls of Data Analysis (or how to avoid lies and damned lies)*. Third International Applied Statistics in Industry Conference in Dallas, TX, June 5-7, 1995. <<http://www.execpc.com/~helberg/pitfalls/>>
- Coffey, A., & Atkinson, P. (1996). *Making Sense of Quantitative Data. Complementary Research Strategies*. Thousand Oaks, CA: Sage.
- Cohen, L., & Manion, L. (1994). *Research methods in Education*, fourth edition. London: Routledge.
- Cohen, L. (1962). The statistical power of abnormal-social psychological research: A review. *Journal of Abnormal and Social Psychology*, 65, 145-153.
- Cohen, L. (1988). *Statistical power analysis for the behavioral sciences (3rd ed.)*. New York: Academic Press.
- Cohen, D. K. (1987). Educational Technology, Policy and Practice. *Educational Evaluation and Policy Analysis*.9, (2), pp. 153-170.
- Coles R. (1989). *The Call of Stories*. Boston, MA: Houghton Mifflin.
- Collins Concise Dictionary (1999). *Fourth Edition*. Harper: Collins Publishers.
- Collinson, V. (1996). *Reaching students: Teachers' ways of knowing*. Newbury Park, CA: Corwin Press.
- Colman, J. F. (1967). *The Master Teachers and the Art of Teaching*. New York. Pitman Publishing.

- Condry, J., & Chambers, J. (1978). Intrinsic Motivation and the Process of Learning. In Lepper, M.R. and Greene, D. (Eds). *The Hidden Costs of Reward*. Hillsdale, New Jersey: Lawrence Erlbaum Associates.
- Creemers, B. P. M. (1994a). The History, Value and Purpose of School Effectiveness Studies. In Reynolds et al. *Advances in School Effectiveness research and Practice*. Willington: Elsevier Science. pp. 9–23.
- Creemers, B. P. M. (1994b). Effective Instruction: An Empirical Basis for a Theory of Educational Effectiveness. In Reynolds et al. *Advances in School Effectiveness research and Practice*. Willington: Elsevier Science. pp. 198–205.
- Creemers, B. P. M., Stringfield, S. & Guldemon, H. (2002). The Qualitative data. In Reynolds, D., Creemers, B., Stringfield, S., Teddlie, C. & Schaffer, G. (Eds) *World Class Schools: International Perspectives on School Effectiveness*. London: RoutledgeFalmer.
- Creemers, B. P. M. (1994c). *The Effective Classroom*. London: Caseell.
- Creswell, J. W. (1994). *Research design: Qualitative and Quantitative approaches*. Thousand Oaks, CA: Sage.
- Creswell, J. W. (1998). *Qualitative Inquiry and Research design: Choosing Among Five Traditions*. Thousand Oaks, CA: Sage.
- Crone, L. J., & Teddlie, C. (1992). Further examination of teacher behavior in differentially effective schools: Selection and socialization process. *Journal of Classroom Interaction*, 30 (1).
- Crook, C. (1994). *Computers and the Collaborative Experience of Learning*. London and New York: Routledge.
- Cuban, L. (1986). *Teachers and Machines: The Classroom Use of Technology since 1920*. New York: Teachers College Press.
- Cuban, L. (1993). *How Teachers Taught: Constancy and Change in American Classrooms 1890–1990*. New York: Teachers College Press.
- Curriculum Review (1994). *Resources for teachers Dec94, Vol. 34 Issue 4*, p7, 1p.
- D'Aeth, R. (1975). *Education and Development in the Third World*. Hants: Saxon House and Lexington Books.
- Denga, D. I. (1996). *Human engineering for high productivity in industrial and other work organization*. Calabar: Rapid Educational Publishers.
- Darling-Hammond, I. (1986). Teaching knowledge: How do we test it? *American Educator*, 10 (3), 18–21, 46.
- Darling-Hammond, L. (1987). Schools for tomorrow's teachers. *Teachers College Record*, 88, 356–358. EJ 350 137
- Darling-Hammond, L., Wise, A.E., & Klein, S.P. (1995). *A license to teach: Building a Profession for 21st-Century schools*. Boulder, CO: Westview Press.
- Darling-Hammond, L., Wise, A.E., & Pease, S.R. (1983). Teacher evaluation in the organizational context: A review of the literature. *Review of Educational Research*, 53, 285–328.
- Dass, P. M. (1998, April). *Professional development of science teachers: results of using the Iowa Chautauqua model in Collier County, Florida*. Paper presented at the National Association for Research in Science Teaching Annual Conference, San Diego, Calif., USA.

- Davies, L. (1997). The Rise of the School Effectiveness Movement. In White, J & Barber, M (Eds) *Perspectives on School Effectiveness and School Improvement*. London: Bedford Way Papers.
- Davies, D. (1970). Teachers will be professionally educated. In M.Lindsey (Ed), *Teacher education: future direction* (pp: 132–139). Washington, DC: Association of teacher educators.
- Davies, T. & Worrall, P. (2003). Media Literacy and Perceptions of Schools. *Long-Life Learning in Europe, Vol. VIII* issue 2, 58–63.
- Day, C. (1999). *Developing Teachers: The Challenges of Lifelong Learning*. London: Falmer.
- Day, C. & Sachs, J. (2004) (Eds). *International Handbook on the Continuing Professional Development of Teachers* pp. 3–32. Berkshire: Open University Press.
- DeLaGarza, D., Schaller, J., & Parker, R. (1993). Comments on “Learning never ends: Human resource development.” *Journal of Rehabilitation Administration*, 17(2), 49–50.
- Denzin, N. (1989). *Interpretive Interactionism*. Newbury Park, CA: Saga.
- Denzin, N., & Lincoln, Y. (1994) (Eds). *Handbook of Qualitative Research*. Thousand Oaks, CA: Saga.
- Dickman, C. B., Van Sickle, M. & Bogan, M. (1997). Integration and Utilization of Technology by Secondary Pre-service Science Teachers. Retrieved 10 August 2003 www.ed.pus.edu/CI/journal/96pap19.htm
- Dieker, L. A. & Barnett, C. A. (1996). Effective Co-teaching: Teaching Exceptional Children. *Eric Digest 29 (1)*, 5–7.
- Dike, V. E. (2004). *Corruption in Nigeria: A New Paradigm for Effective Control*. To be the Best Nigerian Intellectual forum on the Internet. <<http://www.nigeriavillagesquare1.com/Articles/VEDIKE.html>>
- Dilbert (2004). *Quantitative Research Techniques*. <www.ryerson.ca/~mjoppe/ResearchProcess/QuantitativeResearch.htm>
- Dillon, P. W. (2001). Labeling and English Language Learners: Hearing Recent Immigrants’ Needs. In Hudak, G. M. & Kihn, P. (Eds) *Labeling Pedagogy and Politics*. New York: RoutledgeFalmer.
- Doyle, D. P., & Hartle, T. W. (1985). *Excellence in Education: The States Takes Charge*. Washington: American Enterprise Institute for Public Policy Research.
- Drucker, P. (1973). *Management: Tasks and responsibilities and practices*. New York, NY: Harper and Row Publishers.
- Dubin, S. S. (1990). Maintaining Competence through Updating. In S.L Willis & S.S. Dubin (Eds), *Maintaining Professional Competence*. San Francisco: Jossey-Bass Publishers, 9–43.
- Dunkin, M. J. (1997). Assessing teachers’ effectiveness. *Issues in Educational Research*, 7(1), 37–51.
- Durkhiem, E. (1956). *Education and Sociology*. Illinois: The Free Press.
- Eastwood Paideia School (2004). *Three Modes of Learning/Teaching*. <<http://eastwood.cps-k12.org/home.html>>
- Edem D. A. (1987). *Introduction to Educational Administration in Nigeria*. Ibadan: Spectrum Books.

- Eferakeya, O. A., & Ofo, J. E., (1995). Human Relations in Instructional Supervision. In Peretomode V.F. (Ed), *Introduction to Educational Administration Planning and Supervision*. Lagos: Joja Educational Research and Publishers.
- Ehiametalor, E. T. (1981). Cost Accountability. Towards Efficiency in School Administration. In J. A. Aghenta & E. A. Arubayi (Eds). *Benin City: Institute of Education*. University of Benin.
- Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, Vol. 14 No 4, pp. 532–550.
- Emenanjo, E. N. (1995). *Issues in African languages and linguistics*. Aba: Nigeria, NINLAN Books.
- Emenanjo, E. N. (1992). Languages and the national policy on education: implications and prospect. In: Ipaye, B., (Ed). *Education in Nigeria: past, present and future: essays in honour of Professor A.B. Fafunwa*, vol. 1. Lagos, Macmillan.
- Enaohwo, J. O. & Eferakeya, O. A. (1989). *Educational Administration*. Ibadan; Paperback Publishers.
- Eraut, M. (1994). *Development Professional Knowledge and Competence*. London: Falmer Press.
- Esu, A. E. O., (1987). Educational objectives and the secondary school curriculum: analytical approach, *Journal of curriculum studies*, 5(1).
- Esu, A. E. O., (1989). *In-service education for primary schools teachers in Nigeria: the Cross Rivers and Akwa Ibom State*, unpublished PhD thesis, University of Wisconsin-Madison.
- Esu, A.E.O. (1991). In-service Teacher Education in Nigeria: A Case Study. *Journal of Education for Teaching*, 17(2): 189–99.
- Etzioni, A. (1969). Preface. In A. Etzioni (ed.). *The semi-professions and their organization: teacher, nurses, social workers*. New York: The Free Press
- Ezewu, E. (1983). *Sociology of Education*. Lagos: Londman Group.
- Fafunwa, A. B. (1991). *History of Education in Nigeria*. Ibadan: NPS Educational Publishers.
- Fafunwa, B. (1974). *The History of Education in Nigeria*. Ibadan: Macmillan Publishers.
- Farrant, J. S. (1982). “Developing Countries.” In Goodings, R., Bryan, M., & McPartland, M. (Eds). *Changing priorities in teacher education*. London: Croom Helm Ltd.
- Fashoyin, T. (1993). Nigeria: Consequences for Employment. In A. Adepoju (Ed) *The Impact of the Structural Adjustment on the Population of Africa*. New Hampshire: Heinemann.
- Federal Ministry of Education (1990). *Statistics of Education in Nigeria 1985–1989*. Lagos: Government Printer.
- Federal Ministry of Education (1995). *Educational Data Bank*. Lagos: Federal Ministry of Education.
- Federal Republic of Nigeria (1981). *The National Policy on Education*. Lagos: Government Printer.
- Federal Republic of Nigeria (1989). *The National Policy on Education (Revised)*. Lagos: NERC Press.

- Federal Republic of Nigeria. (1977). *The National Policy on Education*. Lagos, Federal Press.
- Federal Republic of Nigeria (1995). *Educational Data Bank Statistics*. Lagos: Federal Ministry of Education.
- Fenstermacher, G. D. (1990). Some moral considerations on teaching as a profession. In J. I. Goodlad, R. Soder, & K. A. Sirotnik (Eds.), *The moral dimension of teaching*, (pp.130–151). San Francisco: Jossey-Bass. ED 337–443
- Fielding, M. (1997). Beyond School Effectiveness and School Improvement: Lighting the Slow Fuse of Possibility. In White, J. & Barber, M. (Eds), *Perspectives on School Effectiveness and School Improvement*. London: Institute of Education University of London.
- Findlay, H. J. (1989). Influence of Selected Experiences on Perceived Levels of Competence of Secondary Vocational Agriculture Teachers. *Journal of Agricultural Education*, pp. 47–53.
- Firestone, W. A., & Pannel, J. R. (1993). Teacher commitment, working conditions and differential incentive policies. *Review of Educational Research*, 63 (4).
- Forster, F., Hounsell, D., & Thompson S. (1995). (Eds), *Tutoring and Demonstrating: A Handbook* University of Edinburgh Center for Teaching, Learning and Assessment.
- Fraser, B. J., Walberg, H. J., Welch, W. W., & Hattie, J. A. (1987). Syntheses of educational Productivity Research. *International Journal of Educational research 11 (2)*, 145–152.
- Fraser, B. J. (1989). Research Syntheses on School and Instructional Effectiveness. *International Journal of Educational Research*, Vol. 13, Issue 7, pp. 707–719.
- Freiberg, J. & Freebody, P. (1995). Analysing Literacy Events in Classrooms and Homes: Conversation-Analytic Approaches. In Freebody, P., Ludwig, C. & Gunn, S. (Eds), *Everyday Literacy Practices in and Out of Schools in Low Socio-Economic Urban Communities*.
- Friend, M., Reising, M., & Cook, L. (1993). Co-Teaching: An overview of the past, a glimpse at the present, and considerations for the future. *Preventing School Failure*, 37, 6–10.
- Fullan, M. G. (1991). *The New Meaning of Educational Change*. London: Cassell Educational Publishers.
- Fullan, M. G. & Watson, N. (1997). *Building Infrastructures for Professional Development: An Assessment of Early Progress*. New York: Rockefeller Foundation.
- Fullan, M. & Hargreaves, A. (1991). *What Is Worth Fighting For: Working Together For Your School*. Toront, Ontario Public School Teachers Federation.
- Fullan, M. (1987). Implementing the Implementation Plan. In Wideen, M. F. (Ed.). *Staff Development for School Improvement*. London: Falmer Press.
- Fullan, M. (1984). The Principal as Agent of Knowledge Utilization for School Improvement. In D. Hopkins & M. Wideen, (Ed.). *Alternative Perspectives on School Improvement*. London: Falmer Press.
- Fullan, M. (1985). Change Processes and Strategies at the Local Level. *The Elementary School Journal*, 83 (3). pp. 391–421.
- Gall, J. G., Gall, M. D., & Borg, W. R. (1999): *Applying educational research: A practical guide*. New York: Longman.

- Gay, L. R., & Airasian, P. (2000). *Educational research: Competencies for analysis and application (6th Ed.)*. Upper Saddle River, NJ: Prentice-Hall.
- Gay, L. R., & Airasian, P. (2000). *Windows statistics to accompany Educational research: Competencies for analysis and application (6th Ed.)*. Upper Saddle River, NJ: Prentice-Hall.
- Gbamanja P. T. (1989). *Essentials of Curriculum and Instruction. Theory and Practice*. Port Harcourt: Pam Unique Publishing Company.
- Goddard, D., & Leask, M. (1992). *Planning for Improvement and Managing Change: Management in Education*. London: Paul Chapman Publishing
- Golembiewski, R. T., (1973). Motivation in Carl Heyel (Ed) *The Encyclopedia of Management, 2nd ed*, New York: Van Nostrand Reinhold Co.
- Good, T. L., & Mulryan, C. (1990). Teacher ratings: A call for teacher control and self-evaluation. In J. Millman & L. Darling-Hammond (Eds.), *The new handbook of teacher evaluation*. Assessing elementary and secondary school teachers. (pp.191–215). CA: Newbury Park.
- Goodlad, J. I. (1990a). The occupation of teaching in schools. In J. I. Goodlad, R. Soder, & K. A. Sirotnik (Eds.), *The moral dimension of teaching*, (pp. 3–34). San Francisco: Jossey-Bass. ED 337 443.
- Goodlad, J. I. (1990b). *Teachers for our nation's schools*. San Francisco: Jossey-Bass. ED 330 655.
- Government of Rivers State of Nigeria. Ministry of Education Port Harcourt. Planning, Research and Statistics Department. Master List of Public Secondary Schools as at Feb. 2001.
- Griffin, C. (n.d): Narrative Analysis. <http://staff.bath.ac.uk/psscsg/QM-Nar-lec.htm>
- Griffin, G. A. (1983). Implications of Research for Staff Development Programs, *Elementary School Journal*, 83(4)
- Grindrod M. (1974). “*Manpower Planning*” In Naylor R & Torrington (Ed), *Administration of Personnel Policies*. Farborough: Gower Press.
- Gronlund, N. E. (2000). *How to Write and Use Instructional Objectives 6th Edition*. Upper Saddle River, N.J.
- Grundy, S. and Robison, J. (2004). Teacher Professional Development: themes and trends in the recent Australian experience. In Day, C. and Sachs, J. (Eds) *International Handbook on the Continuing Professional Development of Teachers*. Berkshire: Open University Press.
- Guralnik, D. (Ed.). (1986). *Webster's New World Dictionary (2nd Ed.)*. Cleveland, OH: Prentice Hall Press.
- Gutek, G. L. (1988). *Philosophical and Ideological Perspectives on Education*. Englewood Cliffs, N.J. Prentice Hall.
- Haberman, M. (1986). Licensing teachers: Lessons from other professions. *Phi Delta Kappan*, 67, 719–722. EJ 345 225.
- Haensly, P. A (2001). Teachers of gifted children, Serial publication, *Roeper Review*, June 2001, Vol.23 Issue 4, p189, 1p.
- Haertel, E. H. (1990). Performance tests, simulations, and other methods. In J. Millman & L. Darling-Hammond (Eds.), *The new handbook of teacher evaluation: Assessing: elementary and secondary school teachers* (pp.278–294). Sage: Newbury Park, CA.

- Haertel, E. H. (1991). New forms of teacher assessment. In G. Grant (Ed.), *Review of research in education*, Vol. 17 (pp.3–29). Washington, D.C.: American Educational Research Association.
- Halinen, I. (1995). The Effective School: Research Results and Practical Experiences. In Hämäläinen, K., Oldroyd, D. & Haapanen, E. (Eds). *Making School Improvement Happen*. Helsinki: Department of Teacher Education, University of Helsinki and Vantaa Institute of Continuing Education.
- Hall, G. & Loucks, S. (1981). Program Definition and Adaptation, *Journal of Research and Development in Education* Vol. 14(1), pp. 46-58
- Hardré, P. L. & Reeve, J. (2003). A Motivational Model of Rural Students' Intentions to Persist In, Versus Drop Out, of High School, *Journal of Educational Psychology*, Vol. 95, 2, pp. 347–356.
- Hartley, J. F. (1994). "Case Studies in Organisational Research." In: C. Cassell & G. Symon (Eds), *Qualitative Methods in Organisational Research: A Practical Guide*. London: Sage, pp. 208–229.
- Hall, D. (1996). How Useful is the Concept of Total Quality Management to the University of the 1990s? *Journal of Further and Higher Education* 20 (2), Summer.
- Haron, I. (1995). Towards a Strategy for Improving the Quality of Primary Education in Developing Countries. In Zajda, J. & Bacchus, K. (Eds) *Excellence and Quality in Education*. Albert Park: James Nicholas Publishers.
- Harris, R. (1991). *Some Ideas for Motivating Students*. <<http://www.virtualsalt.com/motivation/htm>>
- Harris, A. & Muijs, D. (2005). *Improving Schools Through Teacher Leadership*. Berkshire: Open University Press.
- Hax, A. C. & Majluf, N. S. (1996). *The Strategy Concept and Process, A Pragmatic Approach*. Upper Saddle River, NJ: Prentice Hall.
- Heap, J. L. (1992b). Seeing Snubs: An Introduction to Sequence Analysis of Classroom Interaction. *Journal of Classroom Interaction* Vol. 27 issue 2, pp. 23–28.
- Hegarty, S. (2000). Teaching as a knowledge-based activity, *Oxford review of education*, Sep2000, Vol. 26 Issue ¾, p 451, 15p, 4 diagrams.
- Hammersley, M. (1995). *The politics of social research*. London: Sage.
- Hammersley, M. (1995). 'On feminist methodology', in Hammersley, M. *The Politics of Social Research*, London: Sage.
- Herbert, P. L. (1981). *Motivation: Theory and Research*. Belmont, CA: Wadsworth Publishing.
- Herzberg, F. (1971). *The Motivation-Hygiene Concept and Problem of Manpower*. In French, W.L & Hellriegel, D. *Personnel Management and Organization Development: Field in Transition*. Houghton Mifflin Company, Boston; 145–147.
- Herzberg, F., Mausner, & Snyderman (1959). *The Motivation to Work*. New York.
- Heylighen, F & Joslyn, C (Nov. 1 1992). *What is Systems Theory?* <<http://pespmc1.vub.ac.be/SYSTHEOR.html>>
- Hick, M. (n.d) *Quality Management*. <<http://www.eagle.ca/~mikehick/quality.html>>
- Hight, G. (1963). *The Art of Teaching*. London: Methuen & Co.
- Hill, C. W. & Jones, G. R. (1992). *Strategic Management: An Integrated Approach*. Boston, MA: Houghton Mifflin Company

- Hopkins, D. (1984). What is School Improvement? In D. Hopkins, David & M. Wideen (Eds.). *Alternative Perspectives on School Improvement*. London: Falmer Press.
- Hopkins, D. (1987a). School Based Review and Staff Development. In Wideen, M. F. & Andrews, I. (Eds.). *Staff Development for School Improvement*. London: Falmer press.
- Hopkins, D. (1987b). Implication for School Improvement at the Local Level. In D. Hopkins (Ed.). *Improving the quality of schooling*. London: Falmer Press.
- Hopkins, G. W. (2000). Quantitative Research Design. *Sportscience 4(1)*, <<http://www.sportsci.org/jour/0001/wghdesign.html>>
- Hoy, W. K. & Miskel, C. G. (1987). *Educational Administration; Theory, Research and Practice*. 3rd Ed. New York: Random House.
- Hämäläinen et al. (Eds) (2000). “*Consensus or compromise: school-based curriculum development in comprehensive schools in Finland*”. University of Jyväskylä Department of Teacher Education. Research 68.
- Hämäläinen, S., & Häkkinen K. (1995). “*Teachers and students as active learners*”. A case study of one Finnish school’s method of defining, interpreting and operationalizing the term “*Active Learning*”. University of Jyväskylä. Department of Teacher Education. Research 58.
- Hämäläinen, S. & Jokela, J. (Eds) (1993). *Summary of Case Studies: Quality in Teaching*. University of Jyväskylä, Department of Teacher Education. Research 54.
- Huck, S. & H. Sandler (1979). *Rival hypotheses: Alternative interpretations of data based*. New York : Harper & Row/Toulmin.
- Huebner, D. (1996). Teaching as Moral activity. *Journal of Curriculum and Supervision*, 11(3), pp. 267–275.
- Hurn, Christopher J. (1995). *The limits and possibilities of Schooling: An introduction to the sociology of education* (2nd Ed.). Boston: Allyn and Bacon.
- Hustler, D. & McIntyre, D. (Eds) (1996). *Developing Competent Teachers: Approaches to Professional Competence in Teacher Education*. London: David Fulton Publishers
- Hytönen, J. (1996). The Development of Modern Finnish Teacher Education. In Tella, S. (Ed) *Teacher Education in Finland; Present and Future Trends and Challenges*. Hakapaino Oy. Helsinki.
- ICMBA (2004). *SWOT Analysis*. *Journal of Internet Center for Management and Business Administration*. <<http://www.netmba.com/strategy/swot/>>
- Idu, A. P. (1997). Resource Management. In Ogbonnaya, N. I. & Ajagbaonwu, C. L. (Eds). *Major Concepts in Educational Administration*. Onitsha: Cape Publishers International.
- Idu, A. P. (1997). Management of Educational Resources in Technical Education in the 6–3–3–4 System of Education. In Gbonnaya, N. I. & Ajagbaonwu (Eds). *Major Concepts and Issues in Educational Administration*. Onitsha: Cape Publishers.
- Igwe, S. O. (1990). *Professional Handbook for Teachers*. Owerri: NUT and New Africa Publishing Company.
- Ihebuzor, N. (1992). *Language curriculum development in Nigeria: issues, problems and prospects*. Lagos, Federal Ministry of Education, ICNPE. (National School Curriculum Review conference proceedings.)

- Ikuenobe, A. O. (1980). "Staff Evaluation" In Aghenta, J. A. and Arebayi, E. A. (Eds). *Towards Efficiency in school Administration*. Benin City: University of Benin Occasional Publishers Vol. 1. No. 1.
- Ismat, A., (1992). *Professionalizing Teaching: Is There a Role for Professional Development Schools?* ERIC Clearinghouse on Teacher Education Washington DC.
- Jaeger, R. M., (Ed) (1988). *Complementary Methods for Research in Education*. American Educational Research Association. Washington, DC.
- Jarvinen, P. (2001). *On Research Methods*. Tampere: Opinpajan Kirja.
- Jamie, T., (1988). "The Teacher and the Trouble maker" Reprinted from *BALANCE* Vol. 8, No 6. A publication of Bob Jones University. Used by permission. All rights reserved.
- Janneck, M. & Bleek, W. (2004). *Project-based Learning with CommSy*. Retrieved on the 14th of October 2004. <<http://newmedia.colorado.edu/cscl/104.html>>
- Jarvie, I. C. (1973). *Functionalism*. Minneapolis: Burgess Publishing Company
- Javis, P. (1983). *Professional Education*. London: Croom Helm
- Johnson, S. M. (1990). *Teachers at work*. New York: Basic Books.
- Johnson, T. J (1972). *Profession and Power*. London: Macmillian.
- Kamwendo, G. H. (2004). *Language Policy in Health Services: A Sociolinguistic Study of a Malawian Referral Hospital*. Publications of the Institute for Asian and African Studies 6, University of Helsinki, Finland.
- Kaplan, A., (1973). *The conduct of Inquiry*. Intertext Books, Aylesbury.
- Kaplan, R. G. (1991). Teachers beliefs and Practices: A square peg in a square hole. In R. G. Underhill (Ed), *Proceedings of the PME-NA 13 Conference, Vol. pp. 199–125*. Blacksburg, VA: Virginia Tech.
- Katz, L.G. (1988). *What should young children be doing?* American Educator, New York: NY.
- Katz, R. (1974) *Skills of an Effective Administrator*. Harvard Business Review 52. 90–102.
- Kautto-Koivula, K. (1993). *Degree-Oriented Professional Adult Education in the Work Environment. A Case Study of the Mian Determinants in the management of a Long-term Technology Education Process*. Unpublished PhD dissertation, University of Tampere, Finland.
- Kautto-Koivula, K. (1996). Degree-Oriented Adult Education in the Work Environment. In Ruohotie, P & Grimmer, P. P. (Eds) *Professional Growth and Development: Direction, Delivery and Dilemmas*. Canada and Finland: Career Education Books. Pp. 149–188.
- Keen, K. (1991). Competence—What is it and how can it be Developed. Proceedings of Ette Conference 1991, pp. 61–77.
- Keeves, J. P., (Ed) (1997). *Educational Research, Methodology, and Measurement: An International Handbook*. Second Edition. Pergamon.
- Kelchtermans, G. (2004). CPD for Professional Renewal: moving beyond knowledge for practice. In Day, C. and Sachs, J. (Eds). *International Handbook on the Continuing Professional Development of Teachers* pp. 3–32. Berkshire: Open University Press.
- Kelly, J. (1974). *Organizational Behaviour*. Rev. Ed. Homewood : Richard D. Irwin

- Kemjika, O. G. (1995). *Theories and Practice of Career Development In Nigerian Education*. Onitsha: Fabson Printing and Publishing Co. Ltd.
- Kerlinger, F. N. (1973). *Foundation of Behavioral Research*. New York; Holt Rinehart and Winston. N. Y.
- Kerlinger, F. N. (1979). *Behavioral Research. 2nd Ed.* New York: Holt Rinehart and Winston. N. Y.
- Kerlinger, F. N. (1986). *Foundation of Behavioral Research*. New York; Holt Rinehart and Winston. N. Y.
- Kerlinger, F. N., (1969). *Foundation of Behavioral Research*. Holt, Rinehart & Winston, N. Y.
- Kerry, T. & Wilding, M. (2004). *Effective Classroom Teacher: Developing the Skills you Need in Today's Classroom*. London: Pearson Education.
- Kitwood, T. M., (1977). *Values in Adolescent Life. Towards a critical Description*. Unpublished PhD dissertation, University of Bradford.
- Kleinman A. (1988). *The Illness Narratives*. New York: Basic Books.
- Kirschner, P. A., & Thijssen, J. (2005). Competency Development and Employability. *LL in E longlife Learning in Europe, Vol. X* issue 2, pp. 70–75.
- Koch, J. & Burghardt, M. D. (2002). Design Technology in elementary School: A Study of Teacher Action Research. *Journal of Educational Technology*, Vol. 13, No 2.
- Kuykendall, C. (1992). *From Rage to Hope: Strategies for Reclaiming Black and Hispanic Students*. Bloomington, IN: National Education Service.
- Ladebo, O. J. (2005). Effects of Work-related Attitudes on the Intention to Leave the Profession: An Examination of School Teachers in Nigeria. *Educational Management Administration & Leadership*, Vol. 33, No. 3, pp. 355–369.
- Lancaster, H. M. (March 31, 1999). *A Major Force in Economic Development: A Challenge for the North Carolina Community College System*. National Institute for Leadership & Institutional Effectiveness (NILIE) Conference keynote address (Asheville, NC, March 29–31, 1998).
- Larkin, J. H. (1980). Teaching Problem Solving in Physics: The psychological Laboratory and Practical Classroom. In Tuma, D. T. & Reif, F. (Eds) *Problem Solving and Education: Issues in Teaching and Research*. N.J: Erlbaum.
- Law, S. and Clover, D. (2000). *Educational Leadership and Learning: Practice, Policy and Research*. Buckingham: Open University Press.
- Lawal, H. S. (2003). Teacher Education and the Professional Growth of the 21st Century Nigeria Teacher. *The African Symposium Vol. 3* No.2, July 2003.
- Lawn, M. and Ozga, J. (1988). The Educational Worker? A Reassessment of Teachers. In J. Ozga (ed). *Schoolwork: Approaches to the Labour Process of Teaching*, Open University Press: Milton Keynes.
- Lawn, M (1989). Being Caught in Schoolwork: The Possibilities for Research in Teachers' work. In Carr, W. (Ed) *Quality in Teaching: Argument for a Reflective Profession*. Lewes: Falmer Press.
- Leinhart, G. (1991). Evaluating The New Handbook of Teacher Evaluation. *Educational researcher*, 20 (6), 23–25.
- Leino, J. (1996). Developing and Evaluation of Professional Competence. In Ruohotie, P & Grimmett, P. P. (Eds) *Professional Growth and Development: Direction,*

- Delivery and Dilemmas*. Canada and Finland: Career Education Books. Pp. 71–90.
- Leiviskä, E. (2001). *Creative Interdisciplinary: Engineering, Business, and Art & Design Students' Collaboration and Learning in the International Design Business Management*. Department of Teacher Education University of Helsinki Ph.D. Dissertation.
- Lerner, A. L. (1999). *A Strategic Planning Primer for Higher Education. Brief History of Strategic Planning*. <http://www.des.calstate.edu/strategic.html>>
- Lepper, M. R. (1988). Motivational Considerations in the Study of Instruction. *Cognition and Instruction Vol. 5, 4*, pp.289–309.
- Levine, M. (1988). Introduction. In M. Levine (Ed.), *Professional practice schools: Building a model* (pp. 1–25). Washington, DC: American Federation of Teachers ED 313 344.
- Lewis, L. J. (1965). *Society, School and Progress in Nigeria*. Oxford; Pergamon.
- Lloyd, J. P. (1980). *Handbook on Agricultural Education in Public Schools*, Illinois; The Interstate Printers & Publishers Inc.
- Locke, E. A. (1970). What is Job Satisfaction? A Theoretical Analysis. *Organizational Behavior and Human Performance 5*, 485–500.
- Locke, E. A. (1976). *The Nature and Causes of Job Satisfaction*. In Dunette, M. *Handbook of Industrial and Organizational Psychology*. Chicago: Rand-McNally.
- Locke, E. A. (1983). The nature and causes of job satisfaction. In Dunnette, M. D. (Ed.), *Handbook of Industrial and Organizational Psychology*. New York: John Wiley and Sons.
- Lockheed, M.E., Verspoor A.M., (1990). *Improving Primary Education in Developing Countries*. New York: Oxford University Press.
- Loucks, S. & Zigarmi, P (1981). Effective Staff Development, *Educational Considerations, Vol. 8(1)*, pp. 4–8
- Lumsden, L. S. (1994). Student Motivation to Learn. *Eric Clearinghouse on educational Management*.
- Maehr, M. L. & Midgley, C. (1991). Enhancing Student Motivation: A Schoolwide Approach. *Educational Psychologist Vol. 26, 3 & 4*, pp.399–427.
- Marija, J. N. (1997). *SPSS 6.1 Guide to Data Analysis*. New Jersey: Prentice Hall.
- Marinho, A. O. (2000). *Education, the status of education in Nigeria*. Conference on Education.
- Marinho, H. E. G. (1992). *Language study and the Nigerian school curriculum*. Lagos, Federal Ministry of Education, ICNPE. (National School Curriculum Review conference proceedings.)
- Marjoribanks, K. (Ed) (1991). *The foundations of students' learning*: Pergamon press.
- Marshall, H. H. (1987). Motivational Strategies of Three Fifth-Grade Teachers. *The Elementary School Journal Vol. 88, 2*, pp. 135–50.
- Maxwell, J. A., (1996). *Qualitative Research Design: An Interactive Approach*. Saga Publications, Inc.
- May, T. S. and Flack J. A. (2001). *Journal of environmental education*, summer 2001, Vol. 32 issue 4, pp. 5–8.
- Maykut, P. & Morehouse, R. (1994). *Beginning Qualitative Research: A Philosophic and Practical Guide*. London: Palmer Press.

- MacBeath, J. & Mortimore, P. (2001). School Effectiveness and Improvement: The Story so Far. In MacBeath, J. & Mortimore, P. (Eds) *Improving School Effectiveness*. Buckingham: Open University Press.
- McCabe, J. et al. (1975). *Planning the Location of Schools*, UNESCO Press.
- McCormick, P (1996). There's no substitute for good teachers. *U. S Catholic*, Jun96, Vol.61 Issue 6, pp. 46–49.
- McKeachie, W. J. (1999). *Teaching Tips: Strategies, Research, and Theory for College and university teachers*. Boston: Houghton Mifflin.
- McKinley, B. E. (2003). The Basic Assumption. A discussion on the nature of truth. *Written and Published by Brian Elroy McKinley*.
<<http://www.elroy.net/ehr/basicassumption.html>>
- Meade, E. J., Jr. (1991). Reshaping the clinical phase of teacher preparation. *Phi Delta Kappan*, 72, 666–669. EJ 425 517
- Medley, D. M. (1982). Teacher competency testing and the teacher educator. Charlottesville, VA: *Association of Teacher Educators and the Bureau of Educational Research*, University of Virginia.
- Medley, D. M., & Shannon, D.M. (1994). Teacher evaluation. In T. Husen & T.N. Postlethwaite (Eds.), *The International encyclopedia of education*, 2nd Ed., Vol. 10, pp.6015–6020. Oxford: Pergamon.
- Mercer, N. & Fisher, E. (1998). How Do Teachers Help Children to Learn: An Analysis of Teachers' Interventions in Computer-Based Activities. In Faulkner, D., Littleton, K. & Woodhead, M. (Eds) *Learning Relationships in the Classroom*. London & New York: Routledge & Open University Press.
- Messick, S. (1988). The Once and Future Issues of Validity: Assessing the Meaning and Consequences of Measurement. In Wianer, H. & Braun, W. (Eds) *Assessing in transition*. Pergamon.
- Messick, S. (1994). The interplay of evidence and consequences in the validation of performance assessments. *Educational Researcher*, 23 (2), 13–23.
- Meyer, T. (1998). The Definition and Scope of Human Resource Management Standards Generating Body: Human Resources Management & Practices (SGB: HRMP) *Approved at a plenary meeting of stakeholders on 27 September 1999*.
<http://www.hrs.gb.org.za/HR_scope_and_definition.html>
- Mgbodile, T.O. et al (1986). Educational Administration and Supervision. *Institute of Education*, U.N.N.
- Miles, M. B and Huberman, A. M. (1994). *Qualitative data analysis*. Thousand Oaks: Sage Publications.
- Ministry of Education SINGAPORE, (2003). *Gifted Education Programme*.
- Mintzberg, H. (1979). *The Structuring of Organizations*. Englewood Cliffs, N.J. Prentice Hall.
- Miranda, E. & Landmann, R., (2001). Instructional system, *Roeper review*, Jun2001, Vol.23 Issue 4, pp. 230–235.
- Mishler E. (1991). *Research Interviewing: Context and Narrative*. Harvard University Press, Cambridge, MA.
- Mitchem, K. J., Young, K. R., West, R. P., & Benyo, J. (2001). CWPASM: A Classwide Peer-Assisted Self-Management Program for General Education Classrooms. *Education and Treatment of Children*. Vol. 24 (2) pp.111–140.

- Möhle, H. 1979. The German Democratic Republic (GDR)—Staff Development in a Socialist Setting. In David C. B. Teather ed. *Staff Development in Higher Education*. New York: Kogan Page.
- Mortimore, P., Sammons, P, Stoll, L. Lewis, I. & Ecob, R. (1988). *School Matters: The Junior Years*. Somerset: Open Books.
- Moss, P. A. (1994). Can there be validity without reliability? *Educational Researcher*, 23 (2), 5–12.
- Muijs, D. and Reynolds, D. (2001). *Effective Teaching*. London: Paul Chapman.
- Munro-Faure, L. and Munro-Faure, M. (1992). *Implementing Total Quality Management*. London: Financial Times and Pitman Publishing.
- Munro-Faure (1992). *Implementing Total Quality Management*. Pitman.
- Mouly, G. J. (1978). *Educational research: the art and science of investigation*. Heinemann. Boston: Allyn and Bacon.
- Murphy, M. D. (n.d) *Functionalism: Anthropological Theories*. Department of Anthropology College of Arts and Sciences the University of Alabama
<<http://www.as.ua.edu/ant/Faculty/murphy/function.htm>>
- Naylor, J. (1999). *Management*. Harlow: Prentice hall.
- Niederhauser, J. S. (1997). Motivating Learners at the South Korean University. *Forum*. Vol. 35, No. 1. page 8.
- Niemi, H. (1996). Do teachers' have a Future? Conditions for Teachers' Growth. In Ruohotie, P & Grimmer, P. P. (Eds) *Professional Growth and Development: Direction, Delivery and Dilemmas*. Canada and Finland: Career Education Books.
- Nwagwu, N. A. (1990). *The concept of Minimum Standards in Education*. Second Nathan Ejiogu Memorial Lecture, Nsukka, University of Nigeria.
- Nwagwu, N. A. (1997). The Environment of Crises in the Nigerian Education System. *Comparative Education*, Vol.33 Issue 1, pp.87–95.
- Nworgu, B. G. (1991). *Educational Research: Basic issues and methodology*. Ibadan: Wisdom Publishers.
- Odor, G. O (1995). *Administration of Schools in Nigeria, Theory and Practice*. Benin-City: Monose Amalgamates.
- OECD (1992). *The OECD International Education Indicators—A Framework for Analysis*. Paris: OECD.
- OECD (1989). *Schools and Quality: An International Report*. Paris: OECD.
- OECD (1998). *Staying Ahead: In-service Training and Teacher Professional Development*. Paris: OECD.
- Okunoye, A. O. (2003). *Knowledge Management and Global Diversity: A Framework to Support Organisations in Developing Countries*. PhD Dissertation University of Turku Department of Information Technology.
- Okwubunka, S. (1994). *Career Strategies for Youths*. Makurdi: Onaivi Printing and Publishing Co.
- Olaniran, B. A. (2001). Africa in the 21st Century: A Case for Innovation Use of Technology. In Adisida, O. & Oteh, A. (Eds). *African Voices, African Visions*. Stockholm: Elanders Gotab.

- Oloolube, N. P. (1991). *Factors responsible for the choice of career among secondary school students in Ahoada Local Government area of Rivers State of Nigeria*. Unpublished B.Sc. (Ed) Project, University of Port Harcourt, Nigeria.
- Oloolube, N. P. (2000). *An appraisal of workers perception of academic and professional training on Managers' job effectiveness in the oil exploration industry, A case of Dec oil and Gas*. Unpublished PGD thesis, Federal University of Technology Owerri, Nigeria.
- Oloolube, N. P. (1997). *An appraisal of teachers' perception of academic and professional training on teachers' job effectiveness in secondary schools in Ndokwa East Local Government Area of Delta state of Nigeria*. Unpublished Masters' degree thesis, (M. Ed). Delta State University Abraka, Nigeria.
- Oloolube, N. P. (2004). Professionalism: An Institutional Approach to Teachers' Job Effectiveness in Nigerian Schools. Paper Presented at the Seventh International LLinE Conference, September 23–25, 2004.
- Oloolube, N. P. (2005). Benchmarking the Motivational Competencies of Academically Qualified Teachers and Professionally Qualified Teachers in Nigerian Secondary Schools. *The African Symposium, Vol. 5, No. 3*. pp. 17–37.
- Olugbemiro, J. (2000). TEACHERS—Training of—China—Hong Kong; PERCEPTION -- Testing; EXPERTISE *Educational Research, Vol. 42 Issue 3*, pp. 287–309, 22p,
- Olusegun, A. S. (2001). Selecting a Quantitative or Qualitative Research Methodology: An Experience. *Educational Research Quarterly, Vol. 26. 1*, pp 3–10.
- Ossai, G. A (2004). *Principals and Teachers Strategies for Motivation Teachers in Secondary Schools in Delta North Senatorial Districts*. PhD disatation, Delta State University, Abraka, Nigeria.
- Ou Yongsheng, (1989). *Qualitative Research*. Normal University: Shuyuan Co.
- Owens, R. G. (2004). *Organizational Behavior in Education: Adaptive Leadership and School Reform*, 8th edition. Boston: Pearson Education.
- Ozigi, A. O. (1982). *A Handbook on School Administration and Management*. Ibadan: Macmillan Publishers.
- Palmquist, M., (1993). (Ed). *Colorado State University. An Introduction to Content Analysis*. <<http://writing.colostate.edu/references/research/content/contrib.cfm>>
- Parelius, A. P. & Parelius, R. J. (1978). *The Sociology of Education*. Englewood Cliffs, N.J. Prentice Hall.
- Parsons, T. (1959). "The School as a Social Class System and Some of its Functions in American Society", *Harvard Educational Review* 29 (4): 297–318.
- Peretomode, V. F. (1991). *Educational Administration: Applied concept and Theoretical Perspective*. Lagos: Joja Educational Research and Publishers.
- Peretomode, V. F. (Ed) (1995). *Introduction to Educational Administration Planning and Supervision*. Lagos: Joja Educational Research and Publishers.
- Peretomode, V. F. (1991). Recent Changes in Primary School Administration and Financing in Nigeria. In C. E. Okonkwo et al. (Eds) *Primary Education in Nigeria: Issues & Administration*. Owerri; International University Press
- Peretomode, V. F. (1992). *Education Law. Principles, Cases and Materials on Schools*. Owerri; International University Press.

- Pillai, R. (2001). Teachers must engage is active capacity building. *UNESDOC: Online UNESCO documents*.
- Poetter, T. S. (1997). *Voices of Inquiry in Teacher Education. Contributors*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Pole, C. & Lampard, R. (2002). *Practical Social Investigation. Qualitative and Quantitative Methods in Social Research*. Harlow: Printice Hall.
- Postholm, M. B., Petterson, T., Flem, A. & Gudmundstottir, S. (2002). *The Teacher's Role when Pupils Use ICT as a Mediating Artefact in Project Work*. <<http://www.psy.vu.nl/isocrat2002/postholm.pdf>>
- Pratte, R., & Rury, J. L. (1991). Teachers, professionalism, and craft. *Teachers College Record*, 93, 59–72. EJ 438 554
- Perry, P. (1994). Defining and Measuring the Quality of Teaching. In Green, D. (Ed). *What is Quality in Higher Education?* Bristol: SRHE & Open University Press.
- Probst, G. J. B. and Buchel, B. S. T. (1997). *Organizational Learning: The Competitive Advantage of the Future*. London: Prentice Hall
- Punch, K. F. (1998). *Introduction to social research: Quantitative and qualitative approaches*. Thousand Oaks, CA: Sage
- Punch, K. F. (2000). *Developing effective research proposals*. Thousand Oaks, CA: Sage.
- Qi Xuehong, (2002). Qualitative research: A new research paradigm, *Chinese Education and Society*, Vol. 35, no. 2, pp: 47–54.
- Questia (n.d) Teacher Education. *The World's Largest Online Library*. Retrieved on September 20th 2004. http://www.questia.com/Index.jsp?CRID=teacher_education&OFFID=se1&KEY=teacher_education
- Raffini, J. (1993). *Winners Without Losers: Structures and Strategies for Increasing Student Motivation to Learn*. Boston: Allyn and Bacon.
- Rawls, W. J., & Fatunsin, L. O. (1985). Importance and Utilization of Professional Education Competency areas Needed by Vocational Educators. *Journal of Vocational Educational Education Research*, Vol. (1), pp. 59–62.
- Ready, R.K. (1967). *Administrative Job Issues and Dilemma*. New York: McGraw-Hill Book Company.
- Reichardt, C. S. & Cook, T. D. (Eds.) (1979) *Qualitative and quantitative methods in evaluation*. Beverly Hills, CA: Sage.
- Reid, K., Hopkins, D., & Holly, P. (1987). *Towards the Effective School*. Oxford: Basil Blackwell.
- Reiger, R. C. & Stang, J. (2000). Education productivity; Labor productivity; Motivation (psychology), *Employees—Training of. Education*, Vol.121 Issue 1, p. 62. 3p.
- Reissman C. (1993). *Narrative Analysis*. London: Sage.
- Reynolds, D. et al. (2000). Creating World Class Schools: What have we Learned? In Reynolds, D., Creemers, B., Stringfield, S., Teddlie, C. & Schaffer, G. (Eds) *World Class Schools: International Perspectives on School Effectiveness*. London: RoutledgeFalmer.
- Reynolds, D. et al. (1994). *Advances in School Effectiveness Research and Practice*. London: Elsevier Sciences.

- Reynolds, D., & Packer, A. (1992). School effectiveness and school improvement in the 1990's. In, D. Hopkins, & D. Reynolds (Eds.), *School Effectiveness*, pp.171–188. New York: Cassell
- Robertson, I. T. (1991). *An Evaluation of Outdoor Development as a Management Development Tool*. MBA Dissertation. University of Edinburgh.
- Rossman, G. B., and Rallis, S. F. (1998). *Learning in the Field. An Introduction to Qualitative Research*. Thousand Oaks, CA: Sage.
- Rousseau, H. J. (1962). "Training college life and learning." *Teacher Education*. 2(3), P. 211. Sage.
- Rudduck, J., & Flutter, J. (2004). *How to Improve your School*. London: Continuum
- Ruohotie, P & Grimmett, P. P. (Eds) (1996). *Professional Growth and Development: Direction, Delivery and Dilemmas*. Canada and Finland: Career Education Books.
- Sammons, P., Hillman, J., & Mortimore, P. (1997). Key Characteristics of Effective Schooling: A review of School effectiveness. In White, J. & Barber, M. (Eds) *Perspectives on School Effectiveness and School Improvement*. London: Institute of Education University of London.
- Sanders, J. R., Hills, J. R., Nitko, A. J., Merwin, J. C., Trice, C., Dianda, M. & Schneider, J. (1990). *Standards for Teachers Competence in Educational Assessment of Students*. American Federation of Teachers, National Council on Measurement in Education, and National Education Association.
- Sander, et al. (2000). Teaching Educational test and measurements. *Studies in Higher Education*. Vol. 25 issue 3, p. 309, 15p, 8 charts.
- Sarangi, S. (2002). "Discourse Practitioners as a Community of Interprofessional Practice: Some Insights from Health Communication Research." In: C. Candlin (Ed) *Research and Practice in Professional Discourse*. Hong Kong: City University of Hong Kong Press
- Scheerens, J. (2000). *Fundamentals of Educational Planning: Improving School Effectiveness*. Paris: UNESCO.
- Scheerens, J. (1994). Conceptual Frameworks on School Effectiveness: Rational Control Versus Choice. In D. Reynolds et al. (Eds.). *Advances in School Effectiveness Research and Practice*. Pergamon.
- Scheerens, J. (1992). Process Indicators of School Functioning. In OECD. *The OECD International Education Indicators: A Framework for Analysis*. Paris: OECD.
- Scheerens, J. & Creemers, B. P. M. (1989). Conceptualizing School Effectiveness. *International Journal of Educational Research*, Vol. 13, Issue 7, pp. 691–706.
- Schmuck, R. A. & Runkel P. J. (1985). *The Handbook of Organization Development in School* 3rd edition. Mayfield Publishing.
- Schoderbek, P. P.; Cosier, R. A.; & Aplin, J. C. (1988). *Management*. San Diego: Harcourt Brace Jovanovich Publishers.
- Schuler, R. S. & Zubritzky, R. (1982). Personnel and Human Resources Management Research, Practice and Teaching. An applied Approach. In Freedman, R. D. et al. *Management Education Issues in Theory, Research and Practice*. NY: John Wiley and Sons Publishers.
- Scott, J. (1990) *A Matter of Record: Documentary Sources in Social Research*. Cambridge: Polity Press.

- Scriven, M. (1967). The methodology of evaluation. In R.W. Tyler, R.M. Gagne, & M. Scriven (Eds.), *Perspectives of curriculum evaluation*. American Educational Research Association Monograph Series on Curriculum Evaluation, No. 1 (pp.39–83). Chicago: Rand McNally.
- Scriven, M. (1990). *Teacher selection*. In J. Millman & L. Darling-Hammond, *The new handbook of teacher evaluation: Assessing elementary and secondary school teachers*, (pp.76–103). Newbury Park, CA: Sage.
- Scriven, M. (1996). *Assessment in teacher education: Getting clear on the concept*. *Teaching and Teacher Education*, 12, 443–450. Newbury Park, CA: Sage
- Shacklock, G (1998). Teacher conduct of life. *Asia-Pacific Journal of teacher education*, Nov98, Vol. 26 Issue 3, p177, 13p.
- Shacklock, G and Smyth, J (Eds), (1998). *Being Reflexive in Critical Educational and Social Research*. London: Falmer Press.
- Shavelson, R. J. (1976). “Teachers Decision Making: The psychology of Teaching Methods” *The seventy Fifth year book of National Society for the Study of Education, Part 1*.
- Short, E. C. (1984) Gleanings and Possibilities. In Short, E. C. (Ed) *Competence: Inquiries into its Meaning and Acquisition in Educational Settings*. Lanham, MD: University Press of America.
- Shulman, L. S. (1987). Knowledge and teaching: Foundation of New reform. *Harvard Educational Review*, 57, pp. 1–22.
- Sibanda, D. (1983). “The Zimbabwe integrated teacher education course (ZINTEC).” In Greenland, J. (ED). *In-service training of primary teachers in English speaking Africa*. London: Macmillan.
- Silverman, D. (2001). *Doing Qualitative Research: A Practical Handbook*. London: Sage.
- Skinner, B. F. (1953). *Science and Human Behavior*. New York: Macmillan.
- Smith, E. E., (1990). “The Whole Child” Reprinted from BALANCE Vol. 10 , No 7. A publication of Bob Jones University. Used by permission. All rights reserved.
- Soder, R. (1991). *The rhetoric of teacher professionalization*. In J. I. Goodlad, R. Soder, & K. A. Sirotnik (Eds.), *The moral dimension of teaching*, (pp. 35–86). San Francisco: Jossey-Bass. ED 337 443
- Sofolahan, J. S. (1991). *Chairman’s Report to the National Policy on Education Implementation Committee* (Lagos, Federal Ministry of Education).
- Sparks, G. M. (1993). ‘Synthesis of research on staff development for effective teaching’, *Educational Leadership*, Vol. 41, (3), 65–72.
- Stiggins, R. J. (1986). Teacher evaluation: Accountability and growth—different purposes. *NAASP Bulletin*, 70 (490). 51–58.
- Stiggins, R. J., & Duke, D. L. (1990). *The case for commitment to teacher growth: Research on teacher evaluation*. New York: State University of New York Press.
- Stipek, D. (1988). *Motivation To Learn: From Theory To Practice*. Englewood Cliffs, New Jersey: Prentice Hall.
- Stoll, L. & Fink, D. (1996). *Changing our Schools: Linking School effectiveness and School Improvement*. Buckingham: Open University Press.

- Stoll, L. & Mortimore, P. (1997). School Effectiveness and School Improvement. In White, J. & Barber, M. (Eds) *Perspectives on School Effectiveness and School Improvement*. London: Institute of Education University of London.
- Stones, E. (1966). *An Introduction to Educational Psychology*. Ibadan: Spectrum Books.
- Stoof, A. (2005). *Tools for the identification and description of competencies*. Heerlen: Open Universiteit Nederland
- Strauss, A. L. (1987). *Qualitative Analysis for Social Scientists*. Cambridge: Cambridge University Press.
- Strike, K. A. (1990). The ethics of educational evaluation. In J. Millman & L. Darling Hammond (Eds.), *The new handbook of teacher evaluation: Assessing elementary and secondary school teachers*, (pp.175–190). Newbury Park, CA: Sage.
- Stringfield, S. (1994). The Analysis of Large Data Bases in School Effectiveness Research. In Reynolds et al. *Advances in School Effectiveness research and Practice*. Willington: Elsevier Science.
- Sung Ik Park. (2000). *The Theory and Practice of the Teaching-learning Method (I)*. Seoul: Education & Science Publishing Co.
- Teacher Student Union of Finland -SOOL (n.d) Special-interest organisation of all teacher students in Finland. Last updated: June 24, 2004. Retrieved 30th Of September 2004 <<http://www.sool.fi/english.html>>
- Teather, D. C. B. (1979). *Introduction*. In David C. B. Teather ed. *Staff Development in Higher Education*. New York: Kogan Page.
- Teddle, C. et al. (2002). North America—The United States. In Reynolds, D., Creemers, B., Stringfield, S., Teddle, C. & Schaffer, G. (Eds) *World Class Schools: International Perspectives on School Effectiveness*. London: RoutledgeFalmer.
- Teddle, C. and Reynolds, D. (2000). *The International Handbook of School effectiveness Research*. London: Falmer Press.
- Tella, S. (Ed) (1996). *Teacher Education in Finland. "Present and Future Trends and challenges"*. Helsinki: Hakapaino Oy.
- Tharp, R. G & Gallimore, R. (1988). *Rousing Minds to Life. Teaching, Learning and Schooling in Social Context*. Cambridge: Cambridge University Press.
- Tharp, R. & Gallimore, R. (1998). *A Theory of Teaching as Assisted Performance*. In Faulkner, D., Littleton, K. & Woodhead, M. (Eds) *Learning Relationships in the Classroom*. London & New York: Routledge & Open University Press.
- The New Curriculum (2003). *Teaching Insight and Modes of Teaching*. An online Teacher web pages <<http://www.newcurriculum.com/2003/ed9-17.htm>>
- Toliver, K. (1993). The Kay Toliver mathematics program. *The Journal of Negro Education*, 62 (1).
- Tomlinson, H (2004). *Educational Leadership: Personal Growth for Professional Development*. London: Sage Publications.
- Tuckman, B.W(1972). *Conducting educational research*. New York: Harcourt Brace Jovanovick.
- Ukeje B. O, Okorie N. C, & Nwagbara U. A. (1992). *Educational Administration theory and practice*. Totan publishers limited Owerri, Nigeria.
- Ukuje, B. O. (1979). *Foundation of Education*. Benin City; Ethiope Pub. Co.

- Ukwuije R. P. I. (1989). *Educational Measurement and Evaluation for teachers*. Ibadan: Key Publishers.
- Ukwuije R. P. I. (1996). *Test and Measurement for teachers*: Port Harcourt: Abe Publishers.
- UNESCO (1984). *Management and Maintenance in Use of Educational Buildings and Equipment*. Division of Educational Policy and Planning.
- UNESCO. (1990). *Final Report of the World Conference on Education for All: Meeting Basic Learning Needs*. Jomtien, Thailand. Paris: UNESCO.
- van Manen, M. (1990). *The tact of teaching*. Albany, NY: State University of New York Press.
- van Manen, M. (1991). *The tact of teaching*. Albany, NY: State University of New York Press.
- Verma, G. & Beard, R. (1981). *What Is Educational Research*. Londres: Gower.
- Vroom, V. H. (1964). *Work and Motivation*. New York: Wiley.
- Vulliamy, et al. (1997). Teacher Identity and Curriculum change: a comparative case-study analysis of small schools in England and Finland. *Journal of comparative education Vol. 33*(1) 97–115.
- Vygotsky, L. S. (1978). *Mind in Society. The Development of Higher Psychological Processes*. Cambridge: Harvard University Press.
- Wall, S. J., & Wall, S. R. (1995, Autumn). The evolution (not the death) of strategy. *Organizational Dynamics*, 0
- Wassermann, S. (1993). *Getting down to cases: Learning to teach with case studies*. New York: Teachers College Press.
- Wassermann, S. (1996). *The New Teaching Elementary Science: Who's afraid of spiders?* Teachers College Press.
- Watson, L. W.; Stage, F. K. and Terrell, M. (1992). *Enhancing Student Learning: Setting the Campus Context*. Boston, Oxford: American College Personnel Association.
- Watson, L. W. and Stage, F. K. (1999). A Framework to Enhance Student Learning. In Stage, F. K., Watson, L. W. & Terrell, M. *Enhancing Student Learning: Setting the Campus Context*. Boston, Oxford: American College Personnel Association.
- Whawo, D. D. (1993). *Educational Administration, Planning and Supervision*. Benin-City: Jodah publications.
- Whawo, D. D. (1991). School Records. Primary School Administration. In E. T. Ehiametalor & J. Afe (Eds) *Benin City*. CEE and NERA: pp.76–87.
- Wheldall, K. & Glynn, T. (1989). *Effective Classroom Learning: A Behavioural Interactionist Approach to Teaching*. Oxford: Basil Blackwell.
- Whitty, G. (1996). Professional Competences and Professional Characteristics: The Northern Ireland Approach to the Reform of Teacher Education. In Hustler, D. & McIntyre, D. (Eds). *Developing Competent Teachers: Approaches to Professional Competence in Teacher Education*. London: David Fulton Publishers.
- Willis, S. L. & Dubin, S.S. (Eds) (1990). *Maintaining Professional Competence*. San Francisco: Jossey-Bass Publishers.
- Wilson, J. (1981). *Student Learning in Higher Education*. New York and London: John Wiley and Sons and CROOM HELM.

- Wilson, Floden & Ferrini-Mundy (2002). Teacher preparation research: An insider's view from the outside. *Journal of Teacher Education*, 53(3), pp 190–204
- Wise, A. E. (1989). If we are ever to “professionalize” school teaching, universities must redesign education programs. *The Teacher Educator*, 24(4), 29–32. EJ 395–990.
- Wood, D. J., Bruner, J., & Ross, G. (1976). The Role of Tutoring in Problem Solving. *Journal of Child Psychology and Psychiatry*, Vol. 17 (2) pp. 89–100.
- Xiaorong, N. (2001). *Educational Accountability, Network and School Effectiveness: A Study of the Practice of Educational Governance in China*. University of Helsinki, Department of Education, Research Report 174, 2001.
<<http://ethesis.helsinki.fi/julkaisut/kas/kasva/vk/xiaorong/educatio.pdf>>
- Yin, R. K. (1994). *Case Study Research: Design and Methods*, 2nd ed., Newbury Park, CA: Sage.
- Yin, R. K. (1989). *Case Study Research: Design and Methods*. Newbury Park, CA: Sage.
- Young, R. M. (n.d). *Steps Towards a Computational Theory of Interactive Narrative in Virtual Worlds*. Department of Computer Science North Carolina State University Raleigh, NC, 27695.
- Yusuf, K. (2002). *The Need for Environmental Education in the Teacher Education Programme in Nigeria*. The African Symposium Vol. 2 No.4 December 2002.
- Zajda, J. (1995). Defining Excellence and Quality in Education. In Zajda, J., Bacchus, K. & Kach, N. (Eds) *Excellence and quality in Education*. Albert Park: James Nicholas Publishers.
- Zeller, R. A, (1997). In Keeves, J. P., (Ed) *Educational Research, Methodology, and Measurement: An International Handbook*. Second Edition. Pergamon.
- Zeller, R. A., & Carmines, E. G., (1980). *Measurement in the Social Sciences: The Link Between Theory and Data*. Cambridge University Press, New York.
- Zuelke, D. C. (2001). *Attitude, Cost and School Effects on Six-Grade Achievement*. University of Wisconsin, Superior.

Appendix A

INTERVIEW GUIDE

Background/Experiences

1. What is your area of specialization?
2. Are you still studying now and in what capacity?
3. How and why did your decision to study your field come about, and how did you choose this specific field of study?
4. What is so interesting in your profession?
5. What are the possibilities in your profession and what kind of skills and knowledge do you gain from your profession?
6. What do you need in the future?
7. How does learning happen and what does it require of you as a teacher?
8. What kind of expectation and ideas do you as a teacher have about students in general?
9. To be specific, do you find any characteristic typical of students?
10. What goals are you looking forward to achieve as a teacher?
11. Do you have any plans whatsoever for the future, what would you want to do after you retire?
12. What kind of difficulties and obstacles can you imagine that might hamper your goals as a teacher?
13. With your background and experience as a teacher, what are the qualities of good teaching?
14. To what extent does professional training of teachers' improve their effectiveness on the job?
15. To what extent does the ability to perform effectively in teaching in-born?
16. To what extent does higher academic qualification improve teachers' job effectiveness?
17. In your opinion, what do you have to say in general about teachers, with academic and professional qualification?

Appendix B

RESEARCH QUESTIONNAIRE
FACULTY OF BEHAVIOURAL SCIENCES, DEPART-
MENT OF APPLIED SCIENCES OF EDUCATION
UNIVERSITY OF HELSINKI, FINLAND.

Dear Respondent,

This questionnaire is directed at collecting data, if analyzed might go a long way in solving some of the problems in education especially in the area of staffing, manpower planning and development.

As such, this questionnaire is purely for a PhD. dissertation (academic purposes). It is designed to assist the researcher find out teachers' competencies and their job effectiveness.

Please give accurate answers as it applies to you and not what you think it should be. Any information supplied will be treated in strict confidence.

Sincerely,

Nwachukwu Prince Ololube
Dept. of Applied Sciences of Education
University of Helsinki, Finland.
Phone, Finland: +358 41 501 4160
Nigeria: +234 80 37095659 or
+ 234 84 200102
Email: nwachukwu.ololube@helsinki.fi, ololube@ololube.com

Prof. Buchberger, Irina
Dept. of Applied Sciences of Education
University of Helsinki, Finland.
Phone: +358 9 191 28614, +358 50-301 3901
Email: irina.buchberger@helsinki.fi

PERSONAL DATA/OPTIONS

DEPARTMENT/ SCHOOL.....

OCCUPATION.....

AREA OF SPECIALIZATION

Answer the questions by marking (x) inside the boxes where appropriate.

SECTION A

1. Gender: (a) Male (b) Female
2. Age: (a) 20-29 years (b) 30-39
(c) 40-49 (d) 50 and above
3. Status: (a) Principal (b) Teacher (c) Supervisor
4. Subject taught: (a) Social sciences (b) Sciences (c) Humanities
5. Higher academic and professional qualification:

(A) Academic Qualification

- (a) OND (b) HND (c) Bachelors degree
(d) Master's degree (e) PhD.

(B) Professional Qualification

- (a) N.C.E (b) B.Sc. (ED)
(c) B. A (ED) (d) B. ED (e) M.ED
(f) Doctor of Education

6. For how long have you been in the job (in years?)

SECTION B

The following are some possible competencies, which may or may not be perceived by Teachers as being capable of improving their job effectiveness. Please indicate the extent to which you agree or disagree. The keys are thus:

4	Strongly Agree	(SA)
3	Agree	(A)
2	Disagree	(D)
1	Strongly Disagree	(SD)

SA	A	D	SD
4	3	2	1

METHODOLOGICAL COMPETENCIES

- (a) Teachers with academic qualification use problem-solving methods effectively.

(b) Teachers with professional qualification use problem-solving methods effectively.
- (a) Teachers with academic qualification adopt the use of individual teaching method effectively.

(b) Teachers with professional qualification adopt the use of individual teaching method effectively.
- (a) Teachers with academic qualification dramatize (Demonstrates) teaching situation effectively.

(b) Teachers with professional qualification dramatize (Demonstrates) teaching situation effectively.

MOTIVATIONAL COMPETENCIES

- (a) Teachers with academic qualification demonstrate familiarity with co-teachers effectively. (Exchange ideas)

(b) Teachers with professional qualification demonstrate familiarity with co-teachers effectively. (Exchange ideas)
- (a) Teachers with academic qualification encourage co-teachers to work effectively.

(b) Teachers with professional qualification encourage co-teachers to work effectively.

6. (a) Teachers with academic qualification use reward and punishment wisely.

(b) Teachers with professional qualification use reward and punishment wisely.

7. (a) Teachers with academic qualification guide co-teachers on how to plan and carry out their job professionally.

(b) Teachers with professional qualification guide co-teachers on how to plan and carry out their job professionally.

MATERIAL UTILIZATION COMPETENCIES

8. (a) Teachers with academic qualification select appropriate teaching materials.

(b) Teachers with professional qualification select appropriate teaching materials.

9. (a) Teachers with academic qualification prepare and use teaching materials effectively.

(b) Teachers with professional qualification prepare and use teaching materials effectively.

10. (a) Teachers with academic qualification operate projected tools effectively.

(b) Teachers with professional qualification operate projected tools effectively.

INSTRUCTIONAL PROCESS COMPETENCIES

11. (a) Teachers with academic qualification apply the use of contemporary knowledge, ideas etc. to their job.

(b) Teachers with professional qualification apply the use of contemporary knowledge, ideas etc. to their job.

12. (a) Teachers with academic qualification use appropriate questioning skills.

- (b) Teachers with professional qualification use appropriate questioning skills.
13. (a) Teachers with academic qualification develop course curricula properly. (the contents of the course)
- (b) Teachers with professional qualification develop course curricula properly. (The contents of the course)
14. (a) Teachers with academic qualification ensure effective time management.
- (b) Teachers with professional qualification ensure effective time management.
15. (a) Teachers with academic qualification show sufficient mastery of subject matters.
- (b) Teachers with professional qualification show sufficient mastery of subject matters.
16. (a) Teachers with academic qualification effectively manage and arrange classroom.
- (b) Teachers with professional qualification effectively manage and arrange classroom.
17. (a) Teachers with academic qualification clearly state their objectives.
- (b) Teachers with professional qualification clearly state their objectives.

TEACHING EVALUATION COMPETENCIES

18. (a) Teachers with academic qualification construct various evaluation instruments effectively.
- (b) Teachers with professional qualification construct various evaluation instruments effectively.
19. (a) Teachers with academic qualification employ various evaluation techniques correctly.
- (b) Teachers with professional qualification employ various evaluation techniques correctly.
20. (a) Teachers with academic qualification assess students' behavior effectively.
- (b) Teachers with professional qualification assess students' behavior effectively.
21. (a) Teachers with academic qualification use evaluation data to improve job situations.
- (b) Teachers with professional qualification use evaluation data to improve job situations.
22. (a) Teachers with academic qualification keep records of individual students accurately.
- (b) Teachers with professional qualification keep records of individual students accurately.
23. (a) In your opinion do you agree or disagree that higher academic qualification improves teacher's job effectiveness?
- (b) In your opinion do you agree or disagree that professional qualification improves teacher's job effectiveness?

24. (a) In your opinion is the ability to perform effectively in teaching inborn?

(b) In your opinion is the ability to perform effectively in teaching acquired?

INTERACTION PROCESS COMPETENCIES

25. (a) Teachers with academic qualification interact with their students respectfully.

(b) Teachers with professional qualification interact with their students respectfully.

26. The qualities of good teaching in your opinion are (please put them in order according to the most important quality, for example 1,2,3... to the least important such as 9, 10, and 11).

- A. Enthusiasm and devotion to teaching.
- B. Teaching skill (presentation, explanation etc.).
- C. Knowledge bases of subject matter.
- D. Approachableness.
- E. Organization (effective learning environment).
- F. General knowledge base.
- G. Interaction between students and teachers.
- H. Ability to motivate students.
- I. Ability to assess and evaluate students' and their own work.
- J. Appropriate utilization of teaching tools.
- K. Demonstration of teaching situation

Thank You

Appendix C

Research Permit

GOVERNMENT OF RIVERS STATE OF NIGERIA

Telegrams : PERMED

Telephone :

Your Ref :

Our Ref : ME/pRS/944/3
 (All replies to be addressed to the Commissioner)



MINISTRY OF EDUCATION
 PLANNING & RESEARCH DIVISION
 P. M. B. 5020
 PORT HARCOURT

02nd Sept. 2002.

University of Helsinki,
 Department of Teacher Education,
FINLAND.

Attention: Ololube Nwachukwu Prince


Sir,

APPROVAL FOR RESEARCH PERMIT

With reference to your letter of 5/06/2002 for a research permit, I am directed to inform you that the Ministry of Education has granted you the permit.

I am further directed to inform you to furnish the Department of Planning, Research & Statistics with details of your proposed study including the number of Schools and their Locations, you wish to use as sample.

The Ministry wishes you success in your academic pursuits.


 A.M. MFIANGH
 DIRECTOR (PRS)
 for: Permanent Secretary
 Ministry of Education.

Appendix D

Cross Tabulation Analysis

Table 1. Crosstab. Analysis of background information on the use of problem-solving method effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	23,8	0,0	48,4	3,2	21,4	29,4	6,3	67,5
	Male	30,5	0,0	38,5	2,9	27,0	29,3	4,0	67,8
Age	20-29	12,2	0,0	63,3	4,1	8,2	30,6	16,3	65,3
	30-39	32,7	0,0	36,4	3,6	28,2	39,1	2,7	57,3
	40-49	27,5	0,0	39,2	2,5	30,0	21,7	3,3	75,8
	50-Above	38,1	0,0	47,2	0,0	14,3	19,0	0,0	81,0
Status	Principals	40,0	0,0	35,0	0,0	20,0	10,0	5,0	90,0
	Teachers	27,4	0,0	43,0	3,3	24,4	31,1	5,2	65,6
	Supervisors	10,0	0,0	50,0	0,0	40,0	20,0	0,0	80,0
S. Taught	Social Sc.	16,5	0,0	53,8	3,3	23,1	42,9	6,6	53,8
	Sciences	36,8	0,0	30,9	3,7	27,9	25,7	4,4	70,6
	Humanities	24,7	0,0	50,7	1,4	20,5	19,2	4,1	79,5
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
	HND.	15,0	0,0	60,0	10,0	20,0	45,0	5,0	45,0
	Bachelor's D.	25,0	0,0	44,4	0,0	30,6	25,0	0,0	75,0
	Master's Deg.	22,2	0,0	33,3	0,0	33,3	33,3	11,1	66,7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	41,1	0,0	46,2	5,1	10,3	33,3	2,6	61,5
	B.Sc (Ed).	42,7	0,0	29,3	6,7	25,3	32,0	2,7	61,3
	B.A (Ed).	11,5	0,0	61,5	0,0	26,9	15,4	0,0	84,6
	B. Ed.	21,3	0,0	45,9	1,6	23,0	24,6	9,8	73,8
	M.Ed.	9,1	0,0	50,0	0,0	31,8	36,4	9,1	63,6
	Doctor of Ed.	0,0	0,0	0,0	0,0	100,0	0,0	0,0	100,0
L. Service	1-5	18,0	0,0	46,0	2,0	20,0	28,0	16,0	70,0
	6-10	26,0	0,0	45,0	5,0	26,0	36,0	3,0	59,0
	11-15	33,8	0,0	38,2	4,4	26,5	36,8	1,5	58,8
	16-Above	30,5	0,0	41,5	0,0	24,4	15,9	3,7	84,1

Table 2. Crosstab. Analysis of background information on the use of individual teaching method effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	33.3	5.6	47.6	4.8	18.3	30.2	0.8	59.5
	Male	36.2	1.1	45.4	5.7	17.8	36.2	0.6	56.9
Age	20-29	34.7	6.1	57.1	4.1	6.1	44.9	2.0	44.9
	30-39	37.3	1.8	40.9	3.6	21.8	38.2	0.0	65.4
	40-49	32.5	3.3	45.0	8.3	21.7	26.7	0.8	61.7
	50-Above	38.1	0.0	57.1	0.0	4.8	23.8	0.0	76.2
Status	Principals	35.0	0.0	45.0	5.0	20.0	30.0	0.0	65.0
	Teachers	35.9	3.3	45.6	5.6	17.8	34.1	0.7	57.0
	Supervisors	10.0	0.0	70.0	0.0	20.0	30.0	0.0	70.0
S. Taught	Social Sc.	30.8	4.4	51.6	4.4	17.6	35.2	0.0	56.0
	Sciences	35.3	1.5	46.3	8.8	16.9	35.3	1.5	54.4
	Humanities	39.7	4.1	39.7	0.0	20.5	28.8	0.7	67.1
Aca. Qual.	OND.	0.0	50.0	100.0	50.0	0.0	0.0	0.0	0.0
	HND.	30.0	10.0	50.0	0.0	20.0	55.0	0.0	35.0
	Bachelor's D.	19.4	2.8	61.1	2.8	19.4	41.7	0.0	52.8
	Master's Deg.	5.6	0.0	61.1	0.0	33.3	16.7	0.0	83.3
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	53.8	0.0	38.5	2.6	5.1	33.3	2.6	64.1
	B.Sc. (Ed).	48.0	2.7	36.0	17.3	16.0	29.3	0.0	50.7
	B.A (Ed).	30.8	0.0	34.6	0.0	34.6	23.1	0.0	76.9
	B. Ed.	29.5	1.6	50.8	0.0	18.0	36.1	1.6	62.3
	M.Ed.	27.3	0.0	54.5	0.0	18.2	40.9	0.0	59.1
	Doctor of Ed.	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
L. Service	1-5	26.0	6.0	54.0	6.0	18.0	48.0	2.0	40.0
	6-10	38.0	2.0	41.0	3.0	20.0	33.0	1.0	62.0
	11-15	38.2	2.9	51.5	14.7	10.3	33.8	0.0	48.5
	16-Above	34.1	2.4	43.9	0.0	22.0	25.6	0.0	72.0

Table 3. Crosstab. Analysis of background information on dramatizes (demonstrate) teaching situation effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	41,3	0,0	39,7	2,4	19,0	41,3	0,0	56,3
	Male	44,3	0,0	40,2	4,0	14,4	34,5	1,1	61,5
Age	20-29	55,1	0,0	30,6	2,0	14,3	40,8	0,0	57,1
	30-39	40,0	0,0	46,4	5,5	12,7	39,1	0,9	55,5
	40-49	37,5	0,0	39,2	2,5	22,5	35,0	0,8	62,5
	50-Above	61,9	0,0	33,3	0,0	4,8	33,3	0,0	66,7
Status	Principals	60,0	0,0	25,0	0,0	15,9	50,0	0,0	50,0
	Teachers	42,6	0,0	41,1	3,7	15,9	37,0	0,4	59,3
	Supervisors	20,0	0,0	40,0	0,0	30,0	20,0	10,0	80,0
S. Taught	Social Sc.	35,2	0,0	40,7	1,1	23,1	40,7	1,1	58,2
	Sciences	44,9	0,0	42,6	5,9	12,5	39,0	0,0	55,1
	Humanities	49,3	0,0	34,2	1,4	15,1	30,1	1,4	68,5
Aca. Qual.	OND.	0,0	0,0	50,0	50,0	50,0	0,0	0,0	50,0
	HND.	45,0	0,0	30,0	0,0	25,0	45,0	0,0	55,0
	Bachelor's D.	36,1	0,0	47,2	8,3	16,7	44,4	0,0	47,2
	Master's Deg.	27,8	0,0	33,3	0,0	38,9	16,7	0,0	83,3
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	48,7	0,0	43,6	2,6	7,7	56,4	0,0	41,0
	B.Sc (Ed).	52,0	0,0	34,7	5,3	12,0	40,0	1,3	54,7
	B.A (Ed).	53,8	0,0	26,9	0,0	19,2	23,1	0,0	76,9
	B. Ed.	47,5	0,0	37,7	1,6	14,8	31,1	0,0	67,2
	M.Ed.	4,5	0,0	68,2	0,0	22,7	27,3	4,5	72,7
	Doctor of Ed.	0,0	0,0	100,0	0,0	0,0	100,0	0,0	0,0
L. Service	1-5	44,0	0,0	36,0	4,0	20,0	38,0	0,0	58,0
	6-10	40,0	0,0	1,0	44,0	15,0	36,0	1,0	63,0
	11-15	48,5	0,0	36,8	10,3	14,7	39,7	0,0	50,0
	16-Above	41,5	0,0	40,2	0,0	17,1	36,6	1,2	63,4

Table 4. Crosstab. Analysis of background information on the demonstration of familiarity with co-teachers (exchange ideas)

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	50.0	2.4	34.9	1.6	15.1	29.4	0.0	66.7
	Male	45.4	0.0	35.6	0.0	17.2	20.1	1.7	79.9
Age	20-29	44.9	0.0	34.7	0.0	18.4	24.5	2.0	75.5
	30-39	49.1	0.9	30.0	1.8	20.9	25.5	0.0	71.8
	40-49	45.0	0.8	40.8	0.0	12.5	25.0	1.7	74.2
	50-Above	57.1	4.8	33.3	0.0	9.5	9.5	0.0	85.7
Status	Principals	65.0	5.0	30.0	0.0	5.0	15.0	0.0	80.0
	Teachers	45.9	0.7	35.6	0.7	17.4	23.7	1.1	74.8
	Supervisors	50.0	0.0	40.0	0.0	10.0	50.0	0.0	50.0
S. Taught	Social Sc.	51.6	2.2	31.9	0.0	16.5	25.3	0.0	72.5
	Sciences	49.3	0.0	31.6	1.5	17.6	19.9	1.5	78.7
	Humanities	38.4	1.4	46.6	0.0	13.7	30.1	1.4	68.5
Aca. Qual.	OND.	50.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0
	HND.	55.0	0.0	20.0	5.0	25.0	10.0	0.0	85.0
	Bachelor's D.	61.1	0.0	25.0	0.0	13.9	25.0	0.0	75.0
	Master's Deg.	38.9	0.0	27.8	0.0	33.3	27.8	0.0	72.2
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	51.3	5.1	41.0	0.0	5.1	30.8	2.6	64.1
	B.Sc (Ed).	42.7	1.3	34.7	0.0	21.3	29.3	1.3	69.3
	B.A (Ed).	34.6	0.0	53.8	0.0	11.5	11.5	0.0	88.5
	B. Ed.	49.2	0.0	36.1	1.6	13.1	21.3	1.6	77.0
	M.Ed.	45.5	0.0	35.4	0.0	18.2	27.3	0.0	72.7
	Doctor of Ed.	0.0	0.0	100.0	0.0	0.0	50.0	0.0	50.0
L. Service	1-5	54.0	0.0	22.0	0.0	22.0	28.0	2.0	72.0
	6-10	45.0	1.0	34.0	0.0	20.0	26.0	1.0	73.0
	11-15	41.2	2.9	45.6	2.9	13.2	25.0	0.0	69.1
	16-Above	51.2	0.0	36.6	0.0	11.0	18.3	1.2	81.7

Table 5. Crosstab. Analysis of background information on how to encourage co-teachers to work effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	0.8	0,0	58.7	3.2	30.2	27.8	10.3	69.0
	Male	0.0	0,0	40.2	1,7	42.0	28.2	17.8	70.1
Age	20-29	0.0	0,0	65.3	2.0	30.4	32.7	14.3	65.3
	30-39	0.0	0,0	42.7	3.6	43.6	30.9	13.6	65.5
	40-49	0.8	0,0	42.5	1.7	39.2	27.5	17.5	70.8
	50-Above	0.0	0,0	66.7	0.0	28.6	4.8	4.8	95.2
Status	Principals	0.0	0,0	20.0	5.0	80.0	10.0	0.0	85.0
	Teachers	0.4	0,0	49.6	2.2	34.1	29.3	15.9	68.5
	Supervisors	0.0	0,0	60.0	0.0	30.0	30.0	10.0	70.0
S. Taught	Social Sc.	0.0	0,0	50.5	4.4	33.0	29.7	16.5	65.9
	Sciences	0.7	0,0	45.6	1.5	36.8	25.7	16.9	72.8
	Humanities	0.0	0,0	49.3	1.4	42.5	30.1	8.2	68.5
Aca. Qual.	OND.	0.0	0,0	100.0	0.0	0.0	50.0	0.0	50.0
	HND.	0.0	0,0	70.0	0.0	20.0	30.0	10.0	70.0
	Bachelor's D.	0.0	0,0	41.7	0.0	36.1	36.1	22.2	63.9
	Master's Deg.	0.0	0,0	50.0	0.0	11.1	27.8	38.9	72.2
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	0.0	0,0	48.7	7.7	46.2	28.2	5.1	64.1
	B.Sc (Ed).	0.0	0,0	36.0	4.0	48.0	30.7	16.0	65.3
	B.A (Ed).	0.0	0,0	53.8	0.0	38.5	11.5	7.7	88.5
	B. Ed.	0.0	0,0	52.5	1.6	34.4	24.6	13.1	73.8
	M.Ed.	4.5	0,0	59.1	0.0	22.7	36.4	13.6	63.6
	Doctor of Ed.	0.0	0,0	0.0	0.0	100.0	0.0	0.0	100.0
L. Service	1-5	0.0	0,0	68.0	2.0	20.0	32.0	12.0	66.0
	6-10	0.0	0,0	43.0	4.0	44.0	32.0	13.0	64.0
	11-15	0.0	0,0	39.7	2.9	38.2	32.4	22.1	64.7
	16-Above	1.2	0,0	48.0	0.0	37.8	17.1	12.2	82.9

Table 6. Crosstab. Analysis of background information on the wise use of rewards and punishment

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	37,3	0.0	34,9	3,2	27,8	46,0	0,0	50,8
	Male	38,5	0,6	45,4	1,7	15,5	35,1	0,6	62,6
Age	20-29	34,7	0,0	36,7	4,1	28,6	44,9	0,0	51,0
	30-39	42,7	0,9	39,1	2,7	18,2	44,5	0,0	51,8
	40-49	32,5	0,0	44,2	1,7	22,5	35,8	0,8	62,5
	50-Above	52,4	0,0	42,9	0,0	4,8	23,8	0,0	76,2
Status	Principals	20,0	0,0	65,0	5,0	15,0	45,0	0,0	50,0
	Teachers	39,6	0,4	38,9	2,2	21,1	38,9	0,4	58,5
	Supervisors	30,0	0,0	50,0	0,0	20,0	50,0	0,0	50,0
S. Taught	Social Sc.	35,2	1,1	40,7	3,3	24,2	40,7	0,0	54,9
	Sciences	35,3	0,0	44,1	0,7	20,6	47,8	0,0	51,5
	Humanities	46,6	0,0	35,6	4,1	16,4	23,3	1,4	72,6
Aca. Qual.	OND.	0,0	0,0	100,0	50,0	0,0	0,0	0,0	50,0
	HND.	30,0	0,0	30,0	0,0	40,0	65,0	0,0	35,0
	Bachelor's D.	27,8	0,0	61,1	2,8	11,1	27,8	0,0	69,4
	Master's Deg.	16,7	0,0	44,4	5,6	38,9	27,8	0,0	66,7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	51,3	2,6	30,8	7,7	17,9	38,5	0,0	51,3
	B.Sc (Ed).	41,3	0,0	48,0	0,0	10,7	54,7	0,0	45,3
	B.A (Ed).	61,5	0,0	34,6	3,8	3,8	34,6	0,0	61,5
	B. Ed.	42,6	0,0	31,1	0,0	24,6	32,8	1,6	67,2
	M.Ed.	13,6	0,0	40,9	0,0	45,5	27,3	0,0	72,7
	Doctor of Ed.	0,0	0,0	0,0	0,0	100,0	0,0	0,0	100,0
L. Service	1-5	36,0	0,0	28,0	4,0	35,0	48,0	0,0	48,0
	6-10	35,0	1,0	47,0	3,0	18,0	40,0	0,0	56,0
	11-15	33,8	0,0	39,7	2,9	26,5	36,8	0,0	60,3
	16-Above	46,3	0,0	42,7	0,0	9,8	36,6	1,2	63,4

Table 7. Crosstab. Analysis of background information on how to guide co-teachers on how to plan and carry out their job effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	40.5	0.8	31.7	1.6	27.8	33.3	0,0	64.3
	Male	50.6	0.0	29.3	1.7	20.1	18.4	0,0	79.9
Age	20-29	55.1	0.0	18.4	4.1	26.5	30.6	0,0	65.3
	30-39	49.1	0.0	32.7	0.9	18.2	22.7	0,0	76.4
	40-49	37.5	0.8	33.3	0.8	29.2	22.5	0,0	75.8
	50-Above	61.9	0.0	28.6	4.8	9.5	33.3	0,0	61.9
Status	Principals	50.0	0.0	20.0	0.0	30.0	30.0	0,0	70.0
	Teachers	47.4	0.4	30.0	1.9	22.6	24.4	0,0	73.3
	Supervisors	10.0	0.0	60.0	0.0	30.0	20.0	0,0	80.0
S. Taught	Social Sc.	48.4	0.0	34.1	2.2	17.6	28.6	0,0	69.2
	Sciences	44.1	0.0	30.1	2.2	25.7	25.7	0,0	72.1
	Humanities	47.9	1.4	26.0	0.0	26.0	17.8	0,0	80.8
Aca. Qual.	OND.	50.0	0.0	50.0	0.0	0.0	50.0	0,0	50.0
	HND.	45.0	0.0	25.0	5.0	30.0	35.0	0,0	60.0
	Bachelor's D.	50.0	0.0	33.3	5.6	16.7	16.7	0,0	77.8
	Master's Deg.	22.2	0.0	50.0	0.0	27.8	33.3	0,0	77.8
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	41.0	0.0	35.9	2.6	23.1	20.5	0,0	76.9
	B.Sc (Ed).	53.3	0.0	25.3	1.3	21.3	32.0	0,0	66.7
	B.A (Ed).	46.2	0.0	30.8	0.0	23.1	30.8	0,0	69.2
	B. Ed.	55.7	0.0	23.0	0.0	21.3	16.4	0,0	83.6
	M.Ed.	22.7	4.5	45.5	0.0	31-8	18.2	0,0	77.3
	Doctor of Ed.	0.0	0.0	0.0	0.0	100.0	0.0	0,0	100.0
L. Service	1-5	48.0	0.0	24.0	4.0	28.0	28.0	0,0	68.0
	6-10	48.0	0.0	34.0	1.0	18.0	23.0	0,0	76.0
	11-15	36.8	1.5	32.4	2.9	30.9	22.1	0,0	73.5
	16-Above	51.2	0.0	28.0	0.0	20.7	26.8	0,0	73.2

Table 8. Crosstab. Analysis of background information on the selection of appropriate teaching materials

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	38.1	0.0	32.5	0.0	27.0	32.5	2.4	67.5
	Male	36.8	0.0	39.1	0.0	23.6	21.8	0.6	78.2
Age	20-29	34.7	0.0	30.6	0.0	32.7	38.8	2.0	61.2
	30-39	40.9	0.0	33.6	0.0	24.5	23.6	0.9	76.4
	40-49	35.0	0.0	40.0	0.0	23.3	24.2	1.7	75.8
	50-Above	38.1	0.0	42.9	0.0	19.0	23.8	0.0	76.2
Status	Principals	25.0	0.0	50.0	0.0	20.0	20.0	5.0	80.0
	Teachers	38.1	0.0	35.2	0.0	25.6	27.8	1.1	72.2
	Supervisors	40.0	0.0	40.0	0.0	20.0	0.0	0.0	100.0
S. Taught	Social Sc.	34.1	0.0	37.4	0.0	28.6	27.5	0.0	72.5
	Sciences	33.1	0.0	38.7	0.0	26.5	31.6	0.7	68.4
	Humanities	49.3	0.0	28.8	0.0	17.8	15.1	4.1	84.9
Aca. Qual.	OND.	50.0	0.0	0.0	0.0	50.0	0.0	0.0	100.0
	HND.	25.0	0.0	40.0	0.0	35.0	50.0	0.0	50.0
	Bachelor's D.	33.3	0.0	30.6	0.0	36.1	19.4	0.0	80.6
	Master's Deg.	27.8	0.0	38.9	0.0	33.3	33.3	0.0	66.7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	43.6	0.0	38.5	0.0	17.9	23.1	0.0	76.9
	B.Sc (Ed).	40.0	0.0	37.3	0.0	22.7	32.0	0.0	68.0
	B.A (Ed).	46.2	0.0	23.1	0.0	23.1	15.4	7.7	84.6
	B. Ed.	37.7	0.0	39.3	0.0	21.3	27.9	1.6	72.1
	M.Ed.	22.7	0.0	45.5	0.0	27.3	13.6	4.5	86.4
	Doctor of Ed.	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0
L. Service	1-5	32.0	0.0	26.0	0.0	42.0	38.0	0.0	62.0
	6-10	40.0	0.0	32.0	0.0	26.0	27.0	2.0	73.0
	11-15	45.6	0.0	35.3	0.0	17.6	25.0	1.5	75.0
	16-Above	30.5	0.0	48.8	0.0	19.5	19.5	1.2	80.5

Table 9. Crosstab. Analysis of background information on the preparation and use of teaching materials effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	27,8	0,0	45,2	3,2	26,2	30,2	0,8	66,7
	Male	29,9	0,0	47,1	1,1	23,0	28,7	0,0	70,1
Age	20-29	28,6	0,0	55,1	8,2	16,3	26,5	0,0	65,3
	30-39	31,8	0,0	40,9	1,8	27,3	30,9	0,0	67,3
	40-49	24,2	0,0	48,3	0,0	26,7	30,8	0,8	69,2
	50-Above	42,9	0,0	42,9	0,0	14,3	19,0	0,0	81,0
Status	Principals	45,0	0,0	30,0	0,0	25,0	10,0	0,0	90,0
	Teachers	27,8	0,0	47,0	2,2	24,8	30,7	0,4	67,0
	Supervisors	30,0	0,0	60,0	0,0	10,0	30,0	0,0	70,0
S. Taught	Social Sc.	24,2	0,0	54,9	3,3	20,9	37,4	0,0	59,3
	Sciences	25,0	0,0	47,8	2,2	27,2	32,4	0,0	65,4
	Humanities	42,5	0,0	32,9	0,0	23,3	13,7	1,4	86,3
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
	HND.	20,0	0,0	60,0	0,0	20,0	40,0	0,0	60,0
	Bachelor's D.	33,3	0,0	30,6	2,8	36,1	25,0	0,0	72,2
	Master's Deg.	5,6	0,0	44,4	0,0	50,0	32,3	0,0	66,7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	41,0	0,0	48,7	2,6	10,3	35,9	0,0	61,5
	B.Sc (Ed).	32,0	0,0	45,3	2,7	22,7	40,0	0,0	57,3
	B.A (Ed).	26,9	0,0	46,2	0,0	26,9	11,5	0,0	88,5
	B. Ed.	36,1	0,0	47,5	3,3	16,4	16,4	0,0	80,3
	M.Ed.	4,5	0,0	59,1	0,0	31,8	36,4	4,5	63,6
	Doctor of Ed.	0,0	0,0	0,0	0,0	100,0	100,0	0,0	0,0
L. Service	1-5	32,0	0,0	46,0	4,0	22,0	32,0	0,0	64,0
	6-10	30,0	0,0	41,0	4,0	29,0	30,0	0,0	66,0
	11-15	25,0	0,0	52,9	0,0	20,6	45,6	1,5	54,4
	16-Above	29,3	0,0	47,6	0,0	23,2	13,4	0,0	86,6

Table 10. Crosstab. Analysis of background information on the operation of projected tools effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	12,7	0,0	45,2	0,0	38,1	35,7	4,0	64,3
	Male	17,2	0,0	38,5	0,6	37,9	34,5	6,3	64,9
Age	20-29	14,3	0,0	26,5	0,0	49,0	30,6	10,2	69,4
	30-39	10,0	0,0	50,0	0,0	36,4	39,1	3,6	60,9
	40-49	18,3	0,0	40,8	0,8	36,7	35,0	4,2	64,2
	50-Above	28,6	0,0	33,3	0,0	28,6	23,8	9,5	76,2
Status	Principals	15,0	0,0	40,0	0,0	35,0	35,0	10,0	65,0
	Teachers	15,9	0,0	40,7	0,4	38,1	34,8	5,2	64,8
	Supervisors	0,0	0,0	60,0	0,0	40,0	40,0	0,0	60,0
S. Taught	Social Sc.	9,9	0,0	44,0	0,0	39,6	35,2	6,6	64,8
	Sciences	19,1	0,0	37,5	0,0	36,8	39,0	6,6	60,3
	Humanities	15,1	0,0	45,2	0,0	38,4	27,4	1,4	72,6
Aca. Qual.	OND.	0,0	0,0	0,0	0,0	50,0	50,0	50,0	50,0
	HND.	0,0	0,0	40,0	0,0	50,0	25,0	10,0	75,0
	Bachelor's D.	16,7	0,0	27,8	0,0	41,7	44,4	13,9	55,6
	Master's Deg.	11,1	0,0	50,0	0,0	33,3	27,8	5,6	72,2
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	12,8	0,0	38,5	0,0	46,2	38,5	2,6	61,5
	B.Sc (Ed).	18,7	0,0	44,0	1,3	32,0	42,7	5,3	56,0
	B.A (Ed).	7,7	0,0	38,5	0,0	53,8	23,1	0,0	76,9
	B. Ed.	23,0	0,0	47,5	0,0	26,2	31,1	3,3	68,9
	M.Ed.	13,6	0,0	45,5	0,0	36,4	27,3	4,5	72,7
	Doctor of Ed.	0,0	0,0	0,0	0,0	100,0	0,0	0,0	100,0
L. Service	1-5	10,0	0,0	22,0	0,0	56,0	36,0	12,0	64,0
	6-10	12,0	0,0	53,0	0,0	33,0	41,0	2,0	59,0
	11-15	19,1	0,0	38,2	1,5	39,7	30,9	2,9	67,6
	16-Above	19,5	0,0	41,5	0,0	31,7	30,5	7,3	69,5

Table 11. Crosstab. Analysis of background information on the application of contemporary knowledge, idea etc. to their job

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	20,6	0,8	27,8	0,0	46,8	32,5	4,8	66,7
	Male	19,5	0,0	31,0	0,6	44,3	32,2	5,2	67,2
Age	20-29	16,3	0,0	22,4	0,0	59,2	36,7	2,0	63,3
	30-39	19,1	0,9	27,3	0,9	46,4	32,7	7,3	65,5
	40-49	24,2	0,0	32,5	0,0	38,3	32,5	5,0	67,5
	50-Above	9,5	0,0	42,9	0,0	47,6	19,0	0,0	81,0
Status	Principals	20,0	0,0	30,0	0,0	45,0	15,0	5,0	85,0
	Teachers	20,0	0,4	29,6	0,4	45,2	33,3	5,2	65,9
	Supervisors	20,0	0,0	30,0	0,0	50,0	40,0	0,0	60,0
S. Taught	Social Sc.	22,0	0,0	27,5	1,1	46,2	33,0	4,4	65,9
	Sciences	19,1	0,7	28,7	0,0	46,3	35,3	5,9	64,0
	Humanities	19,2	0,0	34,2	0,0	42,5	26,0	4,1	74,0
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	0,0	100,0	50,0	0,0
	HND.	25,0	5,0	5,0	0,0	65,0	35,0	5,0	60,0
	Bachelor's D.	27,8	0,0	27,8	0,0	38,9	44,4	5,6	55,6
	Master's Deg.	22,2	0,0	33,3	0,0	44,4	55,6	0,0	44,4
Prof. Qual.	PhD.	-	-	-	-	-	-	-	-
	N.C.E.	17,9	0,0	25,6	0,0	53,8	15,4	2,6	84,6
	B.Sc (Ed).	18,7	0,0	37,3	0,0	40,0	38,7	4,0	61,3
	B.A (Ed).	7,7	0,0	23,1	0,0	65,4	23,1	3,8	76,9
	B. Ed.	16,4	0,0	26,1	0,0	29,3	21,3	8,2	78,7
L. Service	M.Ed.	31,8	0,0	27,3	4,5	36,4	40,9	4,5	54,5
	Doctor of Ed.	50,0	0,0	0,0	0,0	50,0	0,0	0,0	100,0
	1-5	14,0	0,0	20,0	0,0	64,0	38,0	2,0	62,0
L. Service	6-10	20,0	0,0	29,0	0,0	46,0	31,0	5,0	69,0
	11-15	20,6	1,5	32,4	1,5	38,2	39,7	8,8	57,4
	16-Above	23,2	0,0	34,1	0,0	39,0	24,4	3,7	75,6

Table 12. Crosstab. Analysis of background information on the use of appropriate questioning skills

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	34,1	0,0	27,0	0,0	34,9	27,0	4,0	73,0
	Male	29,9	0,0	46,6	0,6	21,8	30,5	1,7	69,0
Age	20-29	42,9	0,0	36,7	0,0	14,3	26,5	6,1	73,5
	30-39	31,8	0,0	35,5	0,0	30,9	35,5	1,8	64,5
	40-49	23,3	0,0	44,2	0,0	30,8	26,7	1,7	73,3
	50-Above	52,4	0,0	23,8	4,8	19,0	14,3	4,8	81,0
Status	Principals	55,0	0,0	30,0	0,0	10,0	15,0	5,0	85,0
	Teachers	30,4	0,0	38,5	0,4	28,5	29,3	2,6	70,4
	Supervisors	20,0	0,0	50,0	0,0	30,0	50,0	0,0	50,0
S. Taught	Social Sc.	26,4	0,0	49,5	0,0	24,2	42,9	0,0	57,1
	Sciences	33,1	0,0	32,4	0,0	31,6	30,1	2,9	69,9
	Humanities	35,6	0,0	35,6	1,4	23,3	9,6	5,5	89,0
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
	HND.	45,0	0,0	35,0	0,0	15,0	45,0	5,0	55,0
	Bachelor's D.	38,9	0,0	33,3	0,0	27,8	41,7	0,0	58,0
	Master's Deg.	11,1	0,0	44,4	0,0	44,4	55,6	0,0	44,4
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	33,3	0,0	35,9	0,0	30,8	41,0	0,0	59,0
	B.Sc (Ed).	30,7	0,0	41,3	0,0	28,0	26,7	0,0	73,3
	B.A (Ed).	38,5	0,0	34,6	0,0	15,4	11,5	11,5	88,5
	B. Ed.	32,8	0,0	39,3	1,6	23,0	14,8	4,9	83,6
	M.Ed.	18,2	0,0	40,9	0,0	36,4	27,7	4,5	72,7
	Doctor of Ed.	0,0	0,0	100,0	0,0	0,0	0,0	0,0	100,0
L. Service	1-5	34,0	0,0	38,0	0,0	22,0	36,0	6,0	64,0
	6-10	32,0	0,0	32,0	0,0	34,0	27,0	2,0	73,0
	11-15	29,4	0,0	39,7	0,0	27,9	33,8	2,9	66,2
	16-Above	31,7	0,0	45,1	1,2	22,0	23,2	1,2	75,6

Table 13. Crosstab. Analysis of background information on the development of course curricula properly

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	34,9	0,0	33,3	0,0	30,2	33,3	1,6	66,7
	Male	33,3	0,0	36,8	0,0	23,6	30,5	6,3	69,5
Age	20-29	42,9	0,0	32,7	0,0	18,4	32,7	6,1	67,3
	30-39	28,2	0,0	32,7	0,0	35,5	30,9	3,6	69,1
	40-49	34,2	0,0	37,5	0,0	23,3	34,2	5,0	65,8
	50-Above	42,9	0,0	42,9	0,0	14,3	19,0	0,0	81,0
Status	Principals	55,0	0,0	30,0	0,0	5,0	25,0	10,0	75,0
	Teachers	32,6	0,0	35,2	0,0	28,1	32,2	4,1	67,8
	Supervisors	30,0	0,0	50,0	0,0	20,0	30,0	0,0	70,0
S. Taught	Social Sc.	35,2	0,0	40,7	0,0	22,0	34,1	2,2	65,9
	Sciences	33,8	0,0	30,1	0,0	28,7	38,2	7,4	61,8
	Humanities	32,9	0,0	38,4	0,0	27,4	16,4	1,4	83,6
Aca. Qual.	OND.	50,0	0,0	50,0	0,0	0,0	0,0	0,0	100,0
	HND.	35,0	0,0	35,0	0,0	20,0	55,0	10,0	45,0
	Bachelor's D.	36,1	0,0	27,8	0,0	30,6	30,6	5,6	69,4
	Master's Deg.	5,6	0,0	55,6	0,0	38,9	55,6	0,0	44,4
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	51,3	0,0	23,1	0,0	17,9	10,3	7,7	89,7
	B.Sc (Ed).	36,0	0,0	36,0	0,0	25,3	42,7	2,7	57,3
	B.A (Ed).	34,6	0,0	38,5	0,0	26,9	19,2	0,0	80,8
	B. Ed.	36,1	0,0	34,4	0,0	23,0	24,6	6,6	75,4
	M.Ed.	4,5	0,0	50,0	0,0	45,0	31,8	0,0	68,2
	Doctor of Ed.	50,0	0,0	50,0	0,0	0,0	50,0	0,0	50,0
L. Service	1-5	30,0	0,0	34,0	0,0	28,0	34,0	8,0	66,0
	6-10	31,0	0,0	33,0	0,0	34,0	29,0	2,0	71,0
	11-15	38,2	0,0	33,8	0,0	25,0	36,8	2,9	63,2
	16-Above	36,6	0,0	40,2	0,0	17,1	29,3	6,1	70,7

Table 14. Crosstab. Analysis of background information on how to ensure effective time management

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	27,0	0,0	31,7	0,8	36,5	24,6	4,8	74,6
	Male	28,2	0,0	36,2	0,6	28,2	25,3	7,5	74,1
Age	20-29	30,6	0,0	36,7	2,0	22,4	26,5	10,2	71,4
	30-39	29,1	0,0	30,0	0,9	36,4	20,0	4,5	79,1
	40-49	20,0	0,0	38,3	0,0	35,0	30,8	6,7	69,2
	50-Above	57,1	0,0	28,6	0,0	9,5	14,3	4,8	85,7
Status	Principals	35,0	0,0	40,0	0,0	20,0	15,0	5,0	85,0
	Teachers	27,4	0,0	34,4	0,7	31,5	25,9	6,5	73,3
	Supervisors	20,0	0,0	20,0	0,0	60,0	20,0	0,0	80,0
S. Taught	Social Sc.	29,7	0,0	35,2	2,0	29,7	27,5	5,5	70,3
	Sciences	26,5	0,0	38,2	0,0	27,9	31,6	7,4	68,4
	Humanities	27,4	0,0	26,0	0,0	41,1	9,6	5,5	90,4
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	0,0	50,0	50,0	50,0
	HND.	15,0	0,0	55,0	5,0	20,0	35,0	10,0	60,0
	Bachelor's D.	33,3	0,0	27,8	0,0	30,6	25,0	8,3	75,0
	Master's Deg.	5,6	0,0	33,3	0,0	55,6	38,9	5,6	61,1
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	35,9	0,0	43,6	0,0	15,4	28,2	5,1	71,8
	B.Sc (Ed).	28,0	0,0	30,7	0,0	36,0	26,7	5,3	73,3
	B.A (Ed).	38,5	0,0	15,4	0,0	38,5	11,5	7,7	88,5
	B. Ed.	32,8	0,0	31,1	0,0	29,5	13,1	6,6	86,9
	M.Ed.	9,1	0,0	50,0	4,5	40,9	40,9	0,0	54,5
L. Service	Doctor of Ed.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
	1-5	20,0	0,0	40,0	2,0	30,0	28,0	10,0	70,0
	6-10	30,0	0,0	31,0	0,0	32,0	28,0	7,0	72,0
	11-15	27,9	0,0	39,7	1,5	30,0	25,0	1,5	73,5
	16-Above	29,3	0,0	30,5	0,0	32,9	19,5	7,3	80,5

Table 15. Crosstab. Analysis of background information on how to show sufficient mastery of subject matters

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	19,0	0,0	34,1	0,0	38,1	30,2	8,7	69,8
	Male	20,1	0,0	25,3	0,6	40,8	24,7	13,8	74,7
Age	20-29	18,4	0,0	30,6	0,0	34,7	22,4	16,3	77,6
	30-39	20,0	0,0	29,1	0,0	40,9	26,4	10,0	73,6
	40-49	19,2	0,0	26,7	0,8	41,7	30,0	12,5	69,2
	50-Above	23,8	0,0	38,1	0,0	33,3	23,8	4,8	76,2
Status	Principals	15,0	0,0	35,0	0,0	40,0	25,0	10,0	75,0
	Teachers	19,6	0,0	28,1	0,4	40,0	26,3	12,2	73,3
	Supervisors	30,0	0,0	40,0	0,0	30,0	50,0	0,0	50,0
S. Taught	Social Sc.	20,9	0,0	28,6	0,0	40,7	30,8	9,9	69,2
	Sciences	19,1	0,0	25,0	0,7	41,2	27,2	14,7	72,1
	Humanities	19,2	0,0	37,0	0,0	35,6	21,9	8,2	78,1
Aca. Qual.	OND.	0,0	0,0	0,0	0,0	10,0	0,0	90,0	100,0
	HND.	10,0	0,0	20,0	0,0	65,0	45,0	5,0	55,0
	Bachelor's D.	22,2	0,0	13,9	0,0	44,4	19,4	19,4	80,6
	Master's Deg.	33,3	0,0	16,7	0,0	22,2	22,2	27,8	77,8
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	17,9	0,0	33,3	0,0	35,9	28,2	12,8	71,8
	B.Sc (Ed).	18,7	0,0	30,7	1,3	49,3	34,7	1,3	64,0
	B.A (Ed).	15,4	0,0	19,2	0,0	57,7	11,5	7,7	88,5
	B. Ed.	21,3	0,0	37,7	0,0	26,2	21,3	14,8	78,7
	M.Ed.	22,7	0,0	40,9	0,0	22,7	40,9	13,6	59,1
	Doctor of Ed.	0,0	0,0	100,0	0,0	0,0	0,0	0,0	100,0
L. Service	1-5	14,0	0,0	26,0	0,0	42,0	26,0	18,0	74,0
	6-10	26,0	0,0	29,0	0,0	36,0	31,0	9,0	69,0
	11-15	14,7	0,0	35,3	0,0	41,2	30,9	8,8	69,1
	16-Above	19,5	0,0	25,6	1,2	41,5	19,5	13,4	79,3

Table 16. Crosstab. Analysis of background information on how to effectively manage and arrange classroom

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	23,8	0,0	37,3	0,0	31,0	26,2	7,1	73,8
	Male	21,1	0,0	37,4	0,0	32,8	27,0	8,6	73,0
Age	20-29	22,4	0,0	30,6	0,0	36,7	32,7	10,2	67,3
	30-39	20,9	0,0	40,9	0,0	34,5	26,4	3,6	73,6
	40-49	20,0	0,0	38,3	0,0	30,8	25,0	10,8	75,0
	50-Above	42,9	0,0	33,3	0,0	14,3	23,8	9,5	76,2
Status	Principals	45,0	0,0	20,0	0,0	10,0	30,0	25,0	70,0
	Teachers	21,5	0,0	37,0	0,0	34,4	25,9	7,0	74,1
	Supervisors	10,0	0,0	80,0	0,0	10,0	40,0	0,0	60,0
S. Taught	Social Sc.	20,9	0,0	40,7	0,0	34,1	35,2	4,4	64,8
	Sciences	19,9	0,0	36,8	0,0	35,3	22,8	8,1	77,2
	Humanities	28,8	0,0	35,6	0,0	23,3	23,3	12,3	76,7
Aca. Qual.	OND.	0,0	0,0	0,0	0,0	50,0	50,0	50,0	50,0
	HND.	25,0	0,0	15,0	0,0	60,0	60,0	0,0	40,0
	Bachelor's D.	25,0	0,0	44,4	0,0	30,6	30,6	0,0	69,4
	Master's Deg.	11,1	0,0	44,4	0,0	5,6	33,3	38,9	66,7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	28,3	0,0	46,2	0,0	18,0	30,8	7,7	69,2
	B.Sc (Ed).	25,3	0,0	37,3	0,0	33,3	26,7	4,0	73,3
	B.A (Ed).	26,9	0,0	34,6	0,0	23,1	19,2	15,4	80,8
	B. Ed.	19,7	0,0	37,7	0,0	31,1	11,5	11,5	88,5
	M.Ed.	9,1	0,0	27,3	0,0	40,9	31,8	22,7	68,2
	Doctor of Ed.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
L. Service	1-5	12,0	0,0	32,0	0,0	48,0	38,0	8,0	62,0
	6-10	22,0	0,0	45,0	0,0	25,0	27,0	8,0	73,0
	11-15	25,0	0,0	36,8	0,0	32,4	26,5	5,9	73,5
	16-Above	28,0	0,0	31,7	0,0	30,5	19,5	9,8	80,5

Table 17. Crosstab. Analysis of background information on how to clearly state their objectives

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	28,6	0,0	35,7	1,6	31,0	28,6	4,8	69,8
	Male	32,2	0,6	33,3	2,3	26,4	27,6	8,0	69,5
Age	20-29	32,7	2,0	36,7	0,0	26,5	44,9	4,1	53,1
	30-39	33,6	0,0	29,1	0,9	30,0	20,9	7,3	78,2
	40-49	25,8	0,0	37,5	3,3	30,0	30,0	6,7	66,7
	50-Above	38,1	0,0	38,1	4,8	14,3	14,3	9,5	81,0
Status	Principals	35,0	0,0	35,0	0,0	20,0	25,0	10,0	75,0
	Teachers	31,5	0,4	34,1	2,2	28,1	29,3	6,3	68,1
	Supervisors	0,0	0,0	40,0	0,0	50,0	0,0	10,0	100,0
S. Taught	Social Sc.	26,4	0,0	35,2	0,0	37,4	31,9	1,1	68,1
	Sciences	33,1	0,7	34,6	3,7	22,1	32,4	10,3	63,2
	Humanities	31,5	0,0	32,9	1,4	28,8	15,1	6,8	83,6
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	50,0	50,0	0,0	50,0
	HND.	30,0	0,0	35,0	0,0	35,0	60,	0,0	40,0
	Bachelor's D.	41,7	0,0	30,6	0,0	16,7	38,9	11,1	61,1
	Master's Deg.	16,7	0,0	11,1	5,6	66,7	11,1	5,6	83,3
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	30,8	2,6	41,0	0,0	25,6	38,5	2,6	59,0
	B.Sc (Ed).	36,0	0,0	29,3	2,7	30,7	22,7	4,0	74,7
	B.A (Ed).	34,6	0,0	30,8	0,0	30,8	11,5	3,8	88,5
	B. Ed.	27,9	0,0	39,3	3,3	23,0	19,7	9,8	77,0
	M.Ed.	13,6	0,0	54,5	4,5	13,6	40,9	18,2	54,5
	Doctor of Ed.	0,0	0,0	0,0	0,0	100,0	100,0	0,0	0,0
L. Service	1-5	30,0	2,0	30,0	0,0	32,0	56,0	8,0	42,0
	6-10	29,0	0,0	30,0	3,0	37,0	21,0	4,0	76,0
	11-15	35,3	0,0	38,2	1,5	19,1	32,4	7,4	66,2
	16-Above	29,3	0,0	39,0	2,4	23,2	15,9	8,5	81,7

Table 18. Crosstab. Analysis of background information on how to construct various evaluation instrument effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	31,0	0,0	32,5	1,6	31,0	41,3	5,6	57,1
	Male	29,3	0,0	37,4	1,1	27,4	46,6	5,7	57,3
Age	20-29	42,9	0,0	20,4	0,0	36,7	61,2	0,0	38,8
	30-39	24,5	0,0	40,9	1,8	26,4	40,9	8,2	57,3
	40-49	26,7	0,0	35,0	1,7	31,7	40,0	6,7	58,3
	50-Above	47,6	0,0	42,9	0,0	9,5	47,6	0,0	52,4
Status	Principals	45,0	0,0	15,0	0,0	35,0	45,0	5,0	55,0
	Teachers	29,6	0,0	35,2	1,5	29,6	44,1	5,6	54,4
	Supervisors	10,0	0,0	80,0	0,0	0,0	50,0	10,0	50,0
S. Taught	Social Sc.	30,8	0,0	41,8	0,0	23,1	58,2	4,4	41,8
	Sciences	27,9	0,0	30,9	2,2	35,3	41,2	5,9	56,6
	Humanities	32,9	0,0	35,6	1,4	24,7	32,9	6,8	65,8
Aca. Qual.	OND.	50,0	0,0	0,0	0,0	50,0	0,0	0,0	100,0
	HND.	45,0	0,0	35,0	0,0	20,0	60,0	0,0	40,0
	Bachelor's D.	33,3	0,0	30,6	2,8	25,0	41,7	11,1	55,6
	Master's Deg.	11,1	0,0	44,4	0,0	44,4	44,4	0,0	55,6
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	33,3	0,0	33,3	0,0	33,3	64,1	0,0	35,9
	B.Sc (Ed).	32,0	0,0	30,7	4,0	32,0	38,7	5,3	57,3
	B.A (Ed).	23,1	0,0	50,1	0,0	23,1	38,5	3,8	61,5
	B. Ed.	37,7	0,0	31,1	0,0	21,3	39,3	9,8	60,7
	M.Ed.	0,0	0,0	54,5	0,0	36,4	50,0	9,1	50,0
L. Service	Doctor of Ed.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
	1-5	36,0	0,0	22,0	0,0	38,0	64,0	4,0	36,0
	6-10	24,0	0,0	38,0	3,0	34,0	45,0	4,0	52,0
	11-15	27,9	0,0	47,1	1,5	19,1	48,5	5,9	50,0
16-Above	35,4	0,0	30,5	0,0	25,6	28,0	8,5	72,0	

Table 19. Crosstab. Analysis of background information on how to employ various evaluation techniques correctly

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	27,0	0,0	36,5	0,0	32,5	42,9	4,0	57,1
	Male	25,3	0,0	40,8	0,0	28,7	37,9	5,2	62,1
Age	20-29	34,7	0,0	30,6	0,0	32,7	49,0	2,0	51,0
	30-39	25,5	0,0	40,0	0,0	31,8	39,1	2,7	60,9
	40-49	20,0	0,0	43,3	0,0	29,2	36,7	7,5	63,3
	50-Above	42,9	0,0	28,6	0,0	23,8	42,9	4,8	57,1
Status	Principals	45,0	0,0	20,0	0,0	30,0	55,0	5,0	45,0
	Teachers	24,8	0,0	40,0	0,0	30,7	39,6	4,4	60,4
	Supervisors	20,0	0,0	50,0	0,0	20,0	20,0	10,0	80,0
S. Taught	Social Sc.	24,2	0,0	48,4	0,0	24,2	47,3	3,3	52,7
	Sciences	22,1	0,0	35,3	0,0	36,8	39,0	5,9	61,0
	Humanities	35,6	0,0	34,2	0,0	26,0	32,9	4,1	67,1
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	0,0	0,0	50,0	100,0
	HND.	25,0	0,0	50,0	0,0	25,0	70,0	0,0	30,0
	Bachelor's D.	30,6	0,0	41,7	0,0	25,0	36,1	2,8	63,9
	Master's Deg.	22,2	0,0	22,2	0,0	55,6	22,2	0,0	77,8
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	30,8	0,0	33,3	0,0	33,3	48,7	2,6	51,3
	B.Sc (Ed).	22,7	0,0	38,7	0,0	33,3	42,7	5,3	57,3
	B.A (Ed).	34,6	0,0	38,5	0,0	26,9	46,2	0,0	53,8
	B. Ed.	29,5	0,0	36,1	0,0	27,9	27,9	6,6	72,1
	M.Ed.	4,5	0,0	63,6	0,0	18,2	40,9	13,6	59,1
	Doctor of Ed.	50,0	0,0	0,0	0,0	50,0	0,0	0,0	100,0
L. Service	1-5	28,0	0,0	24,0	0,0	44,0	56,0	4,0	44,0
	6-10	31,0	0,0	38,0	0,0	28,0	33,0	3,0	67,0
	11-15	22,1	0,0	50,0	0,0	23,5	45,6	4,4	54,4
	16-Above	22,0	0,0	40,2	0,0	30,5	34,1	7,3	65,9

Table 20. Crosstab. Analysis of background information on how to assess students' behavior effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	19,1	0,0	43,7	0,0	32,5	46,8	4,7	53,2
	Male	11,5	0,0	41,4	0,0	39,7	42,5	7,5	57,5
Age	20-29	22,4	0,0	38,8	0,0	34,7	63,3	4,1	36,7
	30-39	9,1	0,0	43,6	0,0	40,9	40,0	6,4	60,0
	40-49	15,8	0,0	44,2	0,0	32,5	45,8	7,5	54,2
	50-Above	19,0	0,0	33,3	0,0	42,9	14,3	4,8	85,7
Status	Principals	30,0	0,0	35,0	0,0	25,0	35,0	10,0	65,0
	Teachers	13,7	0,0	43,3	0,0	37,0	45,6	5,9	54,4
	Supervisors	10,0	0,0	30,0	0,0	50,0	30,0	10,0	70,0
S. Taught	Social Sc.	17,6	0,0	42,2	0,0	35,2	50,5	4,4	49,5
	Sciences	11,8	0,0	39,0	0,0	41,9	40,4	7,4	59,6
	Humanities	15,1	0,0	47,9	0,0	30,1	43,8	6,8	56,2
Aca. Qual.	OND.	0,0	0,0	50,0	0,0	50,0	50,0	0,0	50,0
	HND.	15,0	0,0	50,0	0,0	30,0	55,0	5,0	45,0
	Bachelor's D.	2,8	0,0	38,9	0,0	50,0	47,2	8,3	52,8
	Master's Deg.	22,2	0,0	33,3	0,0	33,3	38,9	11,1	61,1
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	15,4	0,0	33,3	0,0	43,6	43,6	7,7	56,4
	B.Sc (Ed).	13,3	0,0	44,0	0,0	37,3	49,3	5,3	50,7
	B.A (Ed).	0,0	0,0	46,2	0,0	46,2	46,2	7,7	53,8
	B. Ed.	27,9	0,0	42,6	0,0	30,0	34,4	6,6	65,6
	M.Ed.	2,5	0,0	54,5	0,0	36,4	40,9	4,5	59,1
	Doctor of Ed.	50,0	0,0	0,0	0,0	50,0	50,0	0,0	50,0
L. Service	1-5	14,0	0,0	38,0	0,0	42,0	62,0	6,0	38,0
	6-10	15,0	0,0	43,0	0,0	39,0	44,0	3,0	56,0
	11-15	10,3	0,0	44,1	0,0	36,8	41,2	8,8	58,8
	16-Above	18,3	0,0	42,7	0,0	30,5	36,6	8,5	63,4

Table 21. Crosstab. Analysis of background information on the use of evaluation data to improve job situation

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	23,0	0,0	45,2	0,8	23,8	47,6	7,9	51,6
	Male	31,0	0,0	26,4	0,0	35,6	39,7	6,9	60,3
Age	20-29	28,6	0,0	34,7	0,0	34,7	67,3	2,0	32,7
	30-39	30,0	0,0	31,8	0,9	28,2	42,7	10,0	56,8
	40-49	21,7	0,0	39,2	0,0	31,7	34,2	7,5	65,8
	50-Above	47,6	0,0	19,0	0,0	28,6	38,1	4,8	61,9
Status	Principals	35,0	0,0	35,0	0,0	15,0	30,0	15,0	70,0
	Teachers	27,0	0,0	34,1	0,4	31,9	44,4	7,0	55,2
	Supervisors	30,0	0,0	40,0	0,0	30,0	30,0	0,0	70,0
S. Taught	Social Sc.	28,6	0,0	26,4	0,0	37,4	50,5	7,7	49,5
	Sciences	25,7	0,0	40,4	0,0	27,2	39,7	6,6	60,3
	Humanities	30,1	0,0	32,9	1,4	28,8	39,7	8,2	58,9
Aca. Qual.	OND.	50,0	0,0	0,0	0,0	50,0	50,0	0,0	50,0
	HND.	20,0	0,0	30,0	0,0	50,0	65,0	0,0	35,0
	Bachelor's D.	33,3	0,0	25,0	0,0	30,6	19,4	11,1	80,6
	Master's Deg.	16,7	0,0	33,3	0,0	44,4	16,7	5,6	83,3
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	35,9	0,0	38,5	0,0	20,5	59,0	5,1	41,0
	B.Sc (Ed).	30,7	0,0	30,7	0,0	28,0	50,7	10,7	49,3
	B.A (Ed).	42,3	0,0	23,1	3,8	23,1	42,3	11,5	53,8
	B. Ed.	19,7	0,0	45,9	0,0	29,5	41,0	4,9	59,0
	M.Ed.	13,6	0,0	40,9	0,0	40,9	40,9	4,5	59,1
	Doctor of Ed.	0,0	0,0	50,0	0,0	50,0	0,0	0,0	100,0
L. Service	1-5	22,0	0,0	36,0	0,0	38,0	62,0	4,0	38,0
	6-10	30,0	0,0	32,0	1,0	27,0	40,0	11,0	59,0
	11-15	32,4	0,0	35,3	0,0	27,9	47,1	7,3	52,9
	16-Above	24,2	0,0	35,4	0,0	32,9	31,7	7,3	68,3

Tablr 22. Crosstab. Analysis of background information on how to keep records of individual students accurately

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	10,3	0,0	49,2	1,6	35,7	46,0	4,8	52,4
	Male	10,3	0,0	37,9	0,0	44,3	34,5	7,5	65,5
Age	20-29	8,2	0,0	46,9	0,0	32,7	53,1	12,2	46,9
	30-39	8,2	0,0	33,6	0,0	50,9	35,5	7,3	64,5
	40-49	12,5	0,0	45,0	1,7	39,2	32,5	3,3	65,8
	50-Above	14,3	0,0	66,7	0,0	14,3	66,7	4,8	33,3
Status	Principals	5,0	0,0	55,0	0,0	35,0	50,0	5,0	50,0
	Teachers	10,4	0,0	41,5	0,7	41,5	38,5	6,7	60,7
	Supervisors	20,0	0,0	50,0	0,0	30,0	40,0	0,0	60,0
S. Taught	Social Sc.	7,7	0,0	41,8	0,0	42,9	45,1	7,7	54,9
	Sciences	8,1	0,0	42,6	1,5	44,1	37,5	5,1	61,0
	Humanities	17,8	0,0	43,8	0,0	31,5	35,6	6,8	64,4
Aca. Qual.	OND.	0,0	0,0	0,0	0,0	50,0	100	50,0	0,0
	HND.	0,0	0,0	45,0	0,0	45,0	70,0	10,0	30,0
	Bachelor's D.	5,6	0,0	33,3	0,0	58,3	44,4	2,8	55,6
	Master's Deg.	22,2	0,0	33,3	0,0	38,9	44,4	5,6	55,6
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	20,5	0,0	23,1	0,0	53,8	25,6	2,6	74,4
	B.Sc (Ed).	4,0	0,0	53,3	0,0	34,7	36,0	8,0	64,0
	B.A (Ed).	15,4	0,0	57,7	0,0	23,1	42,3	3,8	57,7
	B. Ed.	14,8	0,0	45,9	3,3	32,8	37,7	6,6	59,0
	M.Ed.	4,5	0,0	40,9	0,0	45,5	36,4	9,1	63,6
	Doctor of Ed.	0,0	0,0	49,5	0,0	50,5	0,0	0,0	100,0
L. Service	1-5	6,0	0,0	40,0	0,0	44,0	50,0	10,0	50,0
	6-10	11,0	0,0	35,0	0,0	45,0	37,0	9,0	63,0
	11-15	11,8	0,0	42,6	1,5	41,2	30,9	4,4	67,6
	16-Above	11,0	0,0	53,7	1,2	32,9	42,7	2,4	56,1

Table 23. Crosstab. Analysis of background information on whether higher academic qualification improves teachers' job effectiveness

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	19,0	0,0	28,1	0,8	38,1	21,4	4,8	77,8
	Male	20,1	0,0	32,2	0,6	42,0	21,3	5,7	78,2
Age	20-29	20,4	0,0	32,7	2,0	38,8	34,7	8,2	63,3
	30-39	20,0	0,0	27,3	0,0	46,4	14,5	6,4	85,5
	40-49	20,8	0,0	39,2	0,8	37,5	24,2	2,5	75,0
	50-Above	9,5	0,0	52,4	0,0	28,6	9,5	9,5	90,5
Status	Principals	15,0	0,0	40,0	0,0	40,0	20,0	5,0	80,0
	Teachers	19,6	0,0	33,7	0,7	41,1	20,7	5,6	78,5
	Supervisors	30,0	0,0	50,0	0,0	20,0	40,0	0,0	60,0
S. Taught	Social Sc.	23,1	0,0	30,8	0,0	41,8	20,9	4,4	79,1
	Sciences	18,4	0,0	36,0	1,5	39,0	22,1	6,6	76,5
	Humanities	17,8	0,0	37,0	0,0	41,1	20,5	4,1	79,5
Aca. Qual.	OND.	40,0	0,0	0,0	0,0	60,0	50,0	0,0	50,0
	HND.	15,0	0,0	25,0	0,0	45,0	30,0	15,0	70,0
	Bachelor's D.	13,9	0,0	44,4	2,8	36,1	22,2	5,6	75,0
	Master's Deg.	33,3	0,0	27,8	0,0	33,3	33,3	5,6	66,7
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	17,9	0,0	38,5	0,0	43,6	17,9	0,0	82,1
	B.Sc (Ed).	24,0	0,0	32,0	0,0	41,3	21,3	2,7	78,7
	B.A (Ed).	15,4	0,0	30,8	0,0	50,0	7,7	3,8	92,3
	B. Ed.	14,8	0,0	39,3	1,6	37,7	24,6	8,2	73,8
	M.Ed.	27,3	0,0	31,8	0,0	36,4	18,2	4,5	81,8
	Doctor of Ed.	0,0	0,0	0,0	0,0	50,0	0,0	50,0	100,0
L. Service	1-5	22,0	0,0	30,0	2,0	40,0	32,0	8,0	66,0
	6-10	21,0	0,0	36,0	0,0	39,0	23,0	4,0	77,0
	11-15	20,6	0,0	29,4	1,5	42,6	16,2	7,4	82,4
	16-Above	15,9	0,0	40,2	0,0	40,2	17,1	3,7	82,9

Table 24. Crosstab. Analysis of background information on whether the ability to perform effectively in teaching in-born or acquired

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	25,4	0,0	35,7	0,0	31,0	28,6	7,9	71,4
	Male	30,5	0,0	35,1	0,0	27,6	28,2	6,7	71,8
Age	20-29	30,6	0,0	28,6	0,0	30,6	18,4	10,2	81,6
	30-39	29,1	0,0	37,3	0,0	29,1	31,8	4,5	68,2
	40-49	25,0	0,0	35,0	0,0	30,8	30,8	9,2	69,2
	50-Above	38,1	0,0	42,9	0,0	14,3	19,0	4,8	81,0
Status	Principals	30,0	0,0	35,0	0,0	25,0	25,0	10,0	75,0
	Teachers	28,5	0,0	34,8	0,0	29,3	27,4	7,4	72,6
	Supervisors	20,0	0,0	50,0	0,0	30,0	60,0	0,0	40,0
S. Taught	Social Sc.	29,7	0,0	34,1	0,0	30,8	28,6	5,5	71,4
	Sciences	25,0	0,0	38,2	0,0	29,4	29,4	7,4	70,6
	Humanities	32,9	0,0	31,5	0,0	26,0	26,0	9,6	74,0
Aca. Qual.	OND.	45,0	0,0	0,0	0,0	55,0	0,0	0,0	100,0
	HND.	25,0	0,0	50,0	0,0	10,0	20,0	15,0	80,0
	Bachelor's D.	36,1	0,0	22,2	0,0	36,1	25,0	5,6	75,0
	Master's Deg.	16,7	0,0	50,0	0,0	22,2	50,0	11,1	50,0
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	30,8	0,0	38,5	0,0	28,2	20,5	2,6	79,5
	B.Sc (Ed).	29,3	0,0	36,0	0,0	30,7	26,7	4,0	73,3
	B.A (Ed).	34,6	0,0	23,1	0,0	34,6	19,2	7,7	80,8
	B. Ed.	24,6	0,0	34,4	0,0	31,1	34,4	9,8	65,6
	M.Ed.	18,2	0,0	45,5	0,0	22,7	36,4	13,6	63,6
	Doctor of Ed.	55,0	0,0	0,0	0,0	0,0	50,0	45,0	50,0
L. Service	1-5	26,0	0,0	36,0	0,0	34,0	24,0	4,0	76,0
	6-10	29,0	0,0	37,0	0,0	26,0	34,0	8,0	66,0
	11-15	32,4	0,0	27,9	0,0	32,4	29,4	7,4	70,6
	16-Above	25,6	0,0	39,0	0,0	26,8	23,2	8,5	76,8

Table 25. Crosstab. Analysis of background information on teachers' interact with their students effectively

Background Information		Strongly Disagree		Disagree		Agree		Strongly Agree	
		Aca.	Prof.	Aca.	Prof.	Aca.	Prof.	Aca.	Prof.
Gender	Female	11,1	0,0	35,7	0,0	49,2	44,4	4,0	55,6
	Male	8,6	0,0	40,8	0,0	43,1	37,9	7,5	62,1
Age	20-29	22,4	0,0	24,5	0,0	40,8	38,8	12,2	61,2
	30-39	7,2	0,0	36,4	0,0	50,9	41,8	5,5	58,2
	40-49	8,3	0,0	47,5	0,0	40,8	41,7	3,3	58,3
	50-Above	0,0	0,0	33,3	0,0	57,1	33,3	9,5	66,7
Status	Principals	5,0	0,0	55,0	0,0	35,0	35,0	5,0	65,0
	Teachers	10,4	0,0	36,7	0,0	46,7	40,7	6,3	59,3
	Supervisors	0,0	0,0	60,0	0,0	40,0	50,0	0,0	50,0
S. Taught	Social Sc.	9,9	0,0	36,3	0,0	48,4	47,3	5,5	52,7
	Sciences	7,4	0,0	42,6	0,0	44,9	41,2	5,1	58,8
	Humanities	13,7	0,0	34,3	0,0	43,8	31,5	8,2	68,5
Aca. Qual.	OND.	0,0	0,0	0,0	0,0	0,0	41,1	100,0	58,9
	HND.	25,0	0,0	20,0	0,0	50,0	50,0	5,0	50,0
	Bachelor's D.	8,3	0,0	30,6	0,0	52,8	33,3	8,3	66,7
	Master's Deg.	0,0	0,0	61,1	0,0	38,9	44,4	0,0	55,6
	PhD.	-	-	-	-	-	-	-	-
Prof. Qual.	N.C.E.	7,7	0,0	30,8	0,0	53,8	30,8	7,7	69,2
	B.Sc (Ed).	9,3	0,0	52,0	0,0	36,0	46,7	2,7	53,3
	B.A (Ed).	15,4	0,0	23,1	0,0	57,7	19,2	3,8	80,8
	B. Ed.	9,8	0,0	39,3	0,0	41,0	44,3	9,8	55,7
	M.Ed.	4,5	0,0	36,4	0,0	59,0	59,1	0,0	40,9
	Doctor of Ed.	0,0	0,0	0,0	0,0	50,0	50,0	50,0	50,0
L. Service	1-5	18,0	0,0	24,0	0,0	50,0	42,0	8,0	58,0
	6-10	12,0	0,0	39,0	0,0	44,0	46,0	5,0	54,0
	11-15	4,4	0,0	42,6	0,0	41,2	39,7	11,8	60,3
	16-Above	4,9	0,0	43,9	0,0	48,8	34,1	2,4	65,9