

# ENSURING SCIENCE EDUCATION SCHOOLS' PRODUCTIVITY USING ACHIEVEMENT DRIVING ADMINISTRATIVE APPROACH

BY

**Hafsatu Abdullahi Umar(PhD)**

Department of Education, Bayero University, Kano

&

**Babalola Victor Tubosun**

Department of Science and Technical Education, Northwest University Kano

GSM: +2347033587119

## Abstract

*The paper looks into how science education schools productivity could be ensured using achievement driving administrative approach (ADAA). Descriptive survey research design was adapted to the study using primary and secondary sources of data. The paper is anchored with theoretical frame-works of Petercian theory. It was discovered that failure to achieve the goals of science education in Nigerian schools was due to poor leadership selection into the bureaucratic position of authorities. However, the paper recommends among others that appointment of workers into the position of authority in science education schools should not be based only on seniority but on rotation, professionalism and the traits of the workers in context.*

**Keywords:** African indigenous education, Rational, Appetitive, Temperate, Success in Education.

## Introduction

Science education is the field concerned with sharing science content and processes with individuals not traditionally considered to be part of the scientific community. Science education intended to keep every citizens including children and adults, males and females as well as educated and illiterates abreast with recent developments in the scientific community. According to section 7, item 39(a) of the Nigerian national policy on education (2004) reversed, "Science education shall emphasizes the teaching and learning of science process and principles. This will lead to fundamental and applied research in the sciences at all levels of education" (FRN, 2004).

Another target of science education is to produce science oriented work-force who can favourably compete with their contemporaries across the global world in the production of technological innovations. The field of science education comprises science content and some social sciences; each of the field of study is concerned with society and human behavior (Ugbe et al, 2014). These Author defined science education as the activation and disciplining of mind and other attributes of an individual to utilize science for improving his life, cope with increasing technology professionally and for dealing responsibly with science related issues.

Historically, Science education has been in the African societies from the time immemorial, it started as a component of African indigenous education (AIE). This AIE is an epitome of beauty to Africans in term of functionalism, naturalism, realism, idealism, pragmatism, morals and community participation. Slave trade and colonial invasion into the African Societies could be held responsible for the deceleration of indigenous education and promotion of the western type of science education. In the AIE context, Science education was indirectly taught through apprenticeship system and learning by observation of indigenous expert teachers called masters. These apprenticeship masters were parents, relatives or family friends.

The content of scientific oriented indigenous education includes; refining of palm fruit into cooking oil, electroplating of gold by the gold-smiths, production of wine through fermentation process, dyeing of cloths, Soldering of iron by the blacksmiths, production of drums and other musical instruments, etc. This traditional sciences and technologies are called indigenous science (IS) and indigenous technology (IT) respectively.

The westernized system of Science education in Nigeria did not come with establishment of the first ever secondary school called the CMS Grammar school, Badagry Lagos in 1859. The introduction of science into the curriculum came with government involvement in secondary education at the turn of this century (Ugbe, Mba, Francis and Henrietta, 2014). Later, mission schools also embarked on the teaching of science, but were mainly limited to general science or nature study. Dough, it is evident that Colonial Administration focused at the production of hand-me-down manpower that would serve them at various capacities. The level of science, Colonial masters taught was limited to Agriculture known as natural science. The topics in this Colonial education agriculture include crop-production, pest control, irrigation, animal rearing,

poultry keeping and crop preservation. All these to their selfish interest of getting maximum raw materials from Nigerian soil and preserved them for shipments into United Kingdom.

The national curriculum conference of 1969 which gave birth to the formulation of the first ever national policy on education in 1977 in Nigeria is a major contributor to the propagation of science education. According to Ugbe et al (2014), the 1969 curriculum conference efforts also lead to a myriad of curriculum development activities of 1970s and 1980s. A wide range of programmes were developed in science, technology and mathematics (STM) especially for the primary and secondary levels of education. Closely linked to this revolution was the establishment of many examination bodies such as WAEC, GCE, NABTEB, JAMB, among others which were to play significant roles in the formulation of curriculum, implementation of policies and quality assurance of Science education schools among others. This is because, before WAEC can give a center to a school, such school must possess the necessary science laboratory apparatus for the practical aspect of the science subjects such as Chemistry, Physics and Biology. This is an indirect propagation of science education in Nigerian schools. All these efforts were based on the truism that science education was recognized by the government of Nigeria as an instrument of change and national development. Ugbe et al (2014), affirms that Government recognizes Science, Technology and Mathematics (STM) as the major components of such education.

### **The Goals of Science Education in Nigeria**

The goals of science education in Nigeria, according to Section 7, item 39(b) of the national policy on education (2004) reversed are to:

- (i) Cultivate inquiring, knowing and rational mind for the conduct of a good life and democracy.
- (ii) Produce scientists for national development
- (iii) Service studies in technology and the cause of technological development, and
- (iv) Provide knowledge and understanding of the complexity of the physical world, the forms and the conduct of life.

Fortunately, it was not only Nigeria as a nation that is clamoring for science education for change and technological development but virtually every nation of the global world. However, the value of science education identified by the American Education Policies Commission in

2001 which apply to science education in general include;(i) longing to know and understand(ii)questioning all things(iii)search for data and their meaning(iv)demand for verification(v)respect for logic(vi) Consideration of premises(vii)Consideration of consequences.

In a similar vein, the goals of modern Science education as emphasized by Rennes and Stafford (2001) are synonymous with scientific literacy. The three major objectives of science education were synoptically pictured by Ugbe et al, (2014) to include; (i) develop in the learners a command of the *rational* powers (ii) to develop in the students the ability and confidence to inquire and (iii) to develop an understanding of the changing nature of the environment in terms of matter, life energy and their interactions. The achievement of these goals resultantly conglomerates into scientific literacy. Students and pupils can develop rational powers, ability and confidence through inquiries into natural phenomena and the natural world.

Everybody can develop an understanding of the changing nature of the environment in terms of matter, life, energy and interactions which are the scope of science education. Science education exposes everybody across the global world to many contemporary concepts such as Climate change, healthy living, balanced diet and nutrition, conservation of natural resources, healthy reproductive life-styles, family planning, immunizations and disease control and thus increase life expectancy rate of individuals. It is clear that these objectives of education have not been fully achieved in African Continent particularly in Nigeria. This can be clearly pictured in Nigeria in the fact that life expectancy rate is down drained. This is perhaps science schools were usually managed by the appetitive and the temperate that were only after how to gather money for their selfish interest.

This work looks at how science education schools could be rescued from parasitic and autocratic leaders to ensure maximum productivity. So, there is a need to device a more suitable administrative approach which could be used as a yard-stick to put the appropriate leader into the opium of educational leadership for the benefit of science schools organization. This was done considering Achievement Driving Administrative Approach as a suitable tool for ensuring science education schools productivity for the benefit of the Nigerian society. It is for the benefit

of the society because educational system produces manpower and responsible individual for industrial consumption and social development respectively.

### **Methodology**

The researcher adopted the descriptive survey research design using primary and secondary sources of data. The primary data employed was collected using observation as the major instrument of data collection. While multidisciplinary approach was used as secondary data collection instrument. Activities of school Administrators and their reactions toward the achievement of school goal or achievement of selfish interest were closely observed across the Nigerian levels of education in Ondo state and in Kano State, Nigeria. The ideas written in this work were strictly based on the findings made from the observation and the comments made by few workers indirectly interviewed when the matter of money is raised in relation to the school administrators. The Secondary source of data employed includes the scholarly works of experts in the field of educational administration as well as that of Philosophy published in textbooks, journal and online resources.

### **Theoretical Frame-Work**

- ***The Petercian theory***

Petercian theory posits that in a bureaucratic organization, new higher ranks is opened, but when a junior worker prove to be competent in the task to which they were assigned; they get promoted to a higher rank, which in some cases is Managerial. The process of climbing up the hierarchical ladder can go on indefinitely, until the employee reaches a position where he/she is no longer competent. The repercussion is that most of the management levels of a bureaucratic organization will be filled by incompetent people who got there because they quite good at doing different and usually but not always easier work than they are currently expected to perform.

The theory explains the effect on an employee's effort of promotion to a new and different job, which has a new set of demands. Peter and Hull (1969) who is the advocate of this theory opines that since past performance is continually used to predict future performance, eventually, people are promoted to a job where they would not be effective. Peter and Hull declare that in a hierarchy, every employee tends to rise to his level of incompetence.

Relating this theory to the issue under discuss, many temperate and appetitive have been promoted to the position of leadership in science education schools because of their academic qualifications and because they were quite good in doing other things which are dissimilar with the psychological make-up needed for the achievement of school goals and productivity. The rational who are the achievement driving fellows are the best fit for science education school leadership positions for efficient school productivity. But some of them are becoming frustrated and moving to greener pastures where they were valued for who they are and what they can do best. This is perhaps the reason why Rational Hunter School Administrators (RHSA) is more productive and rated better than the Rational Dismissal School Administrators (RDSA).

Rational Dismissal school administrators are school leaders (Appetitive and/or temperate) who see the rational set of workers as hindrance to their selfish interest. RDSA always find fault on the activities of the rational so as to prove that the rational is not effective in his/her responsibilities. Every wise leader tries to make rational their friends and advisers but foolish leader see them as enemies and they have nothing good to benefit from the rational in their organization. This is perhaps one of the reasons why people who are outside the rational working organization benefits from rational than the unfriendly and disobliging leaders who always try to fight the psychological make-up of the rational. RHSA are the school leaders who always in search and go after hardworking and highly productive teachers. For instance, a school administrator who is always in search of teachers such as;

- (i) teacher whom students passed External examination most in the state
- (ii) teacher whom students always win international competition
- (iii) the best teacher award winner in the state
- (iv) A teacher who instilled moral values in the students and psychologically eradicate truancy from the school.
- (v) The school best sport teacher.
- (vi) The school best English or mathematics teacher.
- (vii) The fastest school typist and
- (viii) The best school vocational teachers.

### **What is School productivity?**

It is imperative to observe what School productivity connotes. But before this is done, it is germane to examine the concept of productivity. Productivity is an economic term frequently used in industrial sector for production of goods and services for the consumers. Traditionally, productivity is visualized by Paul in Jide and Tijani (2012) as the relationship between output and input used to produce goods and services. The key ingredient of productivity includes efficiency, effectiveness and quality service delivery. Otoabasi (2009) asserts that productivity is typically the rate at which a worker, in establishment or institution produces goods and the amount processed compared with how much time, work and money is needed to produce them. According Bashir and Tijani(2014), productivity may be conceived of as a measure of the technical efficiency of production. As such, qualitative measure of input and sometimes output, are emphasized. From the above propositions, one can now define productivity as the rate at which a worker in an organization or organization itself produces goods and services in compares with how much time, work and money used for the production.

Consequently, the concept of school productivity is an administrative function targeted at ensuring maximum achievement of school goals. According to Olayemi (2004) in Owolabi & Makinde, (2012), “an organization is productive if it achieves its goals by transforming inputs into outputs at the lowest cost”. In a similar vein, an organization is effective when it attains its goals but productivity depends on achieving these goals efficiently. It is deduced that teachers’ productivity has direct relationship with school productivity. School productivity equates school-efficiency, school-dependency, school-sustainability and the realization of school-goals, using available resources for the progressive improvement of mankind that could be assessed and measured in the society. However, workers productivity and school-productivity are predicated on functional education, skilled manpower and technological know-how. This enables a given nation, to compete favourably among other nations across the globe in this techno-dynamic era.

School productivity is determined by the relationship between the input and output of the school in a given period of time, it is the cost-benefit relationship. It is a function of asking oneself whether the money spent on a particular school what spending again. School productivity can be measured by a number of factors. Ogundele and Oni (2007) in Adeleke, Ogundele and Oyenuga(2008) posit that things which determines performance include technology,

structure(organizational structure) and size(school population), communication(vertical and horizontal communication across the school organization structure), the human elements (management and employees), the larger market(students' population), competition(national and international competitions), source of raw materials and supplies(how many foreign students are in the school), legal structure(does the school has rules and regulations to guide do and don't of the students as well as controlling both actions and inaction of staff), socio-cultural contents(does the school serving its purpose of conserving the social culture), globalization(does the school popular within and outside the nation's boundaries) and so on. Abdulkareem and Oyeniran (2011) suggest the parameters for measuring productivity in Nigerian universities as; Number of Students, the teaching indicators (graduation number of recipients of bachelor, master and doctoral granted by the university, teaching load of teachers), research outputs (number of publications i.e. books, book chapters, journal articles, conference papers and other scholarly articles, quality of research publication, total grant received), community service(social assistance, scientific meetings, consultant activities, seminars and symposia for the local communities, technical services rendered), etc. Science education is said to be productive if it achieves success in its stated goals. The Victor's Model of ADAA in fig.1 further explains. Thus;

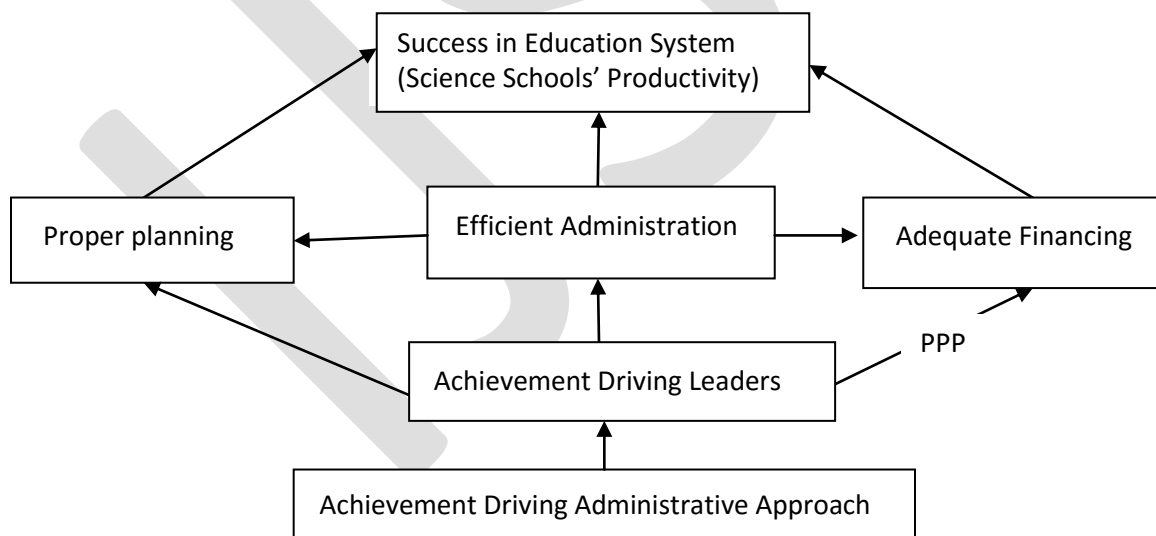


Fig.1: Victor's Model of Achievement Driving Administrative Approach; Source: Authors

According to section 12 item 103 of the national policy on education (NPE) 2004 reversed, "The success of any system of education is hinged on proper planning, efficient administration and adequate financing. Administration is a function of organization and structure, proprietorship and control, inspection and supervision". Without efficient school leaders in science education

schools no success could be achieved because wrong leaders would always produce wrong plans and mismanage the available educational funds. As shown in Fig.1, Achievement driving administrative approach focus in the production of Achievement driving school leaders. These achievement driving leaders are rational who devote time for proper planning, efficient administration and provide alternative ways of financing education through public private partnership (PPP). As shown in fig.1, proper planning, efficient administration and adequate financing are major determinant of education system's success otherwise school productivity. Achievement driving leaders see inadequate finance as a major threat to educational development and tap the opportunity of PPP in educational finance. PPP is an alternative way of financing education in which the school administrators bring individual and a group of philanthropists within and outside the school host community through effective school-community relationship to join hands with government to ensure adequate educational finance.

However, at the primary and secondary echelons of education, indicators of school productivity are as follows;

(1) **Teachers' productivity;** this can be expressed as the ability of the teachers to exhibit the qualities of good teachers. These qualities includes;

**(a) Educational Guidance:** Educational guidance is an American innovation focuses on complete development of individual students through a series of services designed to maximize school learning, stimulate career development and respond to the personal and social concerns that inhibit individual growth. According to Kabir (2015), educational guidance can be defined as a process of helping students to achieve self-understanding and self-direction necessary to make informed choices and move towards personal goals.

**(b) Educational Supervision;** this includes the teacher's duties of supervising, inspecting, assessing and evaluating the students regularly. It also involves effective classroom management. Educational supervision also entails students' project supervision. The quality of a teacher can be identified by the quality of the students' project he/she supervised.

**(c) Contribution to knowledge;** a productive teacher should be able to contribute to knowledge both locally and internationally through creative writing and cross-fertilization of ideas through conference participation and workshop participation. It is

not a taboo for Nigerian scholars to become a theorist internationally. Nigerians have long been studying foreign laws and theories which were totally not in conformity with African tradition, economic, political and social background. Some of these laws and theories have become so obsolete and failed to provide solutions to Nigerian issues and challenges. It's high time the Nigerian teachers started to be productive and contribute to knowledge worldwide by formulating laws and theories for other nations of the world to study. A teacher who is a theorist is productive.

**(d) Student Academic performance;** a teacher whose students performed better in an external examinations like Upper basic education certificate examination (UBECE), West African Examination certificate (WAEC), National examination council (NECO) and UTME is said to be productive than the one whose students failed.

**(2) School performance in competitions:** Schools where students came 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> in inter-schools competitions are said to be productive than those that students came last. Since human is governing by universal law of reason, it is very clear that the parents and guidance (school customers) will prefer to take their children to productive schools where students do perform better.

**(3) School drop-out rate:** The time has come in Nigeria where the teachers have to swear an oath like medical doctors of rescuing the student from being a school drop-out. This is because many tertiary institution teachers seems so delighted when students drop-out from school which is not so to the medical profession where medical doctor always struggle to the last breath to save their patients' lives. Illiteracy is a great disease which is capable of killing entire nation; the school doctors that these responsibilities reposed on are the school teachers. A school with minimum number of students drop-out is said to be productive than those with large number of drop out.

**(4) Academic achievement of the students:** One of the criteria of school productivity is good student academic achievement. Schools that the students perform excellently well in external examinations are said to be more productive than those with poor or low academic performance.

**(5) Graduate certificate Class and performance:** It is obvious that many school graduates in Nigeria cannot defend the certificates they are carrying during interviews. This is a situation whereby a first class graduate from a school cannot compete with a third-class

graduate of another school favourably, especially during interviews. Therefore, the later institution is more productive than the before. Similarly, inability to defend result is not only limited to tertiary institutions but also in the secondary school level where students with Distinctions across their O-level result cannot pass UTME and Post UTME to secure admission into tertiary institution. All these maladjustments are the symptoms of lack of school productivity.

**(6) Moral standard of students and graduates:** Schools with high moral standard of students and graduates as products are more productive than those with immoral students and graduates such as smokers, tugs, cultists and rapists among others. Students and teachers with high moral standard can easily be seen even in their mode of dressing.

**(7) Community participations of the school products:** The school which has produced great men and women in their community, local government, State and in the nation is consider more productive than those without any record of successful people as products in their locality. Today, schools with great men and women as products do receive regular financial aid and publicities from Old Student Association (OSA).

### **Administrators' Views of Achievement Administrative Approach**

Over time in the field of administration and planning, a number of theories of leadership have been proposed, these including; Great Man theory and Behavioral Theories such as “Theory X and Theory Y”, etc.

- **Great Man Theory**

Great Man (Woman) theory, assumes that the leader is different from the average person in terms of personality traits such as intelligence, perseverance, and ambition. Trait theory believes that People are born with inherited traits. Some traits are particularly suited to leadership. People who make good leaders have the right combination of traits. This is in line with the fact that many great leaders in the past never gone through any formal leadership training, yet they were successful leaders. However, critics of this theory believe that people who were not natural leaders (people without leadership traits) could be trained to be successful leaders.

- **Theory X and Theory Y**

Theory X and theory Y is a dichotomy theory of human behavior formulated by Douglas McGregor in 1960 and presented in his paper entitled “The Human side of Enterprise”.

### **Assumptions of theory X**

The postulates of theory X according to James & Barry (2007) in IAAP (2009) includes;

- (a) Employees inherently dislike work and whenever the opportunity arises will make attempt to avoid it.
- (b) Because employees dislike work, they must be coerced, controlled, or threatened with punishment in order to achieve the desired goals.
- (c) Employees will shirk responsibilities and seek formal direction whenever possible.
- (d) Most workers place security above all other factors associated with work and will display little ambition.

### **Assumptions of theory Y**

The postulates of theory Y according to James & Barry (2007) in IAAP (2009) supported by Bello (2014) include the following;

- a) Employees can view work as natural as possible just as rest or play
- b) Men and women will exercise self-direction and self-control if they are committed to achieve objectives
- c) The average person can learn to accept, even seek, responsibility
- d) The ability to make good decisions is widely dispersed throughout the population and is not necessarily the sole province of managers.

According to Fred & Allan (2008), McGregor believes that the classical approach was based on theory X assumptions about people. By this, it means that workers in theory X are naturally lazy and they must be forced, coerced and threatened with punishments before they could be productive. It is hereby reasonable to realize that lazy workers of the type referred to in theory X are not suitable to lead the science school organization. If productivity must be ensured, leaders of Science education schools must be a role model of hard-work to the teachers and students.

### **Philosophers' views on nature of Leaders: Justice versus Injustice**

Philosophers has been known from the time immemorial to be seekers and lovers of knowledge, At this juncture it is imperative to examine what great philosophers of the ancient time said about the nature of people with suitable trait to rule the society or an organization. Aristotle (384-322

B.C) and Plato (427-348 B.C) that were among the greatest philosophers ever lived in the history of mankind had unintentionally vouched their supports for Achievement Driving Administrative Approach. According to Aristotle, Justice demands that people are adequately rewarded for their efforts and achievements. This reward is expected to include promotion to leadership position.

However, this conception of justice could be attributed to Plato, in his book “The Republic of Plato”. An individual is a component of three parts; reason, spirit and desires. The just person is the one who is governed by reason and so he is in the best position to rule or lead the society (Plato, 1713). In like manner, people in a society are classified into three: the rational, the temperate and the appetitive. According to Plato, the rational (Natural leaders) are committed to philosophy and other intellectual activities often lead to achievement of goals. The temperate (Natural Security) are best at protecting the city while the appetitive (public funds looters) are given to satisfaction of desires. Justice in Plato’s view is to make each category of people to perform the task s/he is best fitted. Plato clearly states that, it is injustice to allow the appetitive or the temperate to govern (lead) the society. Similarly, it is injustice for appetitive or the temperate to be allowed to lead any science education schools. This work does not go against any personality from becoming a leader in a science education schools, it only emphasizes that each personality should be allowed to govern the areas where they are best fit for under the atmospheric condition of distributive leadership Style considering their psychological makeup. Who are the rational, appetitive and temperate?

- **The Rational**

The Rational according to Plato’s classification above is referred to as the Achievement Driving Administrative leaders in this work. Achievement driving leader (ADL) derives joy not in the money gotten from the work-done but on the achievement of organizational goals. Other characteristics of ADL include;

- (i) They put other people’ financial needs first before their own. They dislike financial injustice to others and they do not want to be cheated by others.
- (ii) They become sad as if they were the only one who failed when the organization fails. Among students, they like to be group leaders when given group assignment so that they can make their group the best.
- (iii) They sometimes wake up at night to plan on how to achieve the set goals of the organization.

- (iv) Appetitive may fall sick if he/she is over-ruled by a group leader who did not listen to his/her plan of how to achieve the goals. They are desperate to achieve school goals.
- (v) Sometimes idea of a rational individual seems not understandable because their reasoning faculty is exceptional and philosophical in nature. So, the best way to understand them is to give them leadership position and see how unreasonable idea is transformed into noticeable problems' solutions and achievement of goals.
- (vi) The best time to see an appetitive smile is when they achieve a goal and they do not forget their area of failure that a wrong person in a leadership position caused them. They keep talking about the failure to avoid the future occurrence of such failure.
- (vii) The rational likes to involve in virtually every activities in the organization, they dislike idleness and they hate to be part of a failed group. So, they try all they could to avoid failure and the best way to achieve this is to involve them in virtually every organizational activity.
- (viii) At the primary and secondary levels of education, they are usually found around the school, training the students for inter-school competitions such as quiz, debate, and/or relay race.
- (ix) The ability of an achievement driving teacher to achieve goals becomes exposed when they are made the house- masters during the school inter-house-sports; they always make sure they collect 2/3 of the total medals or trophies available for the competitors.

The rational are the asset of every organization. Every organization is hunting for them because they determine to a greater extent the organizational productivity. So, not giving them responsibilities is like giving them opportunity to develop personal abilities and achievements that will eventually make them better than even the leader of the organization in the nearest future. Thereby, the best way to keep a rational in virtually equal level with others in the organization is to keep them busy with many responsibilities and leadership positions. These will make them work for the organization rather than working for themselves.

- **The Temperate**

The temperate is a leadership personality which makes the leader very coercive in nature. Temperate leaders (TL) are very observant and naturally protective. People fear the organization because of them. They get easily provoked when people disobey them. If they are found in the leadership position, they exhibit autocratic leadership style. They hardly take advice and

whatever they said is finally. Temperate individual sometimes exhibits some of the characteristics of the rational but they use iron hand. The most dangerous aspect is when a temperate leader is also exhibiting appetitive characteristics; the organization will definitely experience artificial under-funding as the fund met for smooth running of the school may be diverted to another account for selfish interest. Such will loot the public funds without exhibiting fear or shame because the other workers will notice but nobody will be able to talk in his presence out of fear. They transform their followers into backbiters and made organization filled with fake smiles and laughter. The temperate is not useless in the organization but as the security intelligence and guides, they are to be employed to protect the school but not as school head.

- **The Appetitive**

Appetitive is a personality that is focused and committed to satisfactions of personal interest other than the achievement of organizational goals. They often bribe people to gain leadership position in areas very close to public funds. They are public funds looters. For an organization to move on, they should not be giving leadership positions in an area that is very close to organizational funds. If need be, they should be allowed to lead an organization segments where they will never have contact with organization funds. These set of people always like to contribute lesser funds than the least ranked workers towards organization development or achievement but when it comes to reward they demanded to be rewarded highest because of their highest qualification and rank. According to Plato, it is injustice to make an Appetitive a leader of the organization. Similarly, it is injustice to make an appetitive leader of a science school.

### **ADAA and Distributive leadership Approach (DLA): The nexus**

Many scholars in the field of administration and management studies have been realized that distributive leadership approach is the best leadership style for the management of a social organization in which school as an Open system is not an exception. Distributive leadership style is a leadership approach in which every sub-system of the entire school organization is appointed a leader in a bureaucratic structure. Each of these leaders is accountable to his/her superior who is the head of a science school. However, distributive leadership approach failed to describe the metaphysical make-up of the person who should be the overall head of science schools. It only believes that in a bureaucratic set-up when the junior workers prove to be efficient in the responsibility committed to them, they got promoted to the position of leadership which may

sometimes be their post of incompetence. It sometimes becomes their post of incompetence if their psychological make-up (that is appetitive, temperate and rational) does not fit the position of leadership promoted to.

In most cases in a bureaucratic organization people tends to be partial, ethnocentric and religiously sentimental when more than one people in the same level are seeking appointment into a leadership position of an organization. This is the area where achievement driving administrative approach comes in and gives guideline on how to make a better choice into the mantle of school leadership especially when more than one academically qualified people are available to be appointed into a single leadership position. It is of the opinion that the rational among them should be given opportunity to lead.

### **Effects of Achievement Driving Administrative Approach on School productivity**

Achievement driving administrative Approach (ADAA) produces leaders who derive joy in the achievement of school goals and make the school productive. School productivity has to do with the school leaders using his/her skills to make things work within the school organization. They are not after how much they make as their take-home-income but how much achievement they make on daily bases. As far as their achievements are labeled with the organization name, the school becomes noticeably productive.

### **Summary**

This work perused into the characteristics of three metaphysical natures of workers in science education schools which include appetitive, temperate and the rational. According to Aristotle, it is not wrong for workers to be rewarded with promotion when they perform excellently well in the responsibility given to them. At the same time, Plato states that it is injustice to make appetitive or temperate the overall leader in a society (Science schools).

This work does not go against any personality from becoming a leader in science education schools, it only emphasizes that each personality should be allowed to govern the areas where they are best fit under the atmospheric condition of distributive leadership Style. Also, the best way to keep rational individual workers working for the organization is to give them many

responsibilities which lead to the achievement of organizational goals. It was discovered in this work that unwise leaders tend to make rational workers, enemies and so they have nothing good to gain but everything to lose which will negatively affect the school productivity. The number of rational workers in the organization observably has a direct relationship with the organizational productivity.

### **Conclusions**

Science education schools which are strictly the hope of the nation for technological development and scientific sensitization of the citizens must be taken serious. The leadership position in these organizations should not be handled with levity hand. Achievement driving administrative approach is in agreement with distributive leadership style which was considered very effective by many administrative scholars. However, this work finally gives specifications and guidelines on how to make the best choice into the leadership positions of science schools in the presence of workers with equal level of qualifications. Also, to clarify the concept of justice versus injustice as related to appointment of workers into leadership position, organization workers who have done well in their respective positions should be promoted to the position of authority where they are best fit based on their traits; Appetitive workers should not be given responsibility where closer to the school funds, temperate should be put in charge of law enforcement and security of the school properties, while the rational should be allowed to lead the entire school organization. People with different traits could be easily identified by rotating workers in the leadership position. This is because the achievement ability of an individual in an organization could be assessed if they are given opportunity to act as leaders. The paper is in agreement with distributive leadership style where the position of leadership is decentralized within an organization to ensure maximum productivity.

### **Recommendations**

To ensure science schools' productivity using achievement driving administrative approach, the following suggestions should be implemented in science education schools.

- (1) Workers and leaders should be adequately rewarded when they achieve any of the school goals which on the long run will result to the school productivity.

- (2) School leaders should read this paper and learn how to identify achievement driving fellows among their workers for the benefit of the organization productivity.
- (3) Appointment of workers into leadership position or position of authority in science education schools should not only based on seniority, but on rotational bases or otherwise the metaphysical nature of the people to be selected.
- (4) School administrators should not allow appetitive personality around science school funds; the temperate should be given security responsibility, while the rational should be allowed to lead the entire school organization to ensure maximum school productivity.

## References

- Abdulkareem, A.Y. and Oyeniran, S. (2011). "Managing the performance of Nigerian Universities for sustainable development using data envelopment analysis," *International journal of academic research in business and social sciences* Vol. 1, Special Issue: Available at; [www.Hrmars.Com](http://www.Hrmars.Com)
- Adeleke, A., Ogundele, O. J. K. and Oyenuga, O. O.(2008). *Business policy and strategy* Lagos: Concept publications limited.
- Bashir, B. and Tijani, O. A. (2014). *Globalizing entrepreneurship education for self-reliance and Productivity in Nigeria: The imperative of information communication technology*, Onitsha: West and Solomon publishing Coy Ltd.
- Federal Republic of Nigeria,(2004). *National policy on education*, Lagos: NERDC.
- IAAP, (2009). *Leadership theories and styles*, administrative professionals' week event, April
- James, M. K., & Barry, Z.P. (2007). *The leadership challenge*, 4<sup>th</sup> Ed., Bass Publishers.
- Jide, M.B. &Tijani, O.A.(2012). Quality teachers' education and national productivity: issues and challenges, *Nigeria academic forum journal*. 21(1):51.
- Kabir, B.D. (2015). Relevance of Philosophy of education to counseling practice in Nigeria; *Kano Journal of educational Studies*, 4(2): 7-16.
- Ogundele, O.J.& Oni, K. (2007). "Introduction to entrepreneurship development, corporate Governance and small business management, Lagos: Molofin Nominees
- Otoabasi, A. (2009). Recreating education for national building, *Journal of qualitative education* 5(3):2.
- Owolabi, S.A. & Makinde, O.G.(2012). The effects of strategic planning on Corporate Performance in University education: A study of Babcock University, *Kuwait chapter of Arabian journal of Business and management Review*. 2(4):27-44
- Plato (1713); *An edition of plato's Republic* published by Cambridge University around 380BC.
- Rennes, A. & Stafford, E.(2001). *Science, technology and economic growth in developing Countries*, Oxford: Pergamon press.
- Ugbe, A. U., Mba, T. M., Francis, O. U. & Henrietta, N. H. (2014). *Science education curriculum and Technology development in Nigeria: Implications for vision 2020*. The imperative in tertiary education in Nigeria, Onitsha: West and Solomon publishing Coy Ltd.