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Managing Editor's Introduction to Volume 6, Nos. 1 & 2, June 2006.

Two significant improvements happened to The African Symposium (TAS) since the last issue was published in December 2005. First, TAS is now listed by CSA's PAIS International. CSA is a worldwide information company that, among many other functions, guides researchers to disseminate information about their work. Researchers in more than 4,000 institutions worldwide use CSA information resources, providing quality abstracts and indexes of published journal articles electronically. PAIS International contains over 553,300 journal articles from 120 countries. As such, it is one of the most widely used academic databases around the world. Second, the United States Copyright Office of the Library of Congress has registered The African Symposium allotting ISSN TX 6-342-323. For those who are facing difficulties with promotion and/or tenure because TAS is wholly on-line, being indexed by PAIS International with an ISSN will certainly help to reinforce the fact that TAS as an academic journal is internationally recognized.

As usual, this issue contains articles on various educational and human development issues in and on Africa. Ololube's paper evaluates the leadership styles and management practices of Nigerian education administrators using the European Foundation for Quality Management Excellence Model. Part of his findings is that the Nigerian Ministry of Education is faced with myriad of problems, which hinder the attainment of its aims and objectives. Suggestions are offered on how these problems might be reduced and excellent educational planning in Nigeria enhanced.

Aladejana and Odejebi's paper described the concept of Nigerian indigenous science education and its various components. The end was to examine how the curriculum could reflect the utilitarian function of science and its relevance to the Nigerian child's society and personal experiences. The place of taboos and speculations in indigenous science was examined drawing relationships between concepts and activities in indigenous and modern science. The implications of these for curriculum reform of modern science to incorporate some relevant aspects of indigenous science with the overall goal of improving learning were discussed.

The investigation of the extent and nature of insurance provision for 70 randomly selected public secondary schools in Osun and Oyo States of Nigeria was the focus of Ejieh et al.'s paper. Questionnaire, interview, and observation were used to collect data for the study. The study unveiled the main reason why most of the studied schools were neither insured nor had any plans for buying insurance covers as lack of funds. The state government's role was only advisory in regard to security of school property and did not provide funds for insuring schools. The need for school administrators to view insurance as a necessary plan against disruption of school activities was pointed out.

Alamina's paper considered the implications of the constructivist theory to teaching and learning. Attention was given to the implications based on some research findings on students' ideas of chemistry concepts as they relate to aspects of pedagogy which were: presentation of learning materials, presentations of some ideas in textbooks, linguistic issues, and evaluation of learning and diagnoses of learning problems.

Eweniyi and Ogunyemi's paper investigated the role of campaign in the awareness of HIV/AIDS epidemic among Nigerian University undergraduates and its implication for National Development. Two independent studies were carried out with three hypotheses formulated and tested. In-depth interview and questionnaires were used for data collection while simple

percentage and t-test were used in analysing the qualitative and quantitative data generated. Results obtained indicated that the respondents were knowledgeable about HIV/AIDS. Also, gender, level of education, and respondents' parental educational status were barriers to their awareness level of HIV/AIDS epidemic. Implications for national development were articulated and paper concluded that there was need for more massive and aggressive campaign about the disease by individuals, groups, government, and non-governmental agencies. The reason why the Inspectorate of Education in Uganda has not been effectively accomplishing its mission of school inspection from the 1990s to 2002 was investigated by Julius Omona. Drawing from the array of potential determinants of organizational effectiveness variables theorized in the existent literature, organizational culture was one such variable that was investigated because of its apparent and significant role in this regard. Based on the analysis of the perceptions of 100 educational stakeholders in the 2002 survey; descriptive and inferential statistics and other qualitative data were used to establish that organizational culture of the Inspectorate was ineffective, contributing to the agency's overall inability to effectively accomplish its mission. The study recommends that other public sector organizations should critically address the issue of organizational culture if they are to effectively meet to growing demands for provision of quality services.

Aremu and his colleagues investigated the perception and knowledge of Nigeria Police trainees on the Nigerian Police crest and color. The study sample consisted of 400 police trainees (228 males, 172 females). Participants' age ranged between 18 and 27 years. Three null hypotheses were tested for significance at .05 margin of error using analysis of variance statistics. Results showed that police trainees had a good perception and adequate knowledge of police crest and color, but showed some differences when compared along gender, age, and time spent in training. The paper emphasized the implication on the Nigerian Police and policing responsibilities generally. Adeyemo's paper investigated the effects of personality factors such as self-efficacy, locus of control, self-esteem and neuroticism on career commitment. The subjects were two hundred randomly selected nurses from the public service of Oyo State, Nigeria. Five standardized instruments were used to collect data from the subjects and multiple regression analysis was used to analyse the data. The results show that the psychological factors employed in the study did not make significant contribution either collectively or relatively to the prediction of career commitment. The study therefore recommends the improvement of condition extrinsic to the job as a way of enhancing nurses' commitment to their profession. Nora Osakwe presented the Indigenous Communicative Teaching Approach (ICTA), an integrative strategy in the teaching and learning process, paying attention to the peculiar nature of the learner and the learning environment. The paper discussed the theoretical framework and components of this instructional method in relation to its usefulness in achieving multidimensional goals, especially focusing Health Rights. Using practical examples, the author provides a step by step procedure for implementing this approach in an English lesson which focuses on Health.

An Approach to Quality Improvement of Education in Nigeria through EFQM Excellence Model

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Abstract

The purpose of this paper is to specifically evaluate the existing leadership styles and management practices in the education environment in Nigeria using the European Foundation for Quality Management (EFQM) Excellence Model, and identify some excellence-related factors associated with success in the model. While this exploration was a survey research as depicted in figure 3, the population of study consisted of senior staff of the Ministry of Education. Questionnaire was used for data gathering through a random sampling procedure. Data were analyzed through the use of quantitative research procedures. The findings revealed that the leadership styles and management practices used by the Ministry of Education are not relevant to the educational development needs of Nigerian schools; also there are relationships between the leadership styles and management practices used and the level of educational performance. The study further revealed that the Ministry of Education is faced with enormous constraints which hinder the realization of its aims and objectives. This research paper fulfils a need to provide the Ministry of Education, educational administrators, policy makers, educational planner and researchers that are interested in empirical information methods that might help them improve the quality of education with a framework and guide for assessing and planning towards sustainable excellent improvement in Nigerian education.

Keywords: Excellence model, Excellence in education, Educational system, Ministry of Education, Nigeria

BACKGROUND INFORMATION TO THE STUDY

This study came about after a long reflection on Nigeria's educational leadership and management strategies. Educational leadership and management strategies were chosen as a focus for this study because of its importance in contributing to educational success. However, if the superhero images of educational leadership do not work, meaning that the mandates and incentives are not powerful enough to function as engines that will drive our efforts to improve schools. Nonetheless, in tomorrow's world, success will depend upon the ability of leaders to harness the capacity of human and material resources to further educational responsibilities (Fullan, 1993).

The role of education in research, evaluation, teaching, information transfer, and technological development is critical to nationwide social progress and economic growth. That is why the social benefit for individuals and crucially for societies provides the main justification for increased investment in education in both developed and developing countries. However, confidence in human capital theory continues to underpin the belief in economic benefit from educational investments (Anyamele, 2004). In addition, much recent writings on the "rise of knowledge economies" (e.g. Carayannis & Laporte, 2002; Neef, 1998) assign important role to educational institutions, because the world over, education is the major vehicles for economic and social development, and it has been a known fact that institutions of education have the responsibility for equipping individuals with the advanced knowledge and skills required for positions of responsibility in government, business and professions (Ololube, 2004; Osunde & Omoruyi, 2004). Thus, we agree that education appears to play a central role in supporting both advanced forms of capitalism and new forms of democratic citizenship. From these perspectives, education is reasonably claimed to be about the transformation of society (Boaduo, 2005).

Likewise, students, parents and society are demanding much more from schools as education becomes more and more important for national economic competitiveness, growth and even survival. Therefore, the need for the education sector to better understand quality concepts and apply quality principles and tools becomes imperative. Interestingly, developments and projects related to quality management in education have been conducted across the world, mainly in the United States and Europe. Among them are several approaches that can be used to guide the implementation of quality management principles in schools. One that has been followed with success involves the adoption of EFQM Excellence Model to support self-assessment practices and continuous improvement. This model has inspired research at all levels of education—from kindergarten to higher education (Saraiva et al., [n.d]).

The administrator in the educational system in Nigeria, the Schools Board, the Ministry of Education or even the government from time to time make minor and major policies and decisions that would make for effective utilization of resources in the educational system. The effectiveness of the control measures and management depends to a large extent on the ability of these reference groups to make and take effective decisions at the right time (Nwuzor, 1979). Thus, it becomes unmistakable to highlight that the decisions, policies and strategies employed by the aforementioned are not effective which has led to a decline in education in Nigeria. In addition, the decline in the standard and quality of education from kindergarten to the university is as a result of dwindling resources, poor national economic performance, inappropriate governing structures, political interference, educational instability and so on (Salisu, 2001). The evidence seems strong when Shattock (2003) averred that, one of the major causes of academic inefficiency is low academic morale and the low public esteem in which education is often held is the extent to which institutional infrastructure has been allowed to decline. As a result, effective research, teaching and learning cannot be delivered when libraries are badly run, computer systems break down, and teaching room facilities are inadequate. That is to say, study time will be wasted if administrative and financial systems are unreliable.

Therefore, it is my belief in this study that improving the quality of educational management in Nigeria can add value to educational institutions by enhancing their quality to function effectively and respond to the needs of changing society. This study might assist Nigerian schools as well as those in other developing countries to effectively manage their educational systems in the areas of research, scholarship and service through adequate utilization of their financial resources. This study was undertaken with the belief in the argument that good management strategies is a necessary condition for effective and worthwhile teaching, learning and research, whereas its neglect poses a serious threat to core academic values (Anyamele, 2004; Shattock, 2003). The Ministry of Education in Nigeria need to adopt/accept contemporary management approaches, that will enable educational institutions to realize the full potential of their staff and students in order not to suffocate initiatives with outdated management techniques.

PURPOSE OF THE STUDY

The enthusiasm to carry out this research was inspired by the desire to examine EFQM Excellence model from the perspective of the education environment. In particular, it looks at leadership styles and management practices in Nigeria, which is built on the theoretical frameworks of EFQM Excellence model.

The research objectives and questions of this investigation are made to order for the study of Nigerian educational management practices, with the view to ascertaining the degree to which the existing leadership styles and management practices impact on educational development and

quality improvement. The study addressed major steps in quality improvement in education in Nigeria. Specifically, this study is designed with the following objectives:

- To examine the leadership and management role played by the Ministry of Education toward sustainable excellence improvement in Nigerian education.
- To explore if there are any relationship between the leadership style and management practices used by the Ministry of Education and the level of educational performance?
- To scrutinize the Ministry of Education constraints in improving the basic processes of research, teaching and learning in schools.

To give direction and focus to the study, the following research questions were raised to guide the study. The questions were constructed to suit Nigeria's educational system.

- Are the leadership styles and management practices used by the Ministry of education relevant to the educational development needs of Nigerian school?
- Is there any relationship between the leadership and management practices used and the level of educational performance?
- What are the major constraints encountered by the Ministry of Education's efforts in seeking to realize its aims and objectives?

CONCEPTUAL FRAMEWORK

The EFQM Excellence Model was introduced at the beginning of 1992 as the framework for assessing organizations for the European Quality Award. It is now the most widely used organizational framework in Europe and it has become the basis for the majority of national and regional Quality Awards. The EFQM Excellence Model is a non-prescriptive framework based on 9 criteria. Five of these are 'Enablers' and four are 'Results'. The 'Enablers' criteria cover what an organization does. The 'Results' criteria cover what an organization achieves. 'Results' are caused by 'Enablers' and 'Enablers' are improved using feedback from 'Results'. The Model, which recognizes that there are many approaches to achieving sustainable excellence in all aspects of performance is based on the premise that excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy that is delivered through People, Partnerships and Resources, and Processes (European Foundation for Quality Management, 2005). However, the EFQM excellence model usage in the public and private sector has grown over the years not only in the United Kingdom alone but in other European countries and outside the EU (Herbert, 2001). In the UK alone it is reported that even in as far back as 1996, 35% of companies or organizations were found to be using or intended to use the EFQM Excellence Model as a guide to self-assessment (Consortium for Excellence in Higher Education, 2003).

In Portugal for instance, a large-scale project at 47 schools was based on the application of the European Foundation for Quality Management (EFQM) Excellence Model (Saraiva et al, [n.d]). In other parts of Europe, some universities have used the model for their quality development. For example, at least the Eindhoven University of Technology (TUE), Netherlands, and the Swiss Federal Institute of Technology (ETH), Zurich, have used the EFQM as a basis for their own quality model for the university (Blomqvist, 1997). An extensive discussion concerning the applicability of the model in the education environment can be found for example in the articles by Zink and Schmidt (1995, 1998). This well-known model had already been widely used in spite of cultural disparities for achieving excellence by businesses, other leading organizations, government agencies and national quality award programs throughout Europe and abroad. However, great success has been achieved so far following its application in schools in around the world.

The Federal Government of Nigeria has a nonspecific strategy and operational methods for educational management, this direction is set out in the National Policy on Education 1981 reversed 1989 (Federal Republic of Nigeria, 1989), which describes the plans and purposes of the nation's educational policies aimed at best practices and better quality educational services. Unfortunately the said plans are not functioning. Best practice is described as the process of seeking out and studying the best inner and outer practices that produce better-quality performance in the education sector to meet the needs and aspirations of its citizenry. There has been mounting pressures on the Ministry of Education and other bodies such as Schools Board to adopt an approach which will support and nurture sustainable educational development and institutional changes in its policies and administration in a holistic way that will create innovations. This requires organizational techniques to enable Nigeria move deeply into a performance management tradition to enhance educational production. EFQM Excellence model offers a holistic approach to institutional leadership and management that many other management approaches has not offered previously. It is clear from the Excellence model that regardless of sector, cultural settings, size, structure or maturity, to be successful, organizations need to establish an appropriate management framework.

The EFQM Model is presented in diagram form below. The arrows emphasize the dynamic nature of the Model. They show innovation and learning helping to improve enablers that in turn lead to improved results.

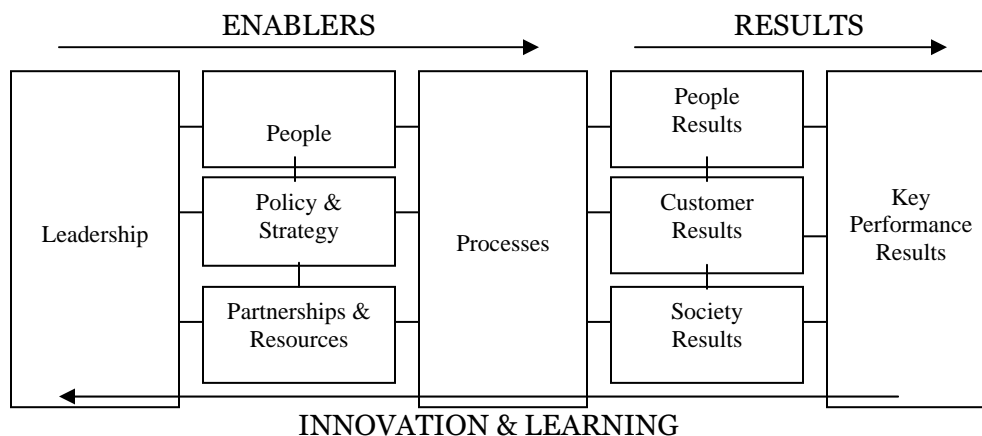
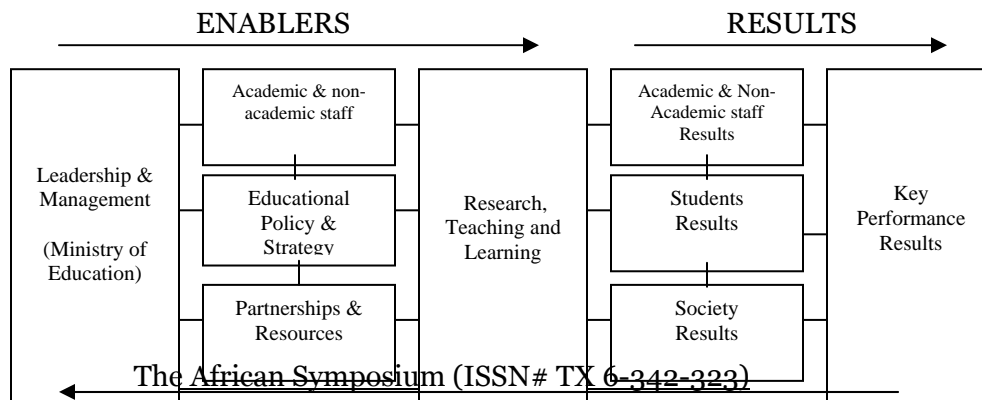


Fig. 1: The Original EFQM Excellence model
Source: The European Foundation for Quality Management 1999

However, the EFQM Excellence Model has been modified by the author to fit the Nigerian education environment.



INNOVATION & LEARNING

Fig. 2: Author self-modified version of EFQM Excellence Model for Application to Nigerian Educational Management

LITERATURE REVIEW

Leadership and Management processes

Leadership is the process of influencing employees towards achievement of organizational goals (Naylor, 1999). Leadership provides a guide to action in education setting by contributing to the achievement of excellence. Outstanding leaders have a vision for their institutions. They have a mental picture of preferred future, which is shared with all in the institution and which shapes the programs of learning and teaching as well as policies, priorities, plans and procedures pervading day-to-day life of the institution (Beare et al., 1997). However, no matter how effective leaders could be, they are faced with a lot of obstacles which they must contain in order to succeed. Leadership in the educational context is the ability to anticipate and envision the future. By word and by personal example, they inspire the whole educational system by effectively influencing the behaviors, thoughts, and feelings of those working within it, and ensure vision to educational leaders by creating strategic alignment in the whole system (Peretomode, 1991).

Warren Bennis (1998 in Anyamele 2004) argued that leadership is a creative enterprise, involving all in innovating and initiating. For them leadership looks at the horizon, and not just at the bottom-line. They believe that a leader does the right things; which implies a goal, a direction, an objective, a vision, a dream, a path, a reach. According to them, a leader does the following.

- ❖ A leader creates a compelling vision. Leadership has to get people in the organization to buy into a shared vision and then translate that vision into reality. They inspire and empower people; they pull rather than push, Leaders motivate people by bringing them to identify with the task and the goal, rather than by rewarding or punishing them.
- ❖ A leader creates a climate of trust. Leaders must know how to generate and sustain trust. In order to do this, leaders must reward people for disagreeing, reward innovation, and tolerate failure. For leadership to create trust, three things are needed:
 - i) competence: trust in leader's capacity to do the job
 - ii) congruity: a leader must have integrity, and
 - iii) to be an effective leader, what the leader says must be congruent with what he does, and what he does must be congruent with what his vision is.
- ❖ A leader creates meaning. A leader creates meaning by creating an environment where people are reminded of what is important. The leader helps to define the mission of the institution and models the behavior that will move the organization towards goals. Leaders are people who can put words to goals and aspiration, and can use words beautifully to express the collective goals of their people.
- ❖ A leader creates success. Successful leaders perceive and handle 'failure' differently. All successful leaders learn from and embrace error and learn from it.
- ❖ A leader creates a healthy, empowering environment. Effective leadership empowers the workforce to make them committed, has the feeling that its members are learning, and that they are competent. Good leaders make people feel that they are at the very heart of things, not at the periphery.

- ❖ A leader creates flat, adaptive, decentralized systems and organizations. Bureaucracy does not create leaders; they create managers and bureaucrats. Managing change is ultimate leadership challenge. Strong leadership is needed in organizations based on a network or flattened hierarchy model—a more centralized model where the key works are acknowledge, create and empower.

Furthermore, according to an Internet source (<http://www.plus2net.net/be/index.php>), leaders ensure appropriate design of policies, procedures, processes, systems, performances etc. as well as values, commitment, motivation, loyalty, communication etc. to pursue progress towards their vision. On the whole, leadership and constancy of purpose concerns the importance of leadership in educational management and planning, that is, setting right the educational policies and strategies, which involves also the improvement of educational programs and administrative services that is aimed at creating quality students capable of entering significant positions in society and improving all forms of educational practices and procedures.

Management processes and fact involves design and deployment of systems that ensure implementation of policies, strategies, and action plans through a set of integrated processes to meet the stakeholders' requirements. The process performance can only be optimized through a clear understanding of how different units of work fit into the whole process. It ensures that a "fit for purpose" management system of the education is developed, implemented and improved. It also looks at how management gathers information to inform policy and strategy on an educational system. Additionally, it involves the application of systems standards covering quality management systems (Lewis, Goodman & Fandt, 1995). The quality management indicators involves how educational leaders ensure that academic and non-academic staffs are continually trained and developed to operate in the innovative and changing educational processes and building professional learning communities (Harris & Muijs, 2005). The process performance when documented and analyzed scientifically and compared with desirable outcomes generate facts on the basis of which the processes can be effectively managed and improved continuously on a day-to-day basis. This factual information supports decisions at all levels that improves the educational process performance further (Schoderbek, Cosier & Aplin, 1988).

People Development and Involvement

People development and involvement means people management at the educational level, which relates to people criteria in the excellence model. Staff as people is very crucial resources of any institution/organization. At the educational levels, it involves the academic and non-academic staff which support and bring about student learning (Anyamele, 2004). The quality of an educational system constitutes strength to the general development of a country. Educational leaders must invest in the academic and non-academic staff, and seek potential in all those who enter the education environment. Thus, in order that these educational functions may be discharged efficiently, a cadre of staff is required in adequate numbers and quality at the different operational levels of the system. The productivity of educational systems is not only research, teaching and learning, but it includes the quality of life of everyone who works in it. Therefore, to ensure quality, their staffs need to be continually developed. Staff development is 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 (Teather, 1979). Thus, every employee working in this sector need to and must be fully developed, motivated and involved in the education processes. Through development, employees are equipped with necessary resources to accomplish the educational goals and through involvement of staffs, the education sector ensures that the acquired knowledge and skills are put to use in the most productive way which enable it to achieve education goals (Ho et al., 2001).

Partnerships and Resources

This involves how external partners are handled. It includes how leadership generates and support innovative thinking through the use of partners. Moreover it includes how educational leaders create energy in working together to improve educational processes and add value to student's academic achievement. In addition, the criterion concerns how leadership in the education environment with help of partners balances the current and their future needs. Fundamentally, the availability of the necessary resources (knowledge, information and capital) to support quality management is an issue in organizations including the education sector. In an environment starved of resources, good ideas are sometimes killed by a lack of resources, and this can often be misconstrued as a lack of commitment from the leadership, causing de-motivation among employees. However, what is lacking in this perspective is not leadership commitment to quality management but rather the reality that resources are frequently and severely limited in the educational management.

Bonvillian's (1996) research supports the view that in the event of this happening, the image of the leadership suffers as a result of this perception, which can ultimately have a negative impact on the proper functioning of the educational system. The remedy to this problem is for institutions to develop links with external constituencies, both private and public organizations to generate the resources for its activities within the context of limited resources and develop the ability to accomplish more with less. The notion of developing collaboration between predominantly private sector entities and predominantly public sector education is not new, and the enduring nature of some partnerships has been recognized (Gray & Broquard, 2000).

We recognize that partnerships and alliances between education and stakeholders have been a powerful force in managing change and prime matrix for renewal in education (UNESCO, 1998). However, Hoff (1999) pointed out that it is the responsibility of every staff member and administrator to recognize and pursue partnerships that could lead to increasing collaborative efforts in research, service and teaching. He argues that it is often from these strong relationships built on hours of working side-by-side for the betterment of the institutions, and services provided to students and other constituents that gifts of equipment and financial resources are realized. In short, major factors influencing the success of educational system lie outside its boundaries and control. In such atmosphere, partnerships are a means to ensure high level of operational linkages with the resources that are critical for the success of the organization and yet beyond its control.

Educational Process

Process is one of the 'enablers' of the study model. In the context of this study processes it is modified as 'educational processes' in order to accommodate the purpose of this study. The educational 'processes' is divided into teaching and research, and then learning as an outcome of teaching and research. The promotion of quality in teaching means the ways we can breathe new life into teaching. For teaching to be made result-oriented in the way of improving students' skills, teaching requires more efficient instructional skills by improving students' ability to learn effectively. Educational leadership must champion the promotion of teaching quality. Leadership must introduce and promote appropriate institutional policies and practices through concrete actions that might be taken to support a higher priority for teaching. Seldin (1990) argued that another way to improve the quality of teaching in the schools is for the administrators' need to know when equipment and facilities do not work, and when classroom supplies have run out. If staff morale should be boosted, institutional leadership should pay serious attention to and correct environmental shortcomings. Seldin further argued that the use of appropriate rewards improves the quality of teaching, suggesting that the best route to improve teaching was to change the reward system, and concluded that a productive way to encourage outstanding teaching is for

administrators to provide meaningful rewards to staff members. Improvement of teaching is to broaden competence through most often focusing almost exclusively on helping teachers to master their subject matter.

In making judgment about quality teaching, Perry (1994) logically suggested that the necessary conditions for teaching quality include the performance of the teachers; the construction of the course; the device put in train by the institution to enhance the quality of teachers' performance; the necessary links with industry; the existence of appropriate accommodation, furniture and equipment for teaching as well as the backup of good library and learning resource facilities. However, he pointed out that this list however provides only the necessary not the sufficient condition for a judgment of quality, but argued that quality in teaching in schools equals first and foremost the quality of students' achievement at the end of their course. For him, it is what a student knows, understands and is able to do, that is the chief and legitimate object of the measurement of teaching quality. Finally, educational systems that fail to provide the quantity and quality of graduates its society requires is not a system that we can be satisfied with. An educational system that is not yet providing for all who are able to benefit from, and who wish for education is not a system that we can be satisfied with (Ball, 1991).

Like teaching and learning are a central task of educational institutions and also an outcome of combined teaching and research processes. Bowen says that learning is often viewed as the unifying goal of teaching, research, and service for education institutions. He also observes learning as knowing and interpreting the unknown, discovering the new, and bringing about desired change in cognitive and affective skills and characteristics of the individuals. In the same way, Domjan describes learning as a change in behavior that meets three criteria. First, students think, perceive, or react to the environment in a new way; second, change is the result of students' experiences in repetition, study, practices, or observations; third, the change is relatively permanent (Watson & Stage, 1999).

In this excellence dimension, excellence means accomplishing results that delight the stakeholders of an educational system, which focused clearly on and understanding of students and teachers, their needs, expectations and values, keeping in consideration and valuing their contribution, and the contribution of other stakeholder in line with educational goals. In addition, excellence is an outstanding practice in managing education and achieving results. Truly Excellent educational systems are those that strive to satisfy their stakeholders by what they achieve, how they achieve it, what they are likely to achieve and the confidence they have that the results will be sustained in the future. Being excellent requires total leadership commitment and acceptance of the fundamental concepts, a set of principles on which an institution or organization bases its behaviors, activities and initiatives. When the institution or organization turns them into practice it opens the access to 'sustainable excellence' (EFQM, 2003, 2005).

RESEARCH METHODOLOGY

A survey research design was used in this study. However, the design of this study is as depicted in figure 3. The research area was in three states Ministry of Education in Nigeria. The population of the study consisted of senior staff of the Ministry of Education who have attained grade level 8 and above. The data for the study were collected through a random sampling procedure, whereby all the senior staffs had an equal opportunity to be selected. A total of 90 questionnaires were sent out and a convenient sample size consisting 55 (79.7%) were chosen from the 69 questionnaires

returned. The reason for discarding 14 questionnaires was either because of the way they were filled out or some questions were not answered. The existing model on the research topic ‘EFQM Excellence Model’ was used to measure levels of leadership and management styles in Nigerian educational system.

Respondents Demographic Information Variables

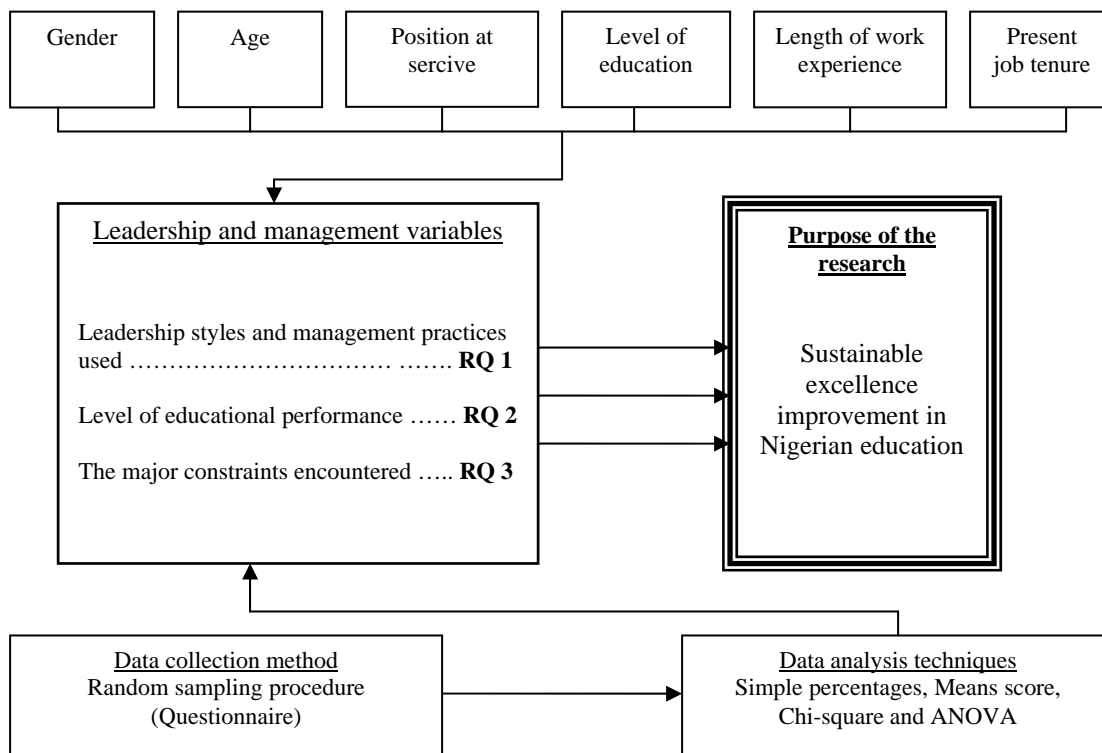


Fig. 3: Research questions and design summarized

The instrument used for data collection was questionnaires. The questionnaire is made up of section ‘A’ and ‘B’. Section ‘A’ consisted of the demographic part that includes (a) gender, (b) age, (c) position at service, (d) level of education, (e) length of work experience and (f) present job tenure. Section ‘B’ consisted of related sources of leadership and management variables, including their sub-variables. The respondents were required to indicate the extent to which they agree or disagree with the items. The respondents weighed each item on a four-point Likert scale, from (4) strongly agree, (3) agree, (2) disagree, and (1) strongly disagree. All items were considered of approximately equal “attitude value” to which participants responded with degree of satisfaction and dissatisfaction (intensity) (Fowler, 1995, p. 162; Kerlinger, 1973, p. 496; Nworgu, 1991, pp. 103-109).

The participants’ responses were keyed into SPSS version 13.0 software of a computer programme and they were analyzed using Simple Percentage, Mean Score and Chi-Square statistics. One-way-analysis of variance (ANOVA) was employed to test the relationship between variables and respondents’ demographic information. It was a statistical significant set at $p < 0.05$ to measure if the researcher’s level of confidence observed in the sample also exists in the population (Bryman & Cramer, 1990, p. 151; 2001, p. 159). The purpose of the research was well explained to all the respondents. Creswell (1998), Kerlinger (1973) and Salant and Dillman (1994) argued that in

order to have a high response rate, the purpose of the research work must be explained to the respondents on the first or last page of the research instrument. Furthermore, The instrument used for data collection was a questionnaire designed by the researchers. Some colleagues who were experienced in the construction of research instruments helped to validate the questionnaire. As a result of the input of the experts, some items were added while a few others were restructured. In addition, a pilot test was conducted prior to when the main questionnaires were sent out to determine how respondents understood the questions (Yin, 1989, 1994). The advantages derived from the pilot test were that new insights were got, the errors pointed out were corrected and the total understandability of the questionnaire was measured which helped enrich the final questionnaires sent out to the respondents. To test the consistency with which the research instrument measures what it is supposed to measure, SPSS of a computer program was also employed, and the overall reliability estimate of 0.86 was obtained. Thus, the instrument was considered to be very reliable (Bryman & Cramer, 1990, p. 151; 2001, p. 159; Reynaldo & Santos, 1999).

PRESENTATION OF EMPIRICAL RESULTS

Descriptive analysis of respondents' demographic variables

Gender and Age: Slightly more than half the sample size were male (52.7%, N = 29) and slightly less than half of the respondents were female (47.3%, N = 26). On average, the respondents in the present sample were 45 years of age with the youngest respondent being 31 and the oldest 59 years.

Position at service: The subjects were divided into two categories according to their positions in the ministry. The first group were directors (N = 3, 5.5%), while the second group (N = 52, 94.5%) were department heads and their administrative staffs, who are in charge of personnel, finance, planning research and statistics, and post secondary education matters. In 16 cases the respondents as administrative head were in fact more accurately placed in their positions based on their qualification, nature of their job and their responsibilities, while the rest employees were not correctly placed.

Level of Education: About half the respondents (N = 27, 49%) had first degree education. While (N = 20, 36.4%) had postgraduate education. Whereas, (N = 8, 14.5%) of the respondents had secondary, training or vocational education. The last category of respondents based on their level of education rose to level 9 as a result of their length of service and experience.

Length of Work Experience: The respondents (N = 55) had been on an average of (14.5) years through out their length of work experience, ranging from less than one year to 34 years. The data revealed that respondents have generally shorter length of experience in their present job. Female (N = 26) had on average been employed two years less (13.6) years compared to (15.6) for male in their current position, but the difference was not statistically significant. To obtain easily comprehensible groups of comparable sizes, work experience in the field was grouped into five categories: 0-5 years, 6-10 years, 11-15 years, 16-20years, and 21-above years.

Present Job Tenure: The respondents had worked, on average, of 12 years for their present employer with the number of years ranging from 1 to 29. Apparently, the results reveal that there were respondents who had worked for other ministries longer than they felt that they had been in the job. However they had done tasks that were very much different from the ones that they currently do as a result of transfer of service, or possibly they had moved from one division or department of the ministry to another, which may have been perceived as being in a different field outside their profession. The third explanation may be that job assignments may have shifted

from one field to another. To obtain groups of comparable sizes, present job tenure was grouped into the same five categories as length of work experience. The categories are 0-5 years, 6-10 years, 11-15 years, 16-20 years, and 21-above years. A third (35%) had been employed by the present employer between 16 and 20 years. More than a sixth (22%) had been employed for more than 21 years. One fourth (28%) had been employed for less than five years, and (15%) had been employed between five and ten years by the Ministry of Education.

Descriptive statistics of respondents' leadership styles and management practices

To determine if the leadership and management practices and styles used are relevant to the educational development needs of Nigerian schools, responses from the returned questionnaires were analyzed using descriptive statistics and it was revealed that the nature of the acceptance of innovation by top line administrative structures rated very low ($M = 2.45$, $SD = 0.89$), this implies that respondents were most dissatisfied with the way proposals for improvement are turned down by the government. Second in the levels of respondents dissatisfaction was in the used of excessive bureaucratic procedures ($M = 2.22$, $SD = 0.82$), which comes from the educational policies and administration in which they operate. Partnership and collaboration among staff and administration was equally rated very low ($M = 2.35$, $DS = 8.88$). The lowest mean ($M = 1.98$, $SD = 0.93$) came from level and quality of inspection and supervision. In general, the respondents expressed their views that the working climate in the Ministry of Education was quite less supportive ($M = 2.38$, $SD = 0.73$). While the male and female respondents were fairly equal in terms of their experiences of the working climate. For the female the less supportive climate were ($M = 2.73$, $SD = 0.84$), and for the male the corresponding figures were ($M = 2.59$, $SD = 0.69$). Non-parametric (Chi-square) and ANOVA analysis of the leadership and management practices used and the level of educational performance

Regarding the relationship between the leadership and management practices used and the level of educational performance, a two tailed chi-square was conducted to test the statistical significance differences between leadership and management practices and the level of educational performance. The result showed that significant relationship exists between leadership and management practices used and levels of educational performance ($\chi^2 = 5.99$, $DF = 2$). It was suggested that the low academic standard experienced in Nigeria is as a result of poor leadership and management practices. Not surprisingly, (79%) of the respondents compared to 21% accepted that the quality of education in the west is more sophisticated than the one experienced in Nigeria. Where the results from ANOVA analysis showed that no significant differences were found for the attitude of age at ($F = 2.67$, $p > 0.190$), in position at service at ($F = 2.24$, $p > 0.181$), length of work experience ($F = 2.62$, $p > 0.242$), present job tenure ($F = 2.66$, $p > 0.232$), and between level of education at ($F = 2.38$, $p > 0.333$) towards the variables.

Descriptive analysis of respondents' answer to the major constraints encountered

A descriptive analysis was used to demonstrate the presence or absence of a relationship. As the data were tallied along agree and disagree. The result from the analysis on the constraints facing the Ministry of Education from achieving educational aims and objectives on the entire variables tested showed large differences. Thus, it was discovered that the respondents rated inadequate funding (89.6%) as against (10.4%) as one of the most important pressing problem encountered by the Ministry of Education. Not surprisingly, the empirical results revealed that (76.7%) compared to (23.3 %), agreed that administrative bottle neck is also a major limitation to the success in achieving the aims and objectives of the Ministry. Whereas (75.5%) are of the same opinion that lack of recruitment of competent staff and placing them at the right place at the right time is also a key setback against (24.5%) who disagreed. Similarly, lack of information dissemination and project implementation was also a contributing setback for the successful functioning of the educational system via the Ministry of Education, (71.9%) and (88.8%) agreed

to this fact, while (28.1%) and (11.2%) differed respectively. Asked whether staff education and training were also a major problem encountered by the Ministry, respondents' answers demonstrated that (82.2%) compared to (17.8%) accepted that staff education and training (workshops, seminars, conferences, in-service training) is a crisis for the Ministry of Education. Finally, the respondents rated very high misappropriation, embezzlement of public fund and political interferences which leads to the appointment of non-professionally qualified staff as the most pressing problems of the Ministry of education. Their percentage values almost equaled that of inadequate fund at (90.3%), and (89.9%) while (9.7%) and (11.1%) respectively held the opposite view. The overall result showed that the educational system in Nigeria has a lot of obstacles hindering its progress.

DISCUSSION OF RESULTS, CONCLUSION AND RECOMMENDATION

This paper investigated the leadership and management practices employed by the Ministry of Education in Nigeria. In general, the analysis of the results obtained showed that the leadership and management styles used do not welcome innovation as creativities and initiatives are hardly utilized. Innovation is the most important competitive advantage that enables contemporary institutions to thrive in today's changing world environment. The secret of innovative educational institutions lies in the capacity to leverage the talent and motivation of their employees. Experts and forward-looking institutions recognize that effective leadership and management provides a key capability for exploiting the innovative capacity of institutions. As such, innovation is a top of the mind issue for modern educational leaders. Therefore, Nigerian educational system should evaluate current innovation processes to measure whether idea generation can be formalized and properly managed rather than sweeping innovative proposals under the carpet.

The dissatisfaction of employees with the bureaucratic management style of leadership stems from the fact that it focuses on the overall institutional system and it is based upon firm rules, policies and procedures, as such, employees often displays more loyalty to individuals than the mission of the educational system. As a consequence, the meager resources are often used to satisfy individual interest rather than the institution's objectives which also comes from endless red tape. That is, much time is spent on official protocols as it causes too much delay. There is hardly an opportunity to exercise personal judgment, the tendency to strictly follow laid down rules, policies and procedure automatically limits one's capacity to adapt to changing circumstances (Whawo, 1993; Peretomode, 1991). Therefore, for there to be sustainability in educational development these vices must not be allowed to flourish in schools.

The respondents showed a negative attitude toward the influence of the working climate as saying that it is quite less supportive. This is evident because employees are poorly paid and occasionally their salaries are not paid on time, as such, they are not stimulated to work. These are translated to employee absenteeism, lukewarm attitude to work, frustration, sharp reduction in professional standards, and early departure from job (Ladebo, 2005; Ulom & Joshua, 2004). Roe's (1970) need theory explains that an occupation is a primary source of need satisfaction and improved productivity, in this case, any thing that will not effectively leads to employee need satisfaction will eventually lead to their dissatisfaction and less performance. In light of the above discussion, low salaries earned compared to employees in other sectors of the economy, poor working condition, limited opportunities for professional advancement and dysfunctional and educational policy and administrative procedures tantamount to lose of appetite for Ministry and teaching job (Abangma, 1981; Nwagwu, 1981).

The lack of partnership and collaboration among employee in the Ministry of Education is a major cause for concern and should be taking seriously, because according to Hoff (cf., 1999), it is the

responsibility of every staff member and administrator to recognize and pursue partnerships that could lead to increasing collaborative efforts in research, service and teaching because it is often from these strong relationships built on hours of working side-by-side for the betterment of the institutions, and services provided to students and other constituents that gifts of equipment and financial resources are realized. In the same vein, partnerships and alliances between education and stakeholders have been a powerful force in managing changes and prime matrix for renewal in education (cf., UNESCO, 1998).

The research findings revealed that the lack of adequate funding is a major constraint in the fulfillment of the obligation of the education sector. According to Bonvillian's (cf., 1996), in the event of this happening the image of the leadership suffers as a result of lack of funding, which can ultimately have a negative impact on the proper functioning of the educational system. The remedy to this problem is for institutions to develop links with external constituencies, both private and public organizations to generate the resources for its activities within the context of limited resources and develop the ability to accomplish more with less. That is developing collaboration between predominantly private sector entities and predominantly public sector education so that enduring nature of some partnerships has to be acknowledged (cf., Gray & Broquard, 2000).

Government corruption, misappropriation and the outright stealing and the unabated embezzlement of public fund by public servants and high-ranking officials stands as a major obstacle to the realization of educational goals in Nigeria (Okotoni & Okotoni, 2003). These authenticities have led to a drastic reduction of government grant to educational institutions, inadequate maintenance of facilities, admissions and certificate racketeering by employees of educational institutions, extortion of money from students to encourage them in examinations malpractice, and general indiscipline (Nwagwu, 1997; Soyinka, 1996). Political interferences such as the appointment of party loyalist and family members results to using the services of non-professionals who lack professional abilities. It also results to constant duplication of educational policies and practices and are highly political without genuine commitments that has affected educational planning and implementation.

On the whole, this research endeavor noted that employees of the Ministry of Education including the academic and non-academic staff in schools are dissatisfied with their job. Noticeable differences were found in the level of priorities accorded each factors in their job. This research design also noted that the reason why employees are dissatisfied with their work was because of the total neglect to innovation and the high level of gross misconduct found in the educational system among employees, in addition, the respondents insisted that educational policy makers, planners and operators of educational policies lack the capacity to make policy work.

This article has presented and discussed new empirical data derived using the EFQM Excellence Model and its applicability to the Nigerian context. However, its results and success has been fully reported elsewhere especially in Europe. Here, we concentrated on one segment (enablers) of the model, reporting the outcomes of the results applications for special measures on how to ensure sustainable excellence improvement in Nigerian education system. By examining and reflecting upon the circumstances surrounding the EFQM model applications, no small measure will be seen in the success if properly applied in Nigeria. We may hope to gain a better appreciation of the existing findings for securing special measures, and to assess the scope for further refinements of educational leadership and management policies and practices by accepting and familiarize ourselves with the EFQM Excellence Model.

The EFQM model being a self-assessments model has been proved to be relatively fast, easy and inexpensive to conduct if appropriately applied with the results usable for a variety of purposes, such as, improving performance, team-building, and enhancing individual and organizational innovation and learning. To achieve a successful educational institution, innovation and learning has to be an integral part of all processes in institutions. Effort at ensuring that empirical data resulting from tests may be utilized to justify decisions such as those related to personnel training and other human resources development issues are thus, very essential. Human resources or personnel managers trained in personality theories can make use of these concepts to identify and distinguish human characteristics necessary in the workplace during recruitment and selection.

As far as we know, this research study seems to be a simultaneous application of self-assessment in education ever based on excellence models in Nigeria. Specifically, the reimbursement for embracing the excellence model in Nigerian educational system will not be far-fetched as the model provides a number of key performance results which have been proven to be of value:

- It looks at all the areas of educational institutions and offering a holistic approach which has been absent in many other leadership and management approaches that has been used before.
- The appraisal process of the excellence model is based on truthful proof but the procedure can be defined at a time to and pace to suit individual institution.
- The EFQM model provides a framework through which the essential part of an institution's concerns are surfaced, investigated and improved on continuous bases. And
- The model has been used widely in Europe and has been extensively tested in a range of sectors—private, public and non-governmental agencies and it offers benchmarking opportunities with others within and outside a particular sector.

Therefore, it is against the empirical results gained in this study and the background on its usability that I wish to propose the European Foundation for Quality Management (EFQM) excellence model to be adopted as a means to enhance sustainability in the education sector, given that it seems to be obvious at present that things are not moving as planned after decades of applying other leadership and management methods.

Anyway, the limitation to this research study relates to the representativeness of the findings in this study vis-à-vis the general viewpoint of the respondents. The sample size of the population used may be another factor. While there are over 36 states of the federation with Ministry of education offices, only samples from three states were used. Arguably, the sample size of this study is not inconsistent with approved sample size recommended for a study like this. At the same time, highly educated and experienced participants were used in the study. However, we recommend that a carefully stratified national survey sample size to further investigate the EFQM Excellence Model is a step in the right direction. As we also recommend that a similar studies of this kind should be carried out in other parts of Africa to ascertain its applicability in those countries.

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The Bi-Directional Relationship Between The Nigerian Indigenous Science Education And Modern Science

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Abstract

Science and technology have become the bedrock of development for any nation. Its impact in all facets of man's life cannot be quantified. This paper examines how the curriculum can reflect the utilitarian function of science such that it is relevant to the Nigerian child's society and personal experiences. The paper therefore describes the concept of indigenous science education and its various components. The place of taboos and speculations in indigenous science is also examined. Efforts are made to draw relationship between concepts and activities in indigenous and modern science. The implications of these for curriculum reform of modern science to incorporate some relevant aspects of indigenous science with the overall goal of improving learning are discussed.

INTRODUCTION

Science and technology has continued to have a tremendous impact on all facets of man's existence at a very high speed. This impact covers such areas as agricultural productivity, industrial growth, communication, transportation, health and life expectancy, pollution, climate change, energy production, music, leisure and warfare. Thus, science and technology play an important role in political, health, economic and social issues relating to man. Development in any nation is closely linked to science and technology.

Modern science in Nigeria as brought by the European missionaries has evolved from Nature Study/ General Science to the present day study of basic and applied sciences. According to Awoniyi (1979) cited by Agboola and Mabawonku (1996), before the advent of modern science, there was the indigenous science education, which was passed down over the generations. If a more general view of science and technology were taken, it would be found that each indigenous civilization has its own science and technology.

However, our colonial history has revealed conscious and consistent suppression of local tradition, culture and beliefs. Long held traditions were dubbed as superstition, our language, customs and culture were condemned as tribal and unworthy (Yakubu, 2000). People do not seem to see any value in traditional science education; neither do they recognize that inspite of whatever shortcomings it may have, there could still be some influence exerted on modern science. Also that it can influence how students learn modern science. According to Jegede (1994) one of the factors undermining science education in Africa is the dysfunction between science learned at school and what goes on in the live of the individual in the society.

According to Osborne and Wittrock (1983), young children do have firmly held views about many science topics prior to being taught science at schools. Such views are usually quite different from those of scientists and are termed misconceptions. According to Aladejana (1989), such misconceptions are often retained after exposure to formal science teaching. It is therefore important for educationists at various levels and sectors to recognize the roles the indigenous science education can play and is actually playing in the learning and use of modern science. According to the Federal Ministry of Education (2000), for an education to be serviceable and viable, it must be geared to the special needs and aims of a nation.

Presently, science is yet to make its significant impact on the attitude of most Nigerians especially as it relates to applying appropriate science concepts, principles, laws and theories in interacting with the universe, solving problems, making decisions and developing values that underlie science. We must therefore evolve amidst other things a system that will blend science and technology with cultural and spiritual environment, a system, which will produce useful, self-confident and competent citizens.

This paper focuses on what indigenous science education is and how it differs from modern science. The various ways in which each of these influences the other will be critically examined. It is expected that the paper will throw more light on how recognition of indigenous science can help to learn modern science better, remove some superstitions and provide some links between the two.

Indigenous Science Education

Every society, whether simple or complex has its own system for training and education. According to Awoniyi (1979) cited by Agboola and Mabawonku (1996), no education system stands apart from the society, which establishes it, be it traditional or formal. According to Olorode and Illoh (2000), man in all societies is a scientist; this is the condition for human survival. Hence in the Nigerian setting there is indigenous knowledge, which has deep scientific insight. According to Bass (2003), Africa possesses a wealth of scientific knowledge developed independently from western science and its methods. This indigenous science often appears to differ from or even run counter to the scientific principles brought with the colonial powers yet they should be brought to light and built upon for the benefit of the continent. Indigenous science can be defined as a systematic body of knowledge acquired by local people through the accumulation of experience, informal experiments and intimate understanding of their environment in a given culture (Warren et.al 1996). Altieri (1988) characterized indigenous science as accumulated knowledge, skill and technology of the local people derived from systems of production and consumption.

The earliest Nigerian educational system failed to realize that indigenous science has potential value for sustainable development, and that it can help people learn how to live in harmony with nature and the environment. Another thing the system failed to appreciate is the fact that there was an indigenous foundation upon which the western type could have been built to facilitate proper integration of modern science in Nigeria. This indigenous foundation (science), passed down over the years is nearing a total neglect, if not neglected, already. This was due to the fact that the type of educational system put in place did not have a place for the indigenous science.

Today, indigenous science is facing a risk because of its oral tradition and the introduction of new technologies. Researchers, development workers and educationists fail to see the influence this indigenous science has over the modern science because they presume that it is primitive, backward, culture-bound, mythical and irrational. In spite of these underscores, indigenous science can exert some influence on the learning of modern day science. Many aspects of indigenous science reflect features of modern science. For example, a scientific process should be repeatable and open to scrutiny in such a way as to facilitate evaluation and perhaps further experimentation and research. Many aspects of indigenous science satisfy this condition like the food processing of sorghum, conversion of maize into alcoholic beverages.

Indigenous science embraces local science and technology, the importance of which cannot be overemphasized. It covers such areas as trade and industry, agriculture, communication, food processing, cloth making, dyeing and various other facets of life. In trade and industry, the local craftsmen display their dexterity in local technology. For example, the pot makers produce pots in different sizes and qualities to serve different purposes using clay. The small and medium sizes

are designed to withstand strong heat and are used for cooking while the bigger ones are for storing water and so designed to provide cooling effect for the water stored inside them.

Black soap (ose dudu) were made from local materials like cocoa pods, melon pods, and kernel oil. Local wine and gin are brewed from plantain, maize, guinea –corn, palm wine and so on. The weaving and dying industry shows that the local people have a very high sense of technology. Local materials are used to make dyes and weaving materials. The types of clothes they produce include the Yoruba “aso oke”. The dying industry produces a variety of patterns. The local blacksmiths also demonstrate a high sense of indigenous science. They make knives, guns, cutlasses and other farm implements for the use of the local farmers. The types of workshop (agbede) they use have local furnaces that portray that they are technologically inclined in their own way.

In agriculture, the knowledge of the local farmer in local technology is quite apparent. Agriculture was and still is the mainstay of the Nigerian economy. Hence serious attention is paid to the teaching of the young how to produce good crops, a lot of the methods taught still permeate the modern way of planting. Children were taught how to discriminate between fertile and non-fertile soil, to apply manure informs of organic waste from animals and households refuse, to prevent water run- off and reduce direct sun scourging (evaporation). The method of capping heaps with refuse is known as mulching in the scientific sense of it.

Another stage in agricultural education was the need to understand the different planting and harvesting seasons (Fafunwa, 1994). The local people have no calendar still they know what and when to plant in each of the seasons. For example, the appearance of certain butterflies in the area was an indication that the rainy season was approaching and it was time to plant early maize. According to Bass (2002), farmers in Nigeria have always preferred to jumble a selection of crops together and grow them all at once. This system of mixed cropping is actually a prudent strategy against crop pests. Such scientific indigenous knowledge abounds in other cultures. For example, the Nomads on the desert’s edge around the Sudan have developed sophisticated strategies for stocking their herds and adjusting the herd size to the relative pricing of animals and crops. They are real experts on devising early warning systems of famines and life-saving responses.

In medicine, surgery has included male and female circumcision, brain surgery and removal of tonsil. The alignment of dislocated bones and treatment of fractures have been documented. African systems of logic have been manifested in games activities of strategy like ‘ayò’. Hunting is another area where indigenous science features tremendously. The hunters used different types of traps to kill animals. The traps are of various types (in Yorubaland, they range from ‘igboro’, □fin, “ akátánpó” (catapult), “□fà” (sword) “okùn” to “ẹbìtì”). All these are indigenous types of traps, the knowledge of how they function cannot be deemed irrelevant and thus be suppressed inspite of modern techniques in vogue.

In communication, the local people are not found wanting as they have their own traditional ways of sending messages, the Yoruba for example use local objects known as “àrokò” which in essence involves sending objects, which have implied messages upon delivery. They also used town criers to disseminate information. Allied to indigenous science is indigenous mathematics. As in modern day mathematics, they have their own way of counting and measuring. Mathematics is regarded as western phenomena by both teachers and students and so has resulted in the devaluation and disregarded of local mathematics.

Indigenous mathematics has however refused to be annihilated like many other aspects of native culture subdued by colonialism and imperialism (Oduyale 1985). For instance, the farmer before

the advent of western education used to count their yam tubers in sets of 50, 100 and 200. This will allow for proper and easy counting of the total number of yams planted each year. Also, those who sell yam in the markets follow this pattern. They place their yams in sets of three (3) or five. This form of counting is known as set theory in modern day mathematics. Apart from this, the local women or traders also recorded goods they sold on credit to customers by making a stroke (/) on the wall. When the strokes are five (5), or ten (10), a stroke will be drawn across like this: /////, //////////////. They will then count the number of sets they have to know the amount to be paid by the customers. In the same vein, women participating in daily money contribution also do the same thing. This method of counting and calculating is now being used in computer and statistics.

Taboos, Speculations and Misconceptions

According to Agboola and Mabawonku (1996), taboos and superstitions are often regarded as an integral part of indigenous science. Superstitions could be expressed as irrational beliefs or practices of the people. They are traditional beliefs that some actions/events can cause apparently unrelated events. On the other hand, taboos are things embedded in the belief system of local societies that are passed from one generation to the other. Taboos are the don'ts of a society and usually punishments are spelt out for violating them. Although taboos and superstitions are deeply noted in the culture and religious beliefs of the society, modern scientists regard them as misconception or speculation because their authenticity cannot be tested empirically. Hence they are seen as constituting barriers to the development of a truly scientific approach to learning.

Many of these taboos and superstition have no scientific explanations or parallels but seem to have been invented as some form of safety precautions. For example, pregnant women are expected to tie a small stone at the edge of the wrapper or use safety pins as mark on themselves when going out in the afternoon. The surface meaning of this is that, if pregnant women walk around without any mark, evil spirit will dislodge the baby in their wombs. Realistically, it is to allow the pregnant women to have proper rest during pregnancy.

Another example is that one is not supposed to talk while removing the feathers of a fowl while preparing them for food. On the surface value, it is believed that such feathers will grow again on the fowl's body but the real reason is to prevent saliva contamination and to ensure concentration at such a tedious job. Also one must not use the broom to beat a boy or he will become impotent. In the real sense, it is to forestall accident as the broom can prick his genital organ.

On the other hand there are some of these taboos and so called superstitions that have relevance today in modern science. Although in indigenous knowledge, they cannot give the scientific reasoning behind the statements. There is the belief that one does not stand at the door during rain lest he is stricken by the god of thunder. This is consistent with modern science that one does not stay in open place during rain to avoid being struck by thunder. Taboos like not sitting on the part of the mortar used in pounding, nor talking when pounding yam are health precautions, which need to be enforced and which are consistent with present day hygiene.

In spite of some of its identified relevance to modern science, misconceptions abound in indigenous science. Many of the taboos and speculations are misconceptions and in many instances can negatively affect the learning of modern science. Many studies have been carried out to identify such misconceptions in Nigeria indigenous knowledge. Many studies have been carried out to identify such misconceptions in Nigeria indigenous knowledge. Aladejana (1989) identified some misconceptions in Biology like the fact that the unit of inheritance is the blood cell; variation in an organism may be due primarily to changes in the blood; an offspring may be the incarnate of dead relatives; the stronger parent carries the dominant gene; and that a couple

that has an all-female children can be attributed to the mother only. Also, Lawson and Weser (1990) identified such non-scientific beliefs, which did not change after instruction in university non-majors biology students. Examples are that: living things were created by an act of God, that events in nature are predetermined by divine guidance and that living things possess spirit which is absent in non living things.

Bi-directional Relationship Between Indigenous and Modern Science

It can be inferred that there exists some link between indigenous and modern science education. It becomes imperative therefore that the teaching and learning of modern science should be referenced to the culture of the society and so should integrate indigenous science and technology. Thus, it is clear that there is an urgent need to formulate a policy that would promote this integration of indigenous science into the Nigerian educational system. According to Titilola (1995), this will allow cultural capital to be added to the modern science. This agrees with earlier views expressed at the World Conference of Science in Budapest in 1999; and also with the views of Jegede (1998), Marrewijk and Lisbensten (1999), and Emeagwali (2003).

According to Erinoshio (2001), this could serve as a way to popularise science, make it meaningful, promote experimental learning that facilitates students understanding of some complex ideas in science and helps to bring excitement into classroom science. Thus, to encourage science and technology development, it is important to use African based strategy that is rooted in the traditional cultural environment daily experiences, and resources in the immediate communities, which will increase people's understanding of science. This will build a mass of scientifically literate people who can use scientific knowledge to solve practical problems of their environment and also improve children's cognitive retention in school.

Justification for this strategy is that it will lead to the awareness of the environment through enquiry and scientific enquiry is the key to science learning. Also linking modern and indigenous science is based on constructivism which is the theory of construction of mental process that make children give meaning to what is learned and apply it to their daily lives. Also it will create a comprehensive educational system (Wahab, 1996). The learner would be able to understand the scientific explanation that underlines his earlier misconceptions.

The rewards of recognizing and taking seriously Africa's indigenous knowledge are exemplified in work of T.A.Lambo, former deputy director general of world health organization who successfully ran the Aro Mental Hospital, Nigeria for many years using therapeutic value in tradition African knowledge along with western medicine. According to Emeagwali(2003), Sherman pharmaceuticals have collaborated with 58 traditional doctors in Guinea, West Africa between 1994 –1998 to identify 145 plant species useful for treatment of diabetes. Pregnancy diagnosis through the use of urine samples and aesthetics derived from plants identified to have pain killing capabilities been noted in some areas of Africa.

On the other hand, learning science equips learners with scientific enquiry and to acquire adequate knowledge of science concepts, principles, laws, theories and processes. Thus, they will learn to question all things, observe carefully and thoroughly, organize information, design experiments, make generalizations and predictions. Acquisition of all these will go a long way in assisting the learners to be able to interact better with their environment. He will therefore be able to understand and reason out explanations for why some things happen. Thus he would probably not blame the woman only for having an all – female children or for not having children at all; can see how sickle cell anaemia can lead to infant mortality especially with poor health care as against the belief in the 'àbikú' syndrome.

Implications of Indigenous Science Knowledge For the development of Modern Science

Curriculum has been defined variously as all the experiences pupils have under the auspices of the school and also all the limited and selected body of experiences from the society which the school deliberately and internationally uses for educational purposes (Doll 1965). Ehindero (1986) said the curriculum includes these and all other unplanned experiences that learners have under the auspices of the school. The unplanned curriculum includes observing teachers' mannerisms, peer influences, societal taboos, speculations and science generally.

The development of a sound curriculum for any subject is imperative to achieve the desired objectives of learning. According to Ajala (1991), the need to integrate indigenous knowledge into the formal educational system is desirable since people learn faster through progression dimension strategy. Also, the fact that schools should ensure the continued existence of the society makes it imperative for schools to provide understanding/ explanations to what goes on in the society.

Farrant (1980) identified the aims of the curriculum to include: assisting the pupils to see the value of the past in relation to the present and the future, equipping the child with the necessary skills for modern living and helping to keep the child a fully integrated member of his community. Thus an effective curriculum in Africa is one that is rooted in the traditional culture, needs and environment of the people. However content analysis of the current curricula of Nigeria primary, junior secondary and senior secondary science reveals that the knowledge generated by the communities within the country is rarely reflected in the educational system. Curriculum planners and teachers often regard Science as western phenomenon.

According to Warren (1996), efforts to introduce indigenous knowledge materials into existing curricula have several important national and global implications. Students' will recognized that they come from communities that have made contributions to knowledge that are worthy of recognition in their own right. It is important to recognize indigenous knowledge because it is when they are known that they can be improved upon. Curriculum content must be meaningful in terms of individuals needs hence it is important for the curriculum of science to be able to explain some possible misconceptions / alternatives conceptions into the classroom. This is because even after exposure to modern science, studies have shown that students still hold both traditional and scientific world-views (Aladejana 1995, Oladele, 1996). Holding such views is not peculiar to Nigeria as studies showed that irrespective of their cultural backgrounds, Students in Botswana, Indonesia, Japan, Nigeria and the Philippines hold identical world-view presuppositions (Ogunniyi et. al. 1995).

Table 1. Comparative Study of Indigenous and Modern Science	
Indigenous Science	Modern Science
1.(a) Making pots for cooking that can withstand and maintain hotness (b) Making pots that provide cooling effect for the water stored in them	These pots are made of clay. The important characteristics of clay that make these properties possible for the pots are: - high water retention capacity - fine soil particle size - low porosity
2. Making of black soap using cocoa pods, melon pods, kernel oil	Saponification process in chemistry involving the preparation of soap using oil (palm kernel oil)
3. Local wine and gin are brewed from plantain, maize, guinea corn and palm wine	This involves the process of fermentation
4. Blacksmiths making knives, cooking utensils,	Extraction of colours from leaves using various

<p>pots, jewellery, cutlasses, bows and traps from mental products like tin, brass iron, and steels.</p>	<p>chemicals.</p>
<p>5. Blacksmiths making knives, cooking utensils, pots, jewellery, cutlasses, bows and traps from mental products like tin, brass, iron, and steels.</p>	<p>Various techniques and scientific principles are involved in these activities. For example Below principle produced strong currents in air in the context of an air changer expanded to draw in air through a valve of to expel it.</p>
<p>6. In agriculture (a) Identifying fertile soil Use of manure Covering yams heaps with leaves Identifying seasons and times for planting and harvesting (b) Erosion control measures - keeping diversities of yams in barns for storage against the next planting season. - Identification of plants whose uses are known locally - Crop combination and sequences (c) Control of Pests - Weeding to control grasshopper - Timely harvesting of: yams against yam beetle; okro against leaf worms - Pruning of infected twigs against blight diseases - Bird scaring (on rice fields) - Crop rotation to prevent nematodes (d) Soil classification (i) By colour Iledu Ile pupa Ile funfun (ii) by fertility ile olora Asale</p>	<p>All of these are carried out in modern agricultural practices and given special terminologies e.g. mulching.</p> <p>Maintenance of genetic diversities in seed banks</p> <ul style="list-style-type: none"> - Plant taxonomy - Mixed cropping <p>All these are physical measures of controlling pests still used in modern agriculture.</p> <p>Humid dark soil Brown / reddish soil Highly leached soil/ sandy</p> <p>Fertile soil Infertile soil</p>
<p>7. Indigenous mathematics (a) Counting yams is set of 50, 100, 200; selling yams in set of 3 or 5 (b) using strokes to count e.g. //// (c) some system of calculation has 10 as a base as in the Yoruba system.</p>	<p>Set theory in mathematics</p> <p>This is tally making used in statistics for grouping of frequency. Regular mathematics calculation is in base 10</p>
<p>8. Classification of living things is done in Yoruba as follows: Ohun elemi</p> <pre> graph TD A[Ohun elemi] --- B[Eweko] A --- C[eranko] B --- D[i. Igi ogbin] B --- E[i. eran osin] </pre>	<p>There are some parallel to these in taxonomy.</p> <p>Living things</p> <pre> graph TD A[Living things] --- B[Plants] A --- C[Animals] B --- D[i. domesticated] B --- E[ii. vegetables] C --- F[i. domesticated] C --- G[ii. Non-domesticated] </pre>

ii. ewebe ii. Eranko igbe iii. itanna iii. Kokoro iv. igi eleso iv. Eja v. igi gedu v. eranko afayafa	iii. flowers iii. Insects iv. fruiting trees iv. Fish v. timber v. reptiles & other crawling ones
9. Food processing (a) Cassava tubers to make gari Palm tree sap for palm wine Cereals to make Ogi (b) use of metallic objects to hasten fermentation	These processes involve fermentation involving microbial induced change and enzymatic reactions. The nature of end product in terms of nutritional and or preservatives qualities is also changed. These elements serve as trace elements promoting the growth of the relevant micro-organisms

One of the objectives of secondary school science as stipulated in the National Policy on Education (1981) is to equip the students to live effectively in this modern age of science and technology. To achieve this aim, it is important for the learner to be able to scientifically analyse indigenous science and thus be able to discard those that are not useful and accommodate true ones into his present knowledge. In essence, the idea is not to replace modern science, but to harmonize modern and indigenous science in order to complement each other. Even in terms of curriculum implementation, modern science can build on the knowledge of indigenous science. According to Fafunwa (1974), indigenous education is participatory in nature as the child observes, imitates and takes active part in various activities like planting, recitations and so on. This participatory characteristic is also emphasized by the formal school system and termed active learning.

Indigenous knowledge especially science is important in the understanding of the foundation of the societal culture. This is important for all learners who will be leaders of tomorrow to ensure the continuing existence of the society. Finding a close relationship between the realism of modern and indigenous science is therefore essential especially in a country like Nigeria where these two realms appear to be radically different from each other.

There are some basic components of curriculum development some of which are: the identification of appropriate objectives, selection and organization of learning experiences for the children based on the identified objectives, the regular review of the content to accommodate contemporary issues and the realities of the present social circumstances. If one recognizes the objective of the role of education to improve the society, enable the learner to understand and interact meaningfully with his environment, then the content of the curriculum must include indigenous science. According to Ogunniyi (1988), a curriculum that is directed solely at eliminating traditional world-view and replacing it with modern science is prone to failure.

It is pertinent to note that for any educational policy to be serviceable and viable, it must be geared to the special needs and aims of a nation. In Nigeria, we must therefore evolve among other things, a system that will blend science and technology with the cultural and spiritual environment a system that will produce useful, self-confident and competent citizens (Federal Ministry of Education, 2000).

Recommendations

Based on the findings and discussion made in this study, the following recommendations are made:

1. There is need for careful study of indigenous science, technology and mathematics to identify aspects that can be incorporated into formal curriculum and those aspects that need to be proved wrong and discarded.
2. The curriculum of integrated science in the primary and junior secondary schools should be reviewed to accommodate some elements of indigenous science and to provide explanations for misconceptions.
3. The content of the curriculum should portray the utilitarian function of science such that it can be relevant to the child's society and personal experiences.
4. It is important to identify the related concepts in modern science to activities in indigenous science. This gives more meaning to modern science as learners can develop this inquiry approach to science better by questioning and finding answers to phenomena in the environment.

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Insurance Of Public Secondary Schools In Nigeria: A Case Study

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Abstract

The purpose of this study was to investigate the extent and nature of insurance provision for 70 randomly selected public secondary schools in Osun and Oyo States of Nigeria. Data for the study were collected by means of a questionnaire, interviews and observation. Following analysis of data, it was found that only 20% of the schools had insurance covers. The main reason why most of the schools were neither insured nor had any plans for buying insurance covers was lack of funds. The state governments played only advisory role in regard to security of school property and did not provide funds for insuring schools. The need for school administrators to view insurance as a necessary plan against disruption of school activities is pointed out.

INTRODUCTION

Modern living and all economic, business, commercial and even social and political activities involve the risk of sustaining some losses of varying types and degrees. As Hansell (1974:3) aptly observes “risk is inseparable from life and nobody is exempt from it”. Schools, like business, commercial and other organizations are exposed to some perils and hazard which either cause them some losses or increase their chances of sustaining losses. Such perils and hazards include windstorm, theft, fire, negligence, sickness or death of staff, etc. When a disaster occurs schools, like other organizations, suffer the same two types of losses identified by Redja (1998) and other writers – direct loss which is the financial loss from physical damage or theft of property, and indirect or consequential loss which, in regard to schools, refers to the learning opportunities that are lost to pupils as a result of not using the lost equipment or the damaged space, and possible extra expenses incurred for hiring alternative accommodation for learning purposes. The chances of schools being able to reduce these losses or counter the adverse effects of perils with their own resources are more remote now than ever before as budgetary allocations to education in recent times continue to dwindle. There is, therefore, the need for educational administrators, policy makers and researchers to take interest in insurance business in order to respond more quickly and effectively to the needs of schools when perils and hazards occur. Studies on school insurance will be of use to them in developing policies that address the problem of damage to, and loss of school property which is on the increase nowadays. Moreover, a search through the literature reveals that there is a dearth of such studies in Nigeria.

The study described in this article was carried out in Oyo and Osun States of Nigeria, which before 1991 comprised the old Oyo State (Adepoju, 1999). Osun State was carved out of Oyo State in 1991. Our interest in studying the insurance of schools in these two states was based on two major considerations. First, many schools in these two states had experienced various perils and hazards often with some telling effects. Records in the Ministries of Education of the old Oyo State showed that not less than 10% of the existing public schools had the roofs of one or more of their buildings blown off by wind and rainstorms. Some of the cases reported in the dailies in recent times and available in the affected schools’ records in the two states included the razing of the science laboratory of a secondary school in Oluponna (Osun State) in October, 1994; the collapse of a secondary school building leading to the death of a female student while four other students sustained injuries in Ikirun (Osun State) in June 1994; and the collapse of a primary school building during a rainstorm in Oyo town (Oyo State) causing the death of two students in June, 1995. Following this and similar incidents, the chairman of the Oyo State Primary

Education Board stated that the state needed a whopping sum of ₦4.6 billion to put the dilapidated primary school buildings in good shape (“School Repairs”, 1995).

In none of these cases of disaster was the affected school building given immediate attention by either the state government concerned or by an insurance company. Consequently, some classes were merged leading to overcrowding and the organization of science practical classes for students was suspended, leading to the reduction of learning opportunities in the affected schools.

Second, the old Oyo State was one of the states in the country where educational administrators were quite aware of the importance of security and the need for insurance of schools. This was given expression in many circulars that the Ministry of Education of that state sent to its schools between 1986 and 1991 on school property and perils. Among such circulars were the “Security of Science and J.S.S. Workshop Equipment of 26th October, 1988”; “Fire/Miscellaneous Perils and Burglary Insurance Scheme for School Property of 13th February 1990; and, the “Fire/Miscellaneous Perils and Burglary of Oyo State Post-Primary Schools, of 12th May, 1989”, which called for insurance schemes for schools following the observed devastating destruction of school buildings caused by violent rainstorms during that period and the unprecedented theft of school property.

Implicit in the wordings of these circulars was the fact that the old Oyo State government was quite aware that schools were exposed to material risks and some perils with serious financial consequences and that there was the need for the schools to have insurance covers. Some pertinent questions to be asked in this regard are ‘how far did this level of awareness of the importance of school insurance lead to the purchase of insurance policies by the schools in the present Oyo and Osun States?’ What efforts (if any) were made by the state governments to ensure that their schools had insurance covers? What types of insurance covers (if any) did the schools have?

This study, which was conducted in the Secondary Schools in the formal Oyo State (now split into Osun State and Oyo State) had the following specific objectives in view:

- (i) to determine the extent to which the schools in the two States were currently insured and the types of insurance policies they purchased;
- (ii) to find out their insurance plans for the future; and,
- (iii) to identify the problems or factors (if any) hindering the insurance of schools.

RESEARCH QUESTIONS

Attempts were therefore made to answer the following research questions:

1. To what extent are public secondary schools insured in Osun and Oyo States of Nigeria?
2. What are the major types of insurance policies held by insured schools?
3. Why are schools (if any) not insured?
4. What roles do the State Governments play in school insurance?
5. What plans do the schools have for the insurance in future?

Although the limitations of a case study are inherent in this study, it nonetheless, provides an insight to educational administrators and policy makers on the status of school insurance in their states. The findings from the study are also instructive to policy makers, administrators and principals of secondary schools in the other States in the country.

METHODOLOGY

From a total number of 651 public secondary schools in the old Oyo State (323 in the present Oyo State and 328 in Osun State), 70 schools, representing a little over 10% of the schools in the two States were selected by simple random sampling with 35 from each State. This sampling technique was considered appropriate as all the schools were under the same administration of the old Oyo State until 1991 when Osun State was carved out from the old Oyo State. There have been no changes in the number of schools in each of the two States since then.

The data for the study were collected by means of an open-ended questionnaire, an interview schedule, observation, and examination of documents. The questionnaire was made up of two sections. The first sought background information about the school including name, year of establishment, number of blocks of buildings in the school and a list of facilities, equipment and materials owned by the school. The second part of the questionnaire was designed to collect information on whether or not the school had ever been insured, the current status and reasons for not insuring, or for discontinuing with insurance where applicable, the types of insurance policies bought, and the school plans for insurance in future.

The interview schedule was designed to collect information from the Ministry of Education officials on the types of personnel employed for school insurance (if any), their roles and how safety and security were ensured in the case of uninsured schools (if any). Unstructured follow-up interviews were also held with some of the principals to clarify some issues on the insurance of their schools where applicable.

The questionnaires were validated and pilot-tested by the investigators and given to all the principals of the schools involved in the study to complete while two top officials of the Directorate of Schools and Higher Education in Ministry of Education of each of the States responded to the interview schedule. The interviews were tape-recorded and later transcribed. The investigators observed some of the school buildings, facilities and equipment and also examined relevant records in the states' Ministries of Education and some of the schools were also examined.

The questionnaire data were analyzed by the use of simple frequency counts and percentages while the transcribed interview data were content analyzed.

FINDINGS AND DISCUSSION

Extent and Types of Insurance Coverage

Data analysis revealed that only 14 (or 20%) of the 70 schools involved in the study had insurance covers. Only one of the schools was in Osun State while 13 were in Oyo State. Twelve of these 13 insured schools in Oyo State were located in one town – Ogbomosho – while the remaining one was in Ibadan.

Twelve of the insured schools purchased comprehensive insurance policies. These policies were purchased between 1996 and 1998. The items covered by the policies included school buildings, laboratory equipment, furniture, motor vehicles, workshop equipment, games and sports equipment, the school farm and electrical gadgets. The two other schools (one in Oyo State and the other in Osun State) had longer insurance history. They purchased insurance covers in the mid-sixties, discontinued with insurance business in 1978 when the old Oyo State took over all private schools, but resuscitated them in 1990. These two have continued to hold insurance covers for fire and rainstorm damage on school buildings and school farms even though the one in Osun State had not experienced any perils and hazards.

It is obvious from this that a majority of the schools in the two states were yet to be insured in spite of the many circulars that were sent to schools by the old Oyo State government pointing to the need for schools to be insured, and in spite of the fact that the damage on some of the school buildings were yet to be attended to by the time this study was in progress. The fact that some schools in the states were insured at all was due to two factors; first, one of the principals in one school in Ogbomosho town, who was the then president of All Nigerian Conference of Principals of Secondary Schools (ANCOPSS) insured his school and convinced 11 other principals in the town to insure their schools. Second, the two other insured schools were established by the Roman Catholic Mission which insured them right from when they were founded until 1978 when they were taken over by the old Oyo State government without renewing their insurance policies until 1990 when the policies were resuscitated by the principals of the two schools. The insurance premiums were paid through internally generated funds. Where schools were insured the insurance coverage was limited to school property only. The implication is that there was general apathy towards school insurance and even in insured schools; no degree of importance was attached to the insurance of staff and students.

Reasons for Not Insuring Schools

The reasons and the number of principals giving such reasons for not insuring their schools are as presented in Table 1.

Table 1: Responses of Principals to Reasons for not Insuring their Schools (n = 70)

Reasons For Not Insuring Schools	No. of principals	Percentage (%)
Lack of understanding of insurance business	4	5.7
No thought about insurance of school	1	1.4
Lack of fund	54	77.2
Lack of interest in insurance	10	14.3
No anticipation of any hazard	1	1.4
Total	70	100%

It can be seen from the table that lack of funds was the main reason why some of the schools were not insured. It is interesting to note that lack of interest in the scheme by school principals features as the second major reason why some schools were not insured. All the eight principals interviewed on this issue were aware that their school buildings, equipment, facilities and supplies were exposed to natural hazards and material risks. According to them, they were not in a position to insure them as there was no financial provision by either the states' Ministries of Education or the governments of the two states to insure the schools. They were of the opinion that their state governments were not interested in insuring schools. Otherwise, they would have provided the necessary funds for it.

Asked whether, their teachers were also not interested in taking insurance covers in their work places; the general reply was that such proposals had not been made to the teachers by the state governments. They expressed some doubt as to whether teachers would buy such insurance covers either as individuals or as groups for lack of interest in insurance business among their staff.

This lack of interest reflects the persistence of one of the problems with insurance business in the country as expressed by Mustafa (1992) over a decade ago. According to him, in addition to lack of knowledge about insurance among the majority of Nigerians, the bad image being given to the insurance industry by some dishonest and dubious insurance firms prevent people from

patronizing insurance companies. Even many of the few Nigerians that have good knowledge of insurance business, including school personnel, are often loath to buy insurance covers unless when absolutely necessary as is the case with purchasing automobile insurance covers by road users. This is because many insurance companies do not promptly reimburse the insured when hazards occur.

Governments' Roles in School Insurance

Interviews with the Directors of schools and their assistants in the two states revealed that the role of the Ministries of Education in regard to school insurance was mainly advisory. Between 1986 and 1991 not less than eight circulars were sent to school principals in the old Oyo State advising them either to insure their schools or suggesting to them various ways of safeguarding school property and averting hazards to them. It should be recalled that one of such circulars was entitled "Fire/Miscellaneous Perils and Burglary Insurance Scheme for School Property" issued in May 1989 by the old Oyo State Ministry of Education. One would have expected such a circular to be followed up with concrete proposals or plans by the State Ministry of Education officials for the take off of the scheme but there was nothing of the sort. Nor was there any other way in which school principals or head teachers or primary schools were empowered by any of the state governments to buy insurance covers for their schools. Meetings were also arranged between Zonal Inspectors of Education and school principals to deliberate on ways of preventing damage to school property by rainstorms in particular, and how to prevent or minimize the loss of school property to burglars. Rarely did any concrete proposals as to what the state government was doing or what school authorities should do to insure school buildings, facilities and equipment feature in such meetings. The Ministries of Education in the two states did not employ any insurance experts but some of their staff kept records of and data on, hazards in schools as well as the subsequent reports submitted by schools on hazards or losses incurred by the schools to the Ministries of Education of the two states. Virtually no practical use was made of such statistical data, records and reports by any of them. The problem of ensuring the security of schools and school property was entirely left to school principals. The common measure adopted by the principals towards addressing this problem was to engage the services of day and night guards.

The role of the government in school insurance is probably a reflection of the general apathy of the average Nigerian towards insurance business for the reasons given above. It is expected, however, that the officials of the state Ministries of Education should have taken the lead in protecting valuable educational facilities by making financial provision for ensuring school buildings and property, and ensuring that school principals purchase appropriate insurance covers for their schools and pay the insurance premiums when due. This is necessary as the financial consequences of damage to some school buildings especially by rainstorm are often very serious. Perhaps, the seemingly nonchalant attitude of relevant government officials towards school insurance is due to the fact that Parent/Teacher Association of most schools in the two states often effect repairs on schools buildings when disasters occur in order to minimize the loss of learning opportunities to their children and wards.

Future Insurance Plans for the Schools

All the school principals were of the opinion that it was good for schools to be insured. In regard to plans for future insurance of schools, however, the principals of the insured schools said they would continue to insure their schools as long as they were able to meet the costs through internally generated funds. None of them expressed any wish to expand the scope of insurance coverage. Only one out of the principals of the 50 uninsured schools said that plans had reached an advanced stage to purchase an insurance policy for his school. There was, however, no evidence to show that he was planning for it. According to him, the policy would be limited to school

property. The rest of the principals had no plans for insuring their schools in the next five or more years.

Almost all the principals of the uninsured schools mentioned lack of finance as the major constraint to their purchasing school insurance policies. In response to the type of data and records kept by the schools for insurance planning, only five out of the principals of the 70 schools claimed that their schools had relevant records and data for school insurance purposes. Examination of the records showed that they were mainly copies of reports of cases of burglary and damage to school buildings and property that have been submitted to the state Ministry of Education. Other documents included handbills and leaflets from insurance agents outlining the various services and policies offered by their companies. Almost all of them said that the purpose of keeping the data was to supply them to the Ministry of Education officials on demand.

The general picture that emerges is one in which only a few schools are insured with little or not relevant insurance records and in which most schools are not only uninsured but have no plans for insurance in the near future. School insurance is yet to assume any degree of importance among school principals and educational administrators in the two states despite the demonstrated awareness of the Education Ministry officials (i.e. the educational administrators themselves) of the dangers to which public schools are exposed. There is no reason to believe that the situation is different in the other states of the country. This contrasts sharply with the situation in most advanced countries of the world. In the United States of America, for instance, where Biddles (1971) noted decades ago, that in almost every city or town public schools are among the biggest purchasers of insurance in the community, and in England where the educational authority owns and operates over 1000 schools and itself directly deals with insurance matters (Irish Minister for Education, 1993). The need for public schools to be the biggest purchasers of insurance is nowhere more appropriate than in Nigeria and those other countries where, because of the steadily dwindling resources for education, schools are unable to effect necessary repairs and replacements when perils and hazards occur thereby denying their students adequate learning opportunities for long periods of time.

State governments stand to gain not only by insuring their school buildings and property against natural hazards, burglary and other material risks but also by purchasing, or ensuring that, health insurance policies are purchased for students. By insuring its schools a state government is assured of protection of the financial and educational values of its school plant especially in areas where the schools are exposed to material risks and natural hazards. Purchasing health insurance could yield good dividends for the educational system as current studies show a two-stage link between insurance coverage and school performance. It has been that children who are insured are more likely to be healthy, and children who are healthy are more likely to succeed in school (Schwarz & Lui, 2000).

CONCLUSION AND IMPLICATIONS

It is apparent from these findings that both the Ministry of Education officials felt the need for insurance of schools and the school principals in the two States but school insurance is yet to receive the serious consideration that it deserves. Many more schools in the two states would have been insured, school insurance plans developed and, the insurance coverage among the few schools that were insured would have been widened beyond property insurance to include staff and students, if the school principals were given funds for school insurance. Allocating little or no funds to school insurance means that school administrators are yet to accord school insurance the recognition it deserves as an important aspect of school management in the two states and,

perhaps, the country as a whole as there is no reason to believe that the status of school insurance in the other states of the federation differs from that of the two states.

In order to enable the schools reduce financial losses or mitigate the effects of misfortune in future, State Ministries of Education should, instead of sending circulars only view insurance as an important part of school business function and play more active roles in school insurance. They should formulate and facilitate the implementation of policies that will ensure that school property, staff and even students are insured by reputable insurance companies. State governments should employ insurance experts to advise schools on insurance plans, keep and update insurance data and assist schools in making claims whenever necessary. School principals should be charged with the implementation of insurance plans and insurance record keeping in their schools. Insurance premiums should be part and parcel of each school's annual budget or each state's annual grants to schools. School administrators should see the purchase of insurance not only as an essential and integral part of school management but also as a necessary plan against disruption of school activities and for reducing fear and worry by school principals whenever a hazard or peril occurs. They should, as Ezarik, (2006:1) rightly put it, "not think twice about insuring school buildings and inventory". Purchasing health insurance policies for students and even school staff should also be considered a worthwhile investment.

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A Review Of Nigerian Students' Ideas In Chemistry And Their Implications On Aspects Of Pedagogy

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Abstract

This paper considers the implications of the constructivist theory to teaching and learning. Attention is given to the implications based on some research findings on students' ideas of chemistry concepts as they relate to aspects of pedagogy which are: presentation of learning materials, presentations of some ideas in textbooks, linguistic issues, evaluation of learning and diagnoses of learning problems.

INTRODUCTION

The teaching of science in the Nigerian schools has yet to acknowledge fully the role of personal and social construction in the development of scientific knowledge. There is evidence from many studies in children's understanding in various fields of science that learners construct their own understanding. Such researchers as Driver [1973; 1988], Kroll and LaBosky (1996), Macnamara (1982), Piaget (1969) and Pope and Gilbert (1983) believe that from birth, children are actively involved in the process of constructing their knowledge structures. For such constructivists, observations are subjective and theory-laden. 'Truths' are not infallible conceptions, and ideas are seen as personal constructions from experiences.

Studies on children's scientific ideas have also illustrated that the conceptual change sought by science teachers has not always occurred (Clement, 1983; Gilbert, Osborne and Fensham, 1982; Hashweh, 1986; Novak, 1984; Pope and Gilbert, 1983). Hewsan (1982) and Shuel (1987), Richardson (1997); Zahorik (1995) had pointed out that teaching in schools does not usually consider students' prior knowledge as possibly interfering negatively with learning. Novak and Nussbaums (1980) show that negative interference persists up to the University level in many instances.

Research findings in the African context have also shown that traditional world view and beliefs influence the theoretical position of an observer (Jegade & Okebukola, 1991). It is therefore important to identify areas where such traditional world views and beliefs may negatively interfere with learning.

Having established that prior knowledge may negatively interfere with learning even at the higher educational level, it is believed that a presentation of some identified implications from a study of senior secondary school students understanding of chemical change with special reference to burning and precipitation will shed more light on teaching and leaning of chemistry at the secondary and tertiary levels (Alamina, 1992).

The burning of paper (Alamina, 1992) provided insight into pupils' ideas and/or misconceptions about the role of the paper, oxygen and flame in burning. The precipitation reaction was used for the specific purpose of finding out pupils' understanding of the nature of the reacting species, as well as their general understanding of the particulate nature of matter. The responses in this study were based on the learners' description of what was observed to be happening. For instance, the interpretation of burning of paper in air commonly 'showed' 'the flame on the paper to be from a source external to the paper and having a destructive transforming effect upon it. Scientific understanding about burning in air presents a different idea, namely that the flame is a consequence of the exothermicity of the combustion reaction. Since the pupils' ideas are

dominated by observable and common sense descriptions, the consideration of the implications of these for pedagogy becomes necessary.

For the purpose of this paper, the following aspects of pedagogy are considered.

- (1) Presentation of learning materials
- (2) Presentation of ideas in textbooks
- (3) Linguistic issues
- (4) Evaluation of diagnosis of learning.

Presentation of Learning Materials

Alamina (1992) has recognized two factors among others that could affect understanding. One is the deficiency factor and the second is the misconception factor. The following describe the ways these factors can affect understanding.

The deficiency factor refers to lack of an appropriate build-up of cognitive structures or 'schemes' which are related to problem-solving capabilities. These structures or schemes influence the way individuals interact with the environment. Lack of appropriate structures needed to relate to a given element of formal knowledge and to regenerate the desired meaning is likely to result in a pupil constructing only an understanding which is unduly influenced by informal prior knowledge.

The misconception factor refers to inappropriate presentation of experiences, and/or an inadequate understanding of presented knowledge. Within the framework of this paper, knowledge is seen to be built up as a result of physical and mental (cognitive) interaction between the individual and the environment. This process involves the creation of meaning. It follows that misconceptions could arise as a result of wrong or erroneous presentation of experience which in turn can trigger wrong internal co-ordination of schemes that are involved in the creation of meaning. The use of some models in the teaching of chemistry can be associated with this. Anderson (1990) points out that atoms and molecules are represented in a variety of ways in textbooks such as circles, balls separated by springs, etc. He argues that the different models, which are often given without explanation or justification, might be a source of misconception for learners. He suggests emphasizing the distinction between models and observation, and providing a clear explanation of the nature of the model. He has also enumerated some category mistakes found in textbooks and commonly made by teachers. One such mistake is failure to make and sustain a clear distinction between substances and atoms/molecules. The problem identified by Anderson (1990) has to do with understanding molecules in their proper context in relation to the substances as a whole. Once this is achieved, the learner should be able to relate their understanding to the variety of models and contexts and will even be able to challenge a statement such as "water consists of hydrogen and oxygen". Inadequate understanding of scientific knowledge is often mixed with learners' everyday common sense explanation. See for example, the following response from a student in senior secondary school class to a question: What is involved in burning?

(Response) Combination of the oxygen from the air with the material made from the match-stick...they reacted on the paper that is, the material to be burned by the match stick.

The above indicates that oxygen is necessary for burning. However, the way in which the gas is involved is not understood correctly. The pupil's response is a patch work of formal and common-sense knowledge.

When a learner is equipped with cognitive structures required to relate to and make sense of new material, and this material is presented to the learner in a manner likely to effect learning, then the learner is in a position either to keep his or her prior knowledge (which may be traditional taboos, beliefs or misconceptions) or to abandon this and accept the new knowledge.

The Presentation of Ideas in the Textbooks

Pupils have a variety of conceptions about the particulate nature of matter, each of which differs from the scientific conception in one or more respects. In most textbooks, chemical change is treated at the substance level before introducing the pupils to atomic theory. Vogelezang (1987:519) points out that one important reason for starting school chemistry with the notion of substance rather than with atoms and molecules is that this notion relates directly to pupils' experience. The question to be asked with regard to Vogelezang's view is whether it is not more appropriate to introduce the scientific conception of chemical change at the particulate level than to teach it initially at the substance level which will only confirm learners' superficial observation of change. An example of a textbook presentation on chemical reaction at the substance-level is given below from the textbook – STAN (1988) widely used in Nigerian secondary schools. "Chemical changes brought about by heat involves either (1) the combination of substances, or (2) the decomposition of substances" (p.12).

In a later chapter of the textbook, atomic theory and reaction involving fundamental particles are introduced. The learners may now find it difficult to reconcile the atomic level of understanding with their earlier understanding based upon observed substance-based changes. This difficulty has been evident in the finding of this study. There is therefore the need to have learners adequately conceptualize the atom in relation to the substance as a whole before they are exposed to topics on chemical reactions.

Linguistics Issues

Learners often interpret information in terms of their everyday informal conceptions. There is therefore a need for a careful verbal and written presentation of terms, especially those that have both scientific and everyday informal conceptions and meanings. An example of a written presentation, which could lead to misunderstanding by pupils is given below from the textbook STAN, (1988). "When heated in air, many substances burn. They react with oxygen from the air and change into new compounds" (p.12)

The term 'burn' is noted to have a variety of meanings derived from everyday experience e.g. something being on fire or something being heated or something being destroyed by fire. (Alamina, 1992). For a learner who does not understand the meaning of the term 'react' in the scientific sense and understands burning only in terms of one or more of the above mentioned everyday meaning, a reading of these sentences from the textbooks, fails to relate the term 'burning to the chemical combination of oxygen with a burnable material.

The Evaluation and Diagnosis of Learning

Detailed assessment of pupils' understanding of a basic idea such as the particulate nature of matter requires an analysis of extended interview and dialog between the teacher and the learner.

Teachers have always developed their own tests with the following aims in mind:

- (1) To re-teach some of the information that was commonly assumed that the students already knew.
- (2) To omit some of the materials planned to be taught because the students already possessed the required understanding.

- (3) To provide some students with remedial instruction while giving other students some enriching experiences.
- (4) To assess students' progress.

According to Mehrens and Lehmann (1984:58), classroom tests assume "optimal learning on the part of pupil and optimal teaching on the part of the teacher". If optimal teaching and learning have been achieved over these years, they have not always been evident. When a curriculum does not recognize that everyday conceptions may interfere with learning, then teaching and testing may be focused on the wrong issues.

Diagnostic aspects of teaching obviously present practical difficulties, not the least in terms of time constraint. Usually, schools have used diagnostic tests to identify specific strengths and weaknesses of learners in a given field of knowledge. Standardized diagnostic tests are used in the area of reading and commonly, are pencil and paper tests designed to identify particular reading skills. In situations where conceptual understandings are being probed, paper and pencil diagnostic tests may not be adequate since meanings are complex, subtle and often elusive.

The dialogue below from this study, illustrates the difficulty of establishing meaning on a question asked about burning of paper.

Students' Response: Oxygen was added, that is, the paper was burnt in the clear atmosphere and burning in air is an addition of oxygen to a substance.

Interviewer: How does this addition happen?

Students' Response: It mingles with, that is the oxygen in the air mingles with the strike of the match on the paper, and encourages the burning.

Interviewer: I don't understand what you mean by mingling.

Student's Response: It mixes with the ignition and helps the burning of the paper.

Comment: Response 1 explains how the learner understands the role of oxygen in burning. On a pencil and paper test, this first response could categorize the learner as having understood that burning is an addition of oxygen. However, response 2 throws further light on this 'addition' process. On a pencil and paper test there will be no opportunity to probe the meaning of the "addition" (The probing continues).

Interviewer: It is not quite clear to me how this mixing comes about.

Students' Responses: In chemistry, you are told that burning is the way substances burn in air in the presence of oxygen.

Comment: It is evident here that the 'addition' of oxygen to the substance mentioned earlier presented a wrong picture of the involvement of oxygen.

CONCLUSION AND RECOMMENDATION

It follows from the above examples that it will be a difficult task for the teacher to 'start from where the pupil is' without a thorough probing of the pupil's understanding. This often requires

an appreciable length of time. There is therefore a need for effective and speedy diagnostic tools, although the difficulty of generation of such tools is obviously considerable. A more coordinated programme of research into pupils' understanding of various topics becomes necessary in the provision of materials for such diagnostic tools.

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An Analysis Of Nigerian University Undergraduates' Awareness Of HIV/Aids Epidemic: Implication For National Development

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Abstract

This study investigated the role of campaign in the awareness of HIV/AIDS epidemic among Nigerian University undergraduates and its implication for National Development. Two independent studies were carried out. The first study sample included 180, while the second study sample comprised 285 subjects from University of Agriculture, Abeokuta; Olabisi Onabanjo University, Ago-Iwoye; and Babcock University Ilishan, all in Ogun State, Nigeria. Three hypotheses were formulated and tested. In-depth interview and questionnaires were used for data collection while simple percentage and t-test were used in analysing the qualitative and quantitative data generated. Results obtained indicated that the respondents were knowledgeable about HIV/AIDS. Also, that gender; level of education and respondents' parental educational status were barriers to their awareness level of HIV/AIDS epidemic. While the implications for National development were articulated, the study also suggested the need for more massive and aggressive campaign about the disease by individuals, groups, government, and non-governmental agencies and the need to include in the school curriculum the teaching of HIV/AIDS as a subject.

Key Words: University Undergraduates Awareness, HIV/AIDS, National Development

INTRODUCTION

The Pandemic called Acquired Immune Deficiency Syndrome (AIDS) is no doubt one of the biggest challenges to human continuous existence; and the greatest battle humanity had had to contend with for over two decades now. The epidemic of AIDS that was first recognized in the United States of America (USA) in 1981 has now become a global health problem of extraordinary magnitude. It represents a global challenge of unprecedented scope to the medical experts throughout the world. Since it was recognized, several millions of people across the globe have been infected with the Human Immuno Deficiency Virus (HIV), the causative agent of AIDS. As at November 1990, nearly a decade after it was first recognized, 298, 914 cases of AIDS have been reported to the WORLD Health Organization (WHO). However, because of the likelihood of under-reporting, WHO estimated that by the end of 1990, over 1,200,00 cases of AIDS would have occurred globally; and about 8 to 10 million people would have been infected with HIV virus across the globe (Centre for the Right to Health, 1991).

As revealed by the year 2000 United Nations/ AIDS report, about 36.1 million people are living with HIV/AIDS throughout the world; with Sub-Sahara Africa accounting for over 25.3 million (70%) people infected. The report also affirmed that over 17 million people the world over have died of HIV/AIDS since inception of the epidemic. Thus, it was estimated that 16,000 people will be infected daily worldwide (centre for the Right to Health 2001). By the end of the year 2001, the cumulative world total of AIDS cases had risen to 40.0 million; with the number of adults living with HIV/AIDS put at 37.2 million and the death toll for the year was put at 3.0 million. (UNAIDS/WHO, 2001). Below are the global regional HIV/AIDS statistics and features as at the end of 2001.

The Global Regional Hiv/Aids Statistics and Features at the end of 2001 as Compiled by
UNAIDS/WHO

Region	Epidemic Started	Adult & Children	Adult & Children	Adults Prevalence	% of HIV Main	Mode(s) of transmission(s)
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		living with HIV/AIDS	newly infected with HIV/AIDS	rate (*)	positive adults who are women	for adults living with HIV/AIDS
Sub-Sahara Africa	Late '70s Early '80s	28.1 million	3.4million	8.4%	55%	Hetero
North Africa & Middle East	Late '80s	440,000	80,000	0.2%	45%	Hetero, IDU
South & South-East Asia	Late '80s	6.1 million	800,000	0.6%	35%	Hetero, IDU
East Asia & Pacific	Late '80s	1 million	270,000	0.4%	20%	IDU, Hetero, MSM
Latin America	Late '70s Early '80s	1.4 million	130,000	0.5%	30%	MSM. IDU. Hetero
Caribbean	Late '70s Early '80s	420,000	60,000	2.2%	50%	Hetero, MSM
Eastern Europe & Central Asia	Late '90s	1 million	250,000	0.5%	20%	IDU
Western Europe	Late '70s Early '80s	560,000	30,000	0.3%	25%	MSM, IDU
North America	Late '70s Early '80s	940,000	45,000	0.6%	20%	MSM, IDU, Hetero
Australia & New Zealand	Late '70s Early '80s	15,000	500	0.1%	10%	MSM
Total		40 million	5 million	1.2 %	48%	

* The proportion of adults (15 to 49 years of age) living with HIV/AIDS in 2001, using 2001 population.

* Hetero (heterosexual transmission), IDU (transmission through injection and drug use).

* MSM (Sexual transmission among men who have sex with men):

Source: UNAIDS/WHO (2001): AIDS Epidemic update:

In Africa, the first case of AIDS was reported in 1984 in Nairobi, Kenya. During this period only few cases were reported. However, as at the end of the year 2001, the estimate by UNAIDS/WHO AIDS Epidemic update for the region (as indicated in the table above), is approximated to be 3.4 million new infections: bringing the number of people living with HIV/AIDS in the region to 28.1 million. In Kenya where it was first recognized in Africa, over 2 million people are living with HIV/AIDS; and about 1.1 million Kenyans have died of the disease (Nigerian Punch Newspaper, 2001).

In Nigeria, the incidence of HIV/AIDS was first reported in 1985. The first few cases reported were seen in commercial sex workers (prostitutes) in Lagos and Anambra states. Since then, the epidemic has been on the increase. In September 1991 for instance, the Federal Ministry of Health reported that out of 125,000 blood samples screened for HIV/AIDS infection nationwide, 830 were reported to be zero positive, giving a prevalence rate of 0.66%. By the end of December 1992, the number had increased to 552 cases nationwide. (Salami, 2002).

As the epidemic rages unhindered, Nigeria has moved from a prevalence rate of 1.8% in 1993, 3.8% in 1994, 4.5% in 1996, to 5.4% in 1999; translating to 2.6 million people living with HIV/AIDS. It is estimated that by 2004 about 4.9 million Nigeria will be infected with the HIV

Virus (Oluduro, 2002). Below is the data given by the Federal Ministry of Health and Social Services on the prevalence of HIV/AIDS in the six geo-political zones of the country.

Zone	Prevalence rate In youth (20-24)	Hot Spot State	Prevalence Rate in Hot Spot State
South East	8.4	Ebonyi	11.1
South West	4.3	Osun	4.7
South-South	6.8	Akwa Ibom	13.3
North East	3.6	Taraba	7.0
North West	4.5	Kaduna	15.0
North Central	9.5	Benue	2.1

*Source: Summary of findings from the 1999 HIV/SYPHILIS sentinel zero-prevalence survey conducted by the Federal Ministry of Health.

The UNAIDS/WHO (2000) report gave the following data as the number of people living with HIV/AIDS as at the end of 1999.

Estimated number of people living with HIV/AIDS	Adults & Children	Adults 15-49	Women 15-49	Children 0-14
	2,700,000	2,600,000	1,400,000	120,000

*Source: UNAIDS/WHO (2000): Report on the global HIV/AIDS Epidemic

It is evident that despite the global campaign against the spread of HIV Virus, the disease has been on the increase. As indicated in the data above, the pandemic disease called AIDS Spares no section of the populace. It is worrisome and pathetic too, that the majority of the percentage of people so far either killed or infected by the disease are adults and children. The incidence is highest among the 15 to 50 years age group. By implication, this age group constituted the 'heart' of the nation's economy, as they are the most economically productive age group. Thus, the effects of the epidemic on the nation are multifarious; these include economic, social and health. But some questions arise here: What has being the effect of various campaign and strategies mounted by individuals, groups, Federal and State Governments and the Non Governmental agencies against the spread of the pandemic disease? Do these campaigns have any effect on the awareness level of the people at all? Or do they further complicate the matter?

Answer to these questions become imperative as some people seem to believe that the spate of jingles, advertisement and awareness posters on the use of condom as means of curbing the spread of HIV Virus have adversely affected the spread of the disease. According to these set of people, uncontrolled exposure of young adolescents to this type of education can corrupt or encourage them to put into practice all they have heard and read on electronic and print media about sexual matters; even when they are least prepare for such challenges. Some people are of the view that such measures are means of informing and educating young adolescents about the right attitude to sexuality issues in a world where HIV/AIDS incidence is on the increase (Salami, 2002).

In view of the foregoing, the present study aimed at assessing the role of campaign in the awareness of the spread of HIV/AIDS epidemic among University Undergraduates. This group was chosen because of the high prevalence rate of the disease among the 15-50 years age group (UNAIDS/WHO 2001), which incidentally fall within University students' age bracket.

Hypotheses

- There is no significant difference between the awareness level of male and female University Undergraduates on the role of campaign On HIV/AIDS epidemic.
- There is no significant difference between the awareness level of first Year University undergraduates and those in final year on the role of campaign on the HIV/AIDS epidemic.
- There is no significant difference between the awareness level of University Undergraduates whose parents are literate and their counterparts whose parents not lettered on the role of campaign on the HIV/AIDS epidemic.

METHODOLOGY

Design

This study adopted a descriptive survey research design for determining the role of campaign in the awareness of HIV/AIDS epidemic among Nigerian university Undergraduates.

Population, Sample and Sampling Technique

This study was delimited to Ogun State, Nigeria. The study's target population from which the sample was drawn comprised University Undergraduates of the Olabisi Onabanjo University, Ago Iwoye, University of Agriculture, Abeokuta, and Babcock University, Ilishan - all in Ogun State, Nigeria.

A total sample of 345 undergraduates drawn from the above named Universities through a random sampling technique was used for the two studies. Sixty (60) subjects, 20 from each of the universities (25 (42%) males and 35(58%) females) drawn through a random sampling technique form the sample for the first study which utilised an in depth interview to generate quantitative data. The sample for the second study comprised 285 randomly selected respondents made up of 95 from each of the universities (130 (45.6%) males, 155 (54.4%) females).

Instrumentation

Qualitative and quantitative data were generated for the study using in-depth interviews and questionnaires. These methods were used to obtain in-depth responses about the awareness level of University Undergraduates on HIV/AIDS epidemic. The interview technique was adopted specifically for the purposes of getting in-dept qualitative information about students HIV/AIDS awareness level, prevention techniques, mode of transmission and prevailing misconceptions surrounding the disease. For achieving this objective, guidelines designed to enable researchers gather detail information about what the students know, think and feel about HIV/AIDS were developed. Generally, the interviews lasted for about 25 minutes per interviewee.

The questionnaire consisted of two sections. Section A sought information on the respondents' socio-demographic characteristics. Section B contained 20 items, which revolved round information on knowledge of HIV/AIDS, how it can be prevented, and its modes of transmission, its misconception and students source of information about the pandemic disease. Each of the items were analysed to ensure that they measure the variables associated with the objective of the study. The test-retest method was used to ensure the reliability of the instrument. A co-efficient of 0.78 was obtained. The questionnaires were self-administered to the 285 subjects; and collected on the spot.

Frequency count and simple percentage were used to process the qualitative data generated through the in-depth interview; while the t-test statistics was used to analyse the quantitative data generated by the questionnaires so as to test the hypotheses postulated for the study.

RESULTS

Study 1

As stated earlier on, in-depth interviews and questionnaire were used to generate data for the study. The content of the interviews revolved round 5 main themes viz: knowledge of HIV/AIDS, its symptoms and mode of transmission, how it can be prevented, and sources of information about the disease.

Concerning the students' knowledge of the nature and existence of HIV/AIDS, the result of the interview indicated that all the 60 interviewees had heard of the disease; and they were fully aware of its nature. From their description of the nature of the disease, they displayed a high level of awareness. For instance, a high percentage (78%), (19 males and 28 females), mentioned thinness (slimness), general weakness of the body and being sickly as symptoms of HIV/AIDS. While 58% (16 males and 19 females) and 75% (21 males and 24 females) mentioned cough, rashes, sores around the mouth and Diarrhoea, constant and severe headache as well as lack of appetite as symptoms of the diseases respectively.

Concerning the modes of transmission, it was revealed that virtually all the interviewees knew the major modes of transmission of HIV/AIDS. Sexual intercourse (hetero or homosexual), infected objects, such as injection needle, clippers etc, and through blood transfusion was rated very high. Also high rated were kissing and breastfeeding. However, only a few percentages (20%-5males and 90%-3 females) of the interviewees were aware that the disease could also be transmitted through accident of any type, which involves cuts.

The interview also revealed some misconceptions about the mode of transmission of the disease. Some of the interviewees, a reasonable percentage (23 % - 6 males and 8 females) believed that the disease can be transmitted through sharing of home utensils such as cups, spoons, lavatory system etc.

On the method/technique of preventing the disease, a good percentage of the interviewees (82%) mentioned sexual abstinence as number one preventive technique. Also rated very high as preventive techniques, were keeping to one sexual partner and being faithful of sexual partners. They were rated 82% and 78% respectively. Avoidance of sex before marriage, proper use of condom, not sharing clippers, razor blades etc with people, and avoidance of the use of non-sterilised injection needle were also recognised as preventive techniques.

On source of information about the disease, a large percentage (93% - 22 males and 34 females) of the interviewees mentioned mass media (Which included T.V. Radio, Video/Film and print media generally) as their major source of information. Next to that in the ranking rate are newspapers and magazines (80% - 18 males and 30 females), friends (77% - 19 males and 27 females), and posters printed by governments and non-governmental agencies (67%-15 males and 25 females) respectively.

However, contrary to the researchers' expectation, parents, counsellors and seminars/symposia/lectures/books were rated very low. They attracted 35, 32 and 22 percentages respectively. Also not popular sources of information as mentioned by the interviewees were religious bodies (churches and mosques) with 33% and service clubs with just 12% of the total number of the interviewees.

Study 2

Concerning the data generated through the administration of the questionnaire, three hypotheses were tested; and the results are as follows:

Hypothesis 1

There is no significant difference between the awareness level of male and female university undergraduates on the role of campaign on HIV/AIDS incidence.

TABLE 1: Result showing t-test comparison of awareness level of male and female undergraduates on HIV/AIDS epidemic

Variables	N	X	SD	DF	t-obs	t-crit	P
Male	130	26.50	3.62	283	1.31	1.96	NS
Female	155	26.67	2.48				

As shown in the table above, the null hypothesis was accepted since the t-observed of 1.31 was less than the t-critical of 1.96. Thus, there was no significant difference in the awareness level of the subjects based on gender. (t=1.31, df=283, P =NS)

Hypothesis 2

There is no significant difference between the awareness level of first year University Undergraduates and those in final year on the role of campaign on the HIV/AIDS epidemic.

TABLE 2: Result showing t-test comparison of awareness level of first and final year University undergraduates on HIV/AIDS epidemic

Variables	N	X	SD	DF	t-obs	t-crit	P
First year	219	26.79	21.19	283	0.35	1.96	NS
Final year	66	26.64	2.61				

In table 2 above, the null hypothesis again was accepted, as there was no significant difference in the awareness level of University Undergraduates based on level of education (t = .35; df =283; P=NS).

Hypothesis 3

There is no significant difference between the awareness level of University Undergraduates whose parents are literate and those whose parents are not literate on the role of campaign on the HIV/AIDS epidemic

TABLE 3: Result showing t-test comparison of awareness level of University undergraduates from literate and non-literate parental background on HIV/AIDS epidemic

Variables	N	X	SD	DF	t-obs	t-crit	P
Literate background	224	26.71	2.23	283	0.88	1.96	NS
Illiterate background	60	27.12	2.96				

From the table above, the null hypothesis was accepted since the t-observed of .88 was less than the t-critical of 1.96. Thus, there was no significant difference in the awareness level of University Undergraduates from literate background and their counterpart from illiterate background. (t=.88;df=282;P =NS)

DISCUSSION

The result of the in-depth interview revealed that the interviewees were knowledgeable about HIV/AIDS disease. The result of the present study confirmed Alutu and Izokun – Etiobhio (1997), Uwakwe (1999), Uwakwe and Abimbola (1992) and Asindi et al (1992) positions that the Nigerian

general public are aware of the pandemic HIV/AIDS disease, its sources of transmission, and preventive stages.

However, it is worthy of note that despite the fact that the interviewees displayed a high knowledge about the disease, a reasonable percentage (23% -6 males and 8 females) still has insufficient knowledge about the disease. They believe that the disease could be transmitted through the sharing of home utensils such as cups, spoons and through the use of what they called “contaminated” lavatory system. Although, this finding did not spark much surprise as Alutu and Izokun – Etiobhio (1997), and Uwakwe (1999) had reported the same thing. It only revealed that there is still need for more massive and aggressive awareness campaign and education programme on the disease for this group of young adults and the Nigerian masses in general.

On students’ source of information about HIV/AIDS, the results revealed that mass media (Radio, Television, video/film posters, newspapers and magazine) and friends were their popular sources of information. Parents, Counsellors, religious bodies (churches and mosques), symposia/seminar/lectures, and books were rated very low. By implication, the university system as a citadel of learning is not being alive to its responsibilities of being the most informing and educating system. Most of our Universities’ libraries are not adequately stocked with current journals and books. Symposia/seminars and inaugural lectures that have a direct bearing on the happenings in the world are seldom organised due to gross under – funding of the system by government.

It therefore means that the University System needs to be revolutionized with academic activities that have a direct link with the happenings in the world to complement the present efforts of individuals, groups and governments at controlling the spread of HIV Virus among Nigerian youths. Thus, governments (both Federal and State) should address, with all seriousness it deserves, the much talked about under – funding of the education sector. Our schools’ libraries (not the university only) should be well stocked with current journals and books. Without this in place, the current campaign against the spread of HIV/AIDS may be an effort in futility if the most vulnerable group (adult) to the disease is not well informed about the nature and modes of transmission of the disease. Asindi, Ibia and Young (1992), Akindele – Oscar (2000), Desalu (2001) and Salami (2002).

School Counsellors too, need to do much in the area of aggressive dissemination of relevant and current information. This is imperative because counselling support programmes and employment of appropriate counselling strategies remain important adjuncts to Aids education in Universities and other tertiary institutions. (Uwakwe, 1999, Uwakwe, Onwu and Masary 1993). Also, parents/guardians and religious body (churches & mosques) need to step-up campaign against the spread of the disease. Parents in particular need to encourage discussion of sexuality issues among their wards; and religious body should pay more attention to the teaching of moral instruction designed to motivate individuals to abstain from pre or extra marital sexual activities.

Based on the quantitative data analysis of the present study, it could be inferred that the awareness level of University Undergraduates in Ogun state on the HIV/AIDS incidence was high as the three hypotheses postulated to determine this were all accepted irrespective of gender, year of study and parent’s educational background. The results of hypothesis one on gender is similar to the findings of Salami (2002) who reported that there was no significant difference between the awareness level of male and female secondary school students of the HIV/AIDS incidence. The findings were contrary to the researcher’s expectation. The researcher had expected the female undergraduates to differ significantly in their awareness level of the role of campaign in HIV/AIDS incidence because female University Students read real life, romance, adventure

stories and science fiction on sex than their opposite sex (Omoegun, 1999). Also, in most developed and developing countries (government, and non-governmental organizations) HIV/AIDS campaign messages are targeted at the female gender (particularly adolescents and young women who are still sexually active). (Franz Kowrak, 1990). But the findings of the study showed no significant gender difference. The second hypothesis also revealed no significant difference in the awareness level of fresh undergraduates and those in their final year of the role of campaign in HIV/AIDS incidence. Salami (2002) also reported that level of education was no barrier to the awareness level of secondary school students of HIV/AIDS incidence. On the third hypothesis, the researcher had expected students from literate homes to significantly differ in their awareness level on the role of campaign in HIV/AIDS incidence than their counterparts from non-literate home because of their parent's educational background. However, the observed insignificant difference could be due to the unwillingness of the literate parents to discuss sexuality issues with their wards due to socio-cultural and religious orientation which outlaw such discussion with young unmarried people (Cerpod, 1996).

IMPLICATION FOR NATIONAL DEVELOPMENT

In every country throughout the world, be it developed, developing or underdeveloped nation as the case may be, the youths constitute the greater percentage in the school setting at the primary and tertiary levels of education and are the "oil" that lubricates the economy. In fact, the youths constitute the heartbeat of every nation. Thus, if the greater percentage of the youth population is vulnerable to catching HIV/AIDS disease as revealed by the UNAIDS/WHO 2000 world report on HIV/AIDS epidemic, it is obvious that the development portends a great danger to national development.

The present study has so far affirmed that HIV/AIDS represent one of the urgent worldwide problems with broad social, cultural, economic, political, legal and health implication. Since the prevention of the spread of the disease requires that every individual should have adequate information about its modes of transmission and prevention; individuals, parents, schools, religious bodies (churches and mosques), peer-group, service clubs, governments (both state and federal) non-governmental agencies should step up more aggressive campaign that will focus on the features of the disease. This becomes imperative in view of the fact that Nigeria, according to Desalu (2001) is the first populous country in the world to cross the 5 percent prevalence mark.

This is the more reason why government must re-strategise and refine its approach at addressing the scourge of HIV/AIDS. Without been modest, the present approach has failed since records have it that the number of HIV/AIDS victims is on the increase. There is need to take the campaign to the root or the foundation of the educational sector. There is need for the government to introduce a policy of "catch them young" into the matter. In view of the fact that the children of today are the youths of tomorrow, there is that need to build a solid foundation for the campaign against the spread of the disease right from the first tier of education.

Therefore, the present educational policy should still be looked into with a view to including in the school curriculum from the primary to the tertiary level, the teaching of HIV/AIDS as a school subject. Although, one is aware of the fact that some few universities are already running it as a course of study; but it will be more meaningful and goal directed if it is made a national policy. By so doing, everybody, both young and old will be aware of the "killer disease" and the society will be free from the scourge of the disease.

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Nigerian Police Trainees' Perception and Knowledge of the Symbolic Elements of the Police Colour and Crest

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Abstract

This study investigated the perception and knowledge of Nigeria police trainees on the Nigerian police crest and colour. The study sample consisted of 400 police trainees (228 males, 172 females). They ranged in age between 18 and 27 years. Three null hypotheses were tested for significance at .05 margin of error using Analysis of variance statistics. Results showed that police trainees had a good perception and adequate knowledge of police crest and colour, but showed some differences when compared along gender, age, and time spent in training (trimester). The discussion emphasizes the implication on the Nigerian police and policing responsibilities generally.

Key Words: Police Trainees, Police Crest, Nigeria.

INTRODUCTION

For about a decade ago, there has been a well – established growing body of research findings on the police in Nigeria (e.g., Akinnawo, 1994, 1995; Aremu, 1996, 1998, 1999; Aremu & Idowu, 2001; Aremu, 2000, 2002; and Aremu & Adeyoju, 2003). The efforts of these researchers have helped a great deal to boost literature on the Nigeria Police. This was not so before 1994. Good as these efforts have been, all the studies were mainly on the police who are on the job. There has not been any known significant study on the police trainees.

The word “police” generally means the arrangements made in all civilized countries to ensure that the inhabitants keep the peace and obey the law. Leineweber (2003) restated the assertion made by an English Commissioner, Sir Richard Mayne in which he stressed the following among other things as the primary objective of an efficient police: protection of life and property; preservation of public tranquility; and absence of crime. The above objectives are among other things stressed during training of police constables. Whether these themselves would produce efficient 21st century police leave much to be desired. This current investigation on Nigerian police trainees was embarked upon as part of the efforts to improve the education and training received by police constables. This is with a view to improving the policing skills and responsibilities.

What is obtained during training in police colleges and academy does not totally reflect the post-training policing job. In actual fact, Rauch (1992) submitted that the central assumption of police work is that policing is a discretionary activity. What this connotes is that there is no defined way of “doing police work”, and that the individual police officer is often called upon by his superior and the state to make decisions and take appropriate action. The consequence of which is boredom by the police officer involved. Although Shearing (1991) argued that no training given in the Police College and academy can cover all what is expected of the police, Rauch (1992) quickly surmised that what is needed is a training which would equip recruits with the exercise of discretion in a complex and changing external environment. Thus, police training, most especially for the recruits (also referred to as police trainees in this study) should be well informed and educative. This is with a view to producing police constables who would be “well educated”, and who would be ready to use the same education to effectively police the society.

Statement of the Problem

The extent to which the police can be successful in discharging their responsibilities and carry out their duties are dependent on public approval of their existence, actions and behaviours. In pre-independence Nigeria, the police profession was embraced by the rejects from other professions and individuals who were less privileged. These people were recruited into the junior cadre of the force. In post independence Nigeria and till date even with the establishment of the elitist force who are trained in the police academy, the issue of whether police trainees truly understand police symbols and crest, and whether these are properly perceived and utilized by them still leave much to be desired. It therefore, becomes pertinent to investigate the police trainees' perception and knowledge of the police symbolic elements (police colour and crest).

Literature Review

Aremu (1998) stated that the importance of ensuring that policemen are well refined need not be over emphasized. It is through training that the police recruits in Nigeria are exposed to the proper attitude and knowledge of reasoning and good policing conduct within the Nigerian context. Okoigun (2000) identified training as a very important activity that enhances the acquisition of knowledge and skills that can make an individual more productive and efficient.

In Nigeria, only citizens of Nigeria who are certified mentally and physically fit are enlisted into the police force. These recruits/ trainees are first trained for six months. After six months training in a Police College, the police trainee becomes a police constable and is engaged to serve for a period of three years and there after, may be re-engaged to serve for another period of six years or disengaged depending on the satisfactory performance of his duties as a constable.

Similarly, Rauch (1992) noted that in South Africa, police basic training consisted of a twenty-two week (six months) course. According to him, this basic training is seen as a discrete experience, which is different from experience of police duties. On the same note, Pagon, Virjent-Novak, Djuric, and Lobnikar (1996) reported that from 1983, the National Commission for Standards and Goals in Criminal Justice recommended 400 hours (10 weeks) in duration for training at Police academies. Accordingly, this should include the following proportion of various subjects:

- Introduction to the system of criminal justice: 8 %;
- Police administration: 9%;
- Law: 10 %;
- Police skills (self-defense, tactical procedures, first aid, driving skills, etc): 18%;
- Human values and problems: 22%; and
- Patrol and investigative procedures: 33%.

Police training, according to Pike (2000) is being directed from the police headquarters by a Deputy Inspector General of Police (DIG) designated as 'commandant'. Police trainees in Nigeria are trained either in police colleges or police training schools. There are also specialized police schools where police receive in – service training. These include: the Police Mobile Force Training, the Police Detective College, the Police Dogs Service, and the Police Mounted Training.

In these colleges and schools, there are basic rules, which trainees should comply with. These are, among others: attend all duties, lectures regularly and punctually; attend roll call at 2100 hours daily; obey all lawful order and commands without any question; attend all activities with the uniform given them; do not borrow from or lend to anybody, do not give or receive bribe; swing hands and march while walking in the school or college compound; and avoid gossiping at all cost. The afore-mentioned rules are in congruence with what obtains elsewhere in the world. For instance, in Britain, police recruits must satisfy essential duties and responsibilities and as well possess ability to think and act quickly in emergencies and pass a psychological test, among other things (Police Recruit, 2004). In European countries, according to Pagon, et al (1996) basic

training for police officers takes between 4 months and 4 years; and this is followed over the years by various forms of specialized and management training. Good as these training may be, other areas such as interpersonal relationship and human psychology ought to have been entrenched in the training scheme of the police. As a matter of fact, Pagon, et al (1996) made a case for standardization in the area of police education and training. Among other things, they recommend the establishment of 3 European centres for “training the trainers” and 3 graduate schools of criminal justice.

Further to this, and stressing what police training ought to be, Southgate (1988) suggested that the following questions should be asked, but stressed that they were extremely difficult to answer: What is actually being delivered? Does it have the desired impact on those being trained? Does it have a lasting impact, both upon those people (police trainees) and upon the public they deal with?

These are indeed thought – provoking questions that should be seriously addressed by the National Police commission. In what appears like answers to Southgate’s (1988) questions, Rauch (1992) noted that in an ideal situation, police training should be evaluated in terms of the experience and assessment of the people who were trained – to ascertain the impact of the training on their perceptions and conduct. He further stressed that training should also be evaluated in terms of “customer satisfaction” – that is how the public evaluate the product (the trained police constable). Other than these answers, training of police recruits should be dynamic and relate more to human psychology other than the handling of gun and baton.

In police colleges and schools all over the world, one of the training prospective police personnel receive is on police symbolic elements. Dwight (2004) is of the opinion that symbols instill beliefs and shape attitudes those underpinning social structures. It then implies that for symbols to be meaningful, considerable value must be attached to them and what they actually represent. In Nigeria, the major features on the coat of arm are: an eagle, a shield that overtly symbolizes Nigeria, two white horses, and a banner with the national motto. Braide (2003) described the red eagle on the coat of arm of Nigeria as apparently docile, but watchful and submitted that the eagle portrays or connotes the consciousness of Nigerian nation. This red eagle, Braide (2003) noted is on top of the crests of the Nigerian Army, Nigerian Navy, Nigerian Air force, Nigerian Police, Custom Service, and other paramilitary organizations.

In the police, there are colours and crest as symbols. The Nigeria Police Flag has three colours. This is horizontally divided, blue – yellow – green with the following meaning:

Blue: It signifies love, loyalty and unity. Through this, the police are expected to show love in the course of rendering their services. They are expected to be courteous and civil, and while doing this, they are expected to show unmitigated loyalty to their country and police organization. In sum, the police are expected to defend the unity of their country

Yellow: It signifies discipline and resourcefulness. The work of the police calls for total discipline. This is to ensure that the police leave above board and are reactive in the course of discharging their duties. Being proactive therefore, calls for resourcefulness.

Green: It signifies energy and life. The Nigerian Police do lay emphasis on physical fitness because of the enormous challenges that are ahead of police trainees. Police trainees are therefore, expected to be active.

The Nigeria Police crest also has three symbolic elements. These are:

The eagle: It signifies strength. This further attests to the physical fitness emphasis. Police are expected to be physically strong and be able to endure stress, strains and challenges.

Crossed Baton: It signifies office and authority. This is where police draw power. It is one of the paraphernalia of the police that give him attention and recognition by the public. The police are expected therefore, to be civil even when asserting their authorities.

Elephant: It signifies steadfastness and reliability. The police profession is an enduring one. For a police trainee therefore to succeed, he must be ready to endure hardships as well as the hazards of the job.

Green Ground: It represents the rich vegetation of the Nigerian nation.

The essence of the above colours and crest symbols is to give the police organisation a unique identity, and make officers and men of the organization to have faith in the organization. It is therefore, imperative that police trainees are expected to absorb the essence of the colours and crest symbols that distinguish the police as unique and civil even in crime prevention and fighting.

The impact of this on the trainees cannot therefore, be over emphasized. It is presumed that exposition of the police trainees to the significance of the colour and crest symbols would instill loyalty and police culture. The loyalty and police culture so imbibed would make the trainees efficient constables upon graduation from the college.

Braide (2003) from the foregoing submitted that the choice of combination of the police colour blue-green-yellow and crest depicts the responsibilities expected of the Nigerian police. Whether these responsibilities are dutifully discharged or not by the Nigerian police is another research area outside the scope of this study. What the present study is interested in is the perception and knowledge of the symbols by the Nigerian police trainees.

Police Perception and Knowledge

There is virtually no research on police perception and knowledge of the symbolic elements of police colour and crest. This notwithstanding, we made do with the few available studies relevant to the study.

Webster and Childress (2003) contended that in order to successfully implement a strategy for good policing, it is important to examine individual commitment not only to the organization, but also to the strategy itself. In the information on police syllabus (2004), it is reported that no other occupation has had its culture and personality more thoroughly analyzed than the police. Though this contention is embarrassing, it reveals some unpleasant facts on police recruitment policy, training, and orientation of the personnel. The summation of these informs what is called police culture.

It is this “police culture philosophy” that informs the kind of training Indian Police authorities give to police trainees in India. According to an Asian Human Rights Commission (2004), the Kerala Armed Police Camps in India lack basic amenities, which include water. According to the Police authorities in India, the philosophy behind this is to prepare the police trainees to face harsh realities in the future. These could influence either positively or negatively (depending on the severity of the conditions in the training camp) the perception and knowledge of the police trainees.

Similarly, Backman, Arnetz, Levin, and Lublin (1999) in their study on police trainees also discovered that some positive cognitive and psychological effects of the image programme are noticed in the trainees. The study, however, does not establish if the programme has any effect on

the physiological and somatic health of police trainees. This is also not addressed in the investigation.

Reiner (1992) was of the opinion that police culture refers to the informal values, norms and rules that influence how police conduct their roles. He posited further that the range of distinguishable features of cop culture include a sense of missions, suspicions, machismo, isolation, and solidarity. For instance, Braide (2003) remarked that in the mind of an average Briton, the unity of the kingdom is not in doubt.

Sanders (2003) was of the opinion that experiences play a prominent role in the perception and knowledge of the police trainees. He contended that police trainees come to a basic course with varied role perceptions that are shaped by the media or limited personal contacts with law enforcement. Although, Sanders asserted that the qualities, which make a good police officer, are often difficult to identify, he nevertheless, admonished the police trainees to understand the perception of others' behaviours and learn through experience. Other than what the police get in training, on-the-job experience would have a great impact and would also shape their policing conduct.

As a matter of fact, Scarman (1982) noted that in the South African Police, there is now an attempt to make training more "holistic", and to emphasize the police – community relationship. He stressed further that the police culture would only be affected (positively) if training is incorporated into routine of ordinary police work, and is seen as a continuous and useful process. The assumption here is that the basic training police trainees are exposed to should not only expose them to the conventional skills acquisition (handling of guns, salute, maintenance of peace, etc.) but should also be a form of socialization through which police trainees are trained to know that their work depends more on human contact. Thus, what is needed is a training, which equips recruits with an understanding of policing and its social context, and with the skills and information necessary for the exercise of professional discretion (Scarman, 1982).

From the perspective of personality make up, Paoline (2003) in her study reported that personality traits of individual officers predispose them to be better able to complete certain aspects of the policing job.

Specifically, Pagon (1996) narrowed the belief police have about policing job to women who join police in Slovenia. He discovered the following among other reasons: diverse nature of work, opportunity to help people, opportunity for social interaction, opportunity for promotion, etc. Pagon (1996) then thought that in recruiting police, efforts need to be on diversity of police work and opportunity to help people and interact with them. Similarly, Kay (1994) called for the introduction of assertiveness training most especially for female police trainees for them to be able to cope effectively with confrontational situations.

In his own contention, Brogden (1991) noted that although the police colleges train both male and female trainees, there is a complex and sophisticated process of "gendering" different types of police work and different aspects of training. He concluded that it is expected that the female police trainees would not be as confident with firearms as their male counterparts. Be that as it may, the female police trainees are expected to grasp the real essence of policing as an occupation.

Sanders (2003) also stressed that the most essential foundation for police professionalism is a positive image, to both oneself (police) and to the public. This contention is consequential on the importance of mentoring in the police, most especially for the police trainee. This becomes

expedient in that a good mentoring might from the beginning of a career make an individual to have a good perception and knowledge of policing job. For instance, Herr and Cramer (1996) affirmed that mentoring assist people to become better leaders. Aremu and Adeyoju (2003) also strongly submitted after their findings on the significance of mentoring in the police that police authorities in Nigeria should encourage young police officers to have mentors. In the same vein, Herr and Cramer (1996) suggested the promotion of mentoring, as an effective mechanism for addressing and supporting the career needs of police. Although this variable (mentoring) was not considered as such in this study, it should be however, stressed that police trainees in the course of training need good mentors. This could be further explored in the future.

Fundamentally, training should equip police trainees with an understanding of policing and its social context, and with the skills and information necessary for the exercise of policing job (Rauch, 1992). Brogden, Jefferson and Walklate (1988) supported the above assertion by making a reference to policing in Britain and the United States of America in which there has been a shift towards a broader interpretation of the police role, as one which requires greater social and self-awareness, and improved interpersonal skills.

The basic assumption of the study therefore, is to find how the perception and knowledge of police trainees of the police symbols and colours would affect their policing attitude and interpersonal skills. In our attempt to give this purpose some definite directions, we propose the following research hypotheses:

- (1) There is no significant relationship in the perception and knowledge of police symbolic elements and colours among Nigerian police trainees based on gender.
- (2) There is no significant relationship in the perception and knowledge of police symbolic elements and colours among Nigerian police trainees based on age.
- (3) There is no significant relationship in the perception and knowledge of police symbolic elements and colours among Nigerian police trainees based on their trimesters.

METHOD

Participants and Procedure

The study sample consisted of 400 police trainees (228 males, 57% and 172 females, 43%) purposively sampled through a randomized process from 700 police recruits from the Police Training School, Eleyele, Ibadan, Nigeria in July 2004. This represented 57.14% of the entire population of the police trainees as at the time of field survey.

The participants ranged in age between 18 and 27 years and were all literate. 281 of the participants were between 18 and 22 years, while 182 of the sample were between 23 and 27 years. They were respectively classified as young and old police trainees. Being a convenient population, the researchers sampled 80 police trainees from each of the 5 groups the trainees were divided into. Furthermore, the sample was narrowed down by sampling 200 police trainees from each of the two trimesters. A trimester is three months. This indicates that the period of training is six months.

Measures

The study protocol included the administration of a questionnaire titled "Perception and Knowledge of Police Colour and Crest Rating Scales (PKPCCRS). This questionnaire was developed by the researchers. The PKPCCRS contained three sections. Section A of the questionnaire contained a personal data form in which respondents were expected to indicate their gender, age, ethnic background, current month of training, marital status, and educational qualification. Section B of the PKPCCRS is on perception. This section contained 15 statement-items structured on a 4 – point likert format (Strongly Agree = 4, Agree = 3, Disagree = 2, and Strongly Disagree = 1). Two examples of the item statements in the section are: 'I recognize and

have respect for police symbolic elements' and 'I perceive the police colour as motivating'. Section C of the PKPCCRS is on knowledge. It contained 15 statement – items also structured on a 4 – point likert format. Two examples of the item – statements in the section are: 'Police symbols generally reflect allegiance' and 'the police crest has three meaningful elements'.

The validity of the PKPCCRS was ascertained by giving it to police psychologists. Doing so, gave the instrument a face and content validity. The reliability of the instrument was also determined using split – half method. The internal consistencies of the two sections using coefficient alpha were as follows: Section B = .78 and Section C = .56. The internal consistency of the whole instrument using coefficient alpha was found to be .69.

Data Analysis and Results

The data collected were analyzed using a one – way analysis of variance (ANOVA) statistics. All analyses were carried out at .05 margin of error.

The results of the first hypothesis which sought to find if there would be any significant relationship in the perception and knowledge of police trainees using their gender as an index is presented below:

Table 1: Mean and Standard Deviation of Police Trainees' Perception and Knowledge of Police Symbolic Elements and Colour Based on Gender

	N	Mean	Std. Deviation	Std. Error
1	281	44.2	8.9	.45
2	182	46.7	7.3	.783
Total	400	45.24	8.390	.419

Table 2: Analysis of variance of Nigerian Police Trainees' Perception and Knowledge of Police symbolic Elements and Colour Based on Gender

Source of Variation	Sum of Squares	Df	Mean Squares	F	Sig.
Between Groups	1046.638	3	348.879	5.110	<. 05
Within Groups	27036.840	396	68.275		
Total	28083.478	399			

As can be seen on tables 1 and 2 above, the F value estimation of 5.110 is significant at less than .05 margin of error. This statistically means that the null hypothesis of no significant relationship was rejected. By implication, this shows that there is a marked significant relationship between male and female police trainees' perception and knowledge of police symbolic elements and colour. Results in table 1 clearly show that female police trainees (M = 46.7, SD – 7.3) have a better perception and knowledge of police symbolic elements (crest) and colour than their male counterparts (M = 44.2, SD = 8.9).

The second hypothesis's results are presented below:

Table 3: Mean and Standard Deviation of Police Trainees' Perception and Knowledge of Police Symbolic Elements and Colour Bases on Age

	N	Mean	Std. Deviation	Std. Error
1	228	46.6	6.6	.68
2	172	44.1	9.5	.92
Total	400	45.3	8.4	.42

Table 4: Analysis of Variance of Nigerian Police Trainees' Perception and Knowledge of Police Symbolic Elements and Colour Based on Age

Source of Variation	Sum of Squares	Df	Mean Squares	F	Sig.
Between Groups	1031.013	3	343.671	5.045	>.05
Within Groups	26974.285	396	68.117		
Total	28005.297	399			

An ANOVA statistics was used to test the significant relationship of police trainees' perception and knowledge of police symbolic elements (crest) and colour using age as index measurement. The results in table 4 show that a significant relationship exist on police trainees' perception and knowledge of police symbolic elements (crest) and colour based on age of the respondents ($F = 5.045$, $P < .05$). The significance of the F – value estimate was further corroborated by the mean and standard deviation values of the respondents. This, by implication means that police trainees, using their age as an index of measurement do not have the same perception and knowledge of the police symbols.

The results of hypothesis three are also presented below:

Table 5 Mean and Standard Deviation of Police Trainees' Perception and Knowledge of Police Symbols Elements and Colour Bases on Trimester

	N	Mean	Std. Deviation	Std. Error
1	200	48.2	5.9	.59
2	200	42.01	9.6	.95
Total	400	45.07	8.6	.43

Table 6: Analysis of Variance of Nigerian Police Trainees' Perception and Knowledge of Police Symbolic Elements and Colour Based on Trimester

Source of Variation	Sum of Squares	Df	Mean Squares	F	Sig.
Between Groups	4278.188	3.	1426.063	22.318	<.01
Within Groups	25302.990	396	63.396		
Total	2958.178	399			

Results of hypothesis three as shown in tables 5 and 6 indicate that a significant relationship exist in the perception and knowledge of police trainee's on police symbols using the period they have spent in training (trimester) as an index of measurement ($F = 22.318$, $P = .01$).

DISCUSSION

In this study, the analyses of variance statistics conducted on the three null hypotheses provided failed to confirm our research guesses on the following indices of measurement: gender,

age and trimester as they affect police trainees' perception of police crest and colour. The findings of the study have shown that police trainees have appropriate perception and knowledge of Nigerian Police's crest (Eagle, meaning strength; Crossed baton meaning office & authority; Elephant, meaning steadfastness & reliability; and Green Ground, meaning rich vegetation of Nigeria) and colour (Blue, denoting love, loyalty, and unity; yellow, denoting discipline and resourcefulness; and Green, denoting energy and life). This corroborates the assertion of Okoigun (2000) that training is a very important activity that enhances the acquisition of knowledge and skills that can make an individual more productive. This evidence suggests that basic training police are to need to be enriched and made more dynamic for them to meet up with challenges of modern policing in the 21st century. These perception and knowledge of police trainees notwithstanding, the study revealed some significant differences among the participants. This suggests that police trainees were different in their perception and knowledge of Police's crest and colour.

With regard to gender as an index of measurement, the finding revealed that female police trainees had a better perception and knowledge of police crest and colour than their male counterparts (Female Mean = 46.7 > Male Mean = 44.2).

As earlier posited in this study, there is paucity of literature on police crest and colour. This has somehow affected the strength of the discussion on findings of this study. Nevertheless, sufficient inferences were drawn from previous similar findings to corroborate our findings. For instance, Aremu and Adeyoju (2003) reported that mentored female police have a better job satisfaction than their male counterparts. Similarly, Aremu and Idowu (2001) reported that women police are generally satisfied with their job than their male counterparts. Bolton (2003) also reported similarly that black women police have a unique relationship with policing. That is, women police do enjoy better policing job. The inference drawn from these previous studies in relation to ours is that female police (trainees inclusive) are better than their male counterparts on some issues (e.g., Perception and knowledge of police crest and colour, job satisfaction) that have to do with policing.

Be that as it may, it should be stressed that the police are basically human. Therefore, what an individual is before joining the police would influence the impact the training would have on him/her and could eventually determine his/her policing career. More importantly, the study showed that female police trainees seemed to have a better perception and knowledge of policing crest and symbols.

A conclusion from this inference perhaps bothers on personality in that womenfolk are much more receptive generally. This notwithstanding, the issue of gendering in police training should not be over flogged. This is because in training, this is de-emphasized. However, we feel cautioned in drawing further inferences; and therefore, call for a further research on policing and influence of gender.

Another finding of the study was on the influence of age on police trainees' perception and knowledge of police crest and symbols. The finding has shown that age of police trainees influences their perception and knowledge of police crest and colour, with younger police trainees showing better perception and knowledge of the crest and colour than their relatively older counterparts (younger police trainees Mean = 46.6, young police trainees Mean = 44.1). This finding can be explained in a form that younger police trainees are much more enthusiastic about the whole training and policing job than their relatively older counterparts who perhaps join the police out of frustration as a result of not getting employment. While this finding could be significant, a note of caution should also be sounded in that there is need for more studies to

support the present contention. That said, age determinance of police trainees' perception and knowledge of police crest and symbols could after all validate the National Police Commission's policy on recruitment of young abled- bodied Nigerians into the police force.

Lastly, the study reveals that there is a significant relationship in the perception and knowledge of police trainees on police crest and symbol using the number of period they have spent in training (trimester) as an index of measurement. From the mean and F values in table 5 and 6, it is discovered that the period spent in 6 months training (either the first three months or the last three months) could influence police trainees' perception and knowledge of police crest and colour. The finding has shown that police trainees in the first three months of training do have a better perception of police crest and colour than their counterparts in the last three months. This somehow has some semblance with the finding reported on the second hypothesis. Thus, the first three months of training of police recruits could be very crucial on the perception and knowledge they would eventually possess. This means that serious efforts should be made to give police recruits appropriate policing orientation during the early part of their training. The inference being drawn from here and upon which a conclusion is made is that eventually, police personality, stereotypism and orientation are unconsciously formed during the early period of training.

Implications for Counselling in the Police

The findings reported in this study have shown that police and policing skills could be made better if serious efforts are made right from the training period to give police trainees' appropriate policing orientation. This becomes pertinent in that the study has contributed some useful suggestions into the police training and by extension to police job.

From the outcomes of the study, it is presupposed that there is need for proper mentoring of police trainees. This would help to shape whatever perception and knowledge of policing job the police trainees might acquire. This is where, counseling as a service becomes apparent for police recruits when in training. This, therefore, suggests that police trainees should be properly counselled and mentored. Although, this was not directly explored in this investigation, nevertheless, its import on the policing values and skills acquired during training cannot be overemphasized. Thus, it is worth a distinct exploration on police trainees in the future research.

A further implication of the study has to do with the need to inculcate some psychological programmes into the training programmes of police recruits. Since policing job has to do with human and interpersonal contacts, it is essential that police recruits should be exposed to some psychological skills like assertiveness skills, receiving and giving compliments, emotional intelligence, etc. The thrust of this on the Nigerian police cannot be downplayed. If Nigerian police are 'to protect and serve with integrity', then these values are better taught and acquired during training rather than on the job when it could become more difficult to do.

Another very interesting implication of the study has to do with the style of recruiting prospective police personnel. Other than the present style in which interested civilians are recruited through oral interview, written test, physical fitness, as well as possession of certain physical traits, civilians who want to be enlisted into the police profession could be made to take some psychological tests (aptitude, attitude and personality tests) to ascertain their suitability for police profession. This, psychological test advocacy being suggested here would go a long way to place the Nigerian police in a good stead in the society. Thus, the police would be better for it in terms of recruitment policy and training programmes and subsequently discharge of policing responsibilities.

Limitations and Future Research

This study has several strengths and prospects. The study is a boost to the existing literature on the police in Nigeria. This, also by extension, has increased the scope of universal knowledge on the police. The strongest strength of the study lies on the relatively least investigated population, police recruits studied in this study.

To further extend the frontiers of knowledge on policing in general and police trainees in particular, future research could therefore, be conducted on police trainees in other police commands in the country, as well as on the elite police trainees in the Police Academy. Similarly, influence of other variables could be investigated on police trainees.

Despite these strengths and prospects, some limitations of the study need to be acknowledged. First, the sample of the population was limited to only 400 from just a single police training school. Thus, some caution need to be noted in generalizing the findings reported in this study to other police trainees in Nigeria. Second, only three variables (gender, age, and trimester) were investigated as independent variables. Thus, whatever inferences and conclusions drawn from this study are limited only to the variables investigated. In the same vein, there are still one thousand and one other dependent variables other than the studied ones (perception and knowledge of police crest and colour) that could be investigated. Whatever is therefore alluded to on the police trainees is limited only to the variables investigated in the study.

These limitations notwithstanding, this study has contributed to knowledge. It is therefore, a welcome addition to the existing empirical findings on the police in Nigeria.

CONCLUSION

This investigation on perception and knowledge of the Nigerian police trainees on the symbolic elements of the police colour and crest lend further weight to the growing body of knowledge on the Nigerian police. On the basis of the findings of this study, there are clear indications that the Nigerian police would be better off if efforts are made to improve upon the present training programmes for the police recruits. More often than not, the police are a somewhat true reflection of the training received. Thus, police need a good education and training to effectively police the society and for their services to be appreciated. This requires a more dynamic training policy that would put Nigerian police in a good stead in the 21st century.

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The Usefulness Of Some Selected Psychological Variables In Predicting Career Commitment Among Nurses In Oyo State, Nigeria

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Abstract

The study investigated the effects of personality factors such as self-efficacy, locus of control, self-esteem and neuroticism on career commitment. The subjects were two hundred randomly selected nurses from the public service of Oyo State. Five standardized instruments were used to collect data from the subjects. Multiple regression analysis was used to analyse the data. The results show that the psychological factors employed in the study did not make significant contribution either collectively or relatively to the prediction of career commitment. The study therefore recommends the improvement of condition extrinsic to the job as a way of enhancing nurses' commitment to their profession.

Key words: Psychological Variables, Career Commitment, Nurses

INTRODUCTION AND BACKGROUND

Career commitment has become a subject of considerable interest to researchers in the recent time (Adeyemo and Aremu, 1999; Irving, Coleman and Cooper, 1997; Meyer and Allen, 1991; and Blau, 1985). Among the factors that had been identified to relate to commitment include occupational status (Sinclair, Martins and Micel, 1999); job satisfaction (Adeyemo, 2001); age (Meyer and Allen, 1984); experience (Adeyemo and Aremu, 1999); turnover intention (Herkett, Briclo and Hansdoff, 1994; Meyer, Allen & Smith, 1993), emotional intelligence (Melita, 2004; George-Curran & Smith, 2003) and teacher efficacy (Knobloch & Whittington, 2003).

Three forms of commitment have been identified in literature. These are affective commitment, continuance commitment and normative commitment (Irving et al, 1997). Career commitment as defined by Ellemmer, Gilder, Heuvel (1998) is the extent to which people felt committed to the individual goals of advancing in their personal careers. Aryee and Tan (1992) empirically conceptualized career commitment as the inclination to keep up with the new development in the profession and attend skill training. It has also been used in the contexts of devotion to one's profession (Arnold, 1990) and the ambition to advance to a job at higher level. These definitions tend to portray career commitment as an unidimensional construct. It should be realized that career commitment is an engendered constructs. It is brought about by the job ability to satisfy one's needs, values and interest.

The research literature is full of several studies that have employed variables such as career prospect, work environment, and intrinsic reward to predict job satisfaction and commitment of workers (Adeyemo, 1986; Lam, Frog & Moon, 1995; Ajayi, 1981). The role of some core evaluation in job satisfaction and commitment has also been investigated by researchers (Irving et al. 1997; Judge, Locke, Durham & Klug, 1998; and Nwagwu & Salami, 1999). Of the self-evaluation variables, only locus of control has been related to career commitment, others such as self-esteem, self-efficacy, and neuroticism, which have been duly investigated in job satisfaction researches, are yet to be explored as possible explanation for career commitment. The situation is particularly true of Nigeria. It is for this reason that the present study was conducted to find out the combined and relative effects of the variables on career commitment of Nurses.

The choice of the Nurses as the target population was informed by the fact that they constituted a core group within the health delivery team. As pointed out by Alarape and Oki (1999), the role of a nurse involves execution of therapeutic programmes as designed by the doctors for sick patients.

Their duty schedule also includes personal services aimed at hygiene and personal comfort and maintenance of physical and psychological environment conducive to recovery and rehabilitation (Okunade, 1994). Evidence of career commitment of the nurses was provided in the work of Alarape and Oki (1999). They found that principal nursing officers with corresponding more years of experience might have identified more psychological with their job and placed greater importance in their self-image by seeking for recognition. The issue addressed by the present study was how much of the commitment is brought about by core evaluation such as self-esteem, self-efficacy, neuroticism and locus of control. There is need for proper conceptualization of these self-constructs, and or better still, what are they?

SELF-ESTEEM

This is described as the overall value that one places on oneself (Harter, 1990). From a theoretical perspective, Locke, Mclear and Knight (1996) argued that the most plausible theory of Rand's which asserts that self-esteem is reliance on one's power to think (Rand, 1993; p. 181), which implies the relentless use of one's conceptual faculty (reason), which implies an active mind, a mind focused on reality, integration, understanding, grasping connection, thinking long range, making deduction and inferences and increasing the sums of one's knowledge (Bisiwanger, 1991). Taylor and Brown (1988) however disagreed with the reality based view of self-esteem, positing that positive illusions such as unrealistic self-evaluation, exaggerated perceptions of control and mastery and unrealistic optimism are important source of self-esteem and mental health. Again, some schools of thoughts (e.g. Judge et al, 1998; Calvin and Block, 1994) are of the opinion that the construct is fundamentally rooted in reality as opposed to illusion of delusion. Several studies have linked self-esteem to job satisfaction (Locke McClear and Knight, 1996; Judge et al 1998; Nwagwu and Salami, 1999; Judge and Locke, 1993). It has also been linked with performance outcome (Adebayo, 1999; Taiwo and Thomas, 1999). In the present study the extent of the relevance of the construct to career commitment is part of the major concern.

SELF-EFFICACY

Self-efficacy theory (Bandura, 1977; 1982; 1983) has been given considerable attention over the past decades as useful conceptual model for understanding various aspects of the career development process. Self-efficacy as espoused by Bandura (1977) is concerned with people's judgments of their capabilities to execute action that the required to deal with prospective situation and the relationship between these judgment and subsequent behavior. Although the theory as conceived by Bandura is task-oriented, Judge et al (1997) had established the globality of the concept. Viewing from a generalized perspective, self-efficacy was defined by Judge et al (1997) as one's estimate of one's capabilities to mobilize the motivation, cognitive resources and courses of action needed to exercise general control over events in one's life. If life itself is regarded as series of tasks, then generalized self-efficacy can be seen as reflecting one's perception of one's fundamental ability to cope with life's exigencies. While it is true that some studies have related self-efficacy to career related issues (Nwagwu and Salami, 1999; Adebayo, 1999 and Taiwo and Thomas, 1999) the present study has gone a step further by extending the construct to career commitment.

NEUROTICISM

Neuroticism has been described as a subjective part of self-esteem (Judge et al, 1998). Neurotics displays personality disposition such as insecurity, fear, helplessness, anxiety and low self-esteem (Costa and McCarie, 1988). A concept that has been found to be related to neuroticism is negative affectivity. Organizational psychologists have demonstrated unquantifiable interest on the impact of personality dispositions on work appraisal (Leiter, 1988; Parkes, 1990; Adeyemo, 1999). Negative affectivity as defined by Tellegen (1992) is a stable personality disposition that subsumes trait – anxiety, depression and low self-esteem. Negative affectivity is often viewed as a measure

of neuroticism and it has been pointed out in literature that they are very much-related (Larsen and Ketloa, 1991). The two are regarded as negative lenses for mirroring and interpreting environmental events. They have the tendency to be dissatisfied with people (themselves and their jobs).

LOCUS OF CONTROL

This refers to people's disposition to perceive one's reinforcement either as contingent on one's effort or on factors beyond one's control. It has to do with people believe in the extent to which they are able to control events in their lives (internal locus of control) as well as the belief that forces external to them are responsible for their Plights (Rotter, 1966). This disposition partitions people into two – internally and externally controlled. As a general principle "internal control" refers to the perception and/or negative events as being a consequence of one's own action and thereby under personal control. "External control" is the perception of positive and/or negative events as being unrelated to one's own action in certain situation and therefore beyond their personal control. A person's locus of control therefore is a measure of belief about whether his success or failure can be attributed to internal or external forces. Although, Judge et al (1998) pointed out that locus of control and self-efficacy are theoretically related, the two concepts differ in one important respect. Self-efficacy pertains to confidence with respect to actions or behaviors whereas locus of control is more concerned with confidence in being able to control outcomes. In the expectancy theory, self-efficacy pertains more to expectancy and locus of control more to instrumentality. Both self-efficacy and locus of control have been linked to job satisfaction (Judge et al 1998; Judge and Locke, 1993). The issue of concern in the present study is the consideration of the extent of linkage between locus of control and career commitment either as a single index or in combination with other self-constructs.

RESEARCH QUESTIONS

- (1) How much did self-esteem, self-efficacy, neuroticism and locus of control (when taken together) contribute to the prediction of career commitment among nurses?
- (2) What is the relative contribution of each of the variables to the prediction of career commitment among the subjects?

METHOD

Design

The design employed in this study was an ex-post facto type. In such a research, the investigator does not have a direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. What the investigator did in the present study was to examine the four psychological variables (independent variables) and the career commitment (dependent variable) as it occurred rather than creating these manifestations himself (Odinko, 1999).

PARTICIPANTS

The study sample was two hundred nurses randomly drawn from government established hospitals in Oyo State, Nigeria. The sample consisted of one hundred and forty female nurses and sixty male nurses. This lopsidedness is explained by the fact that in this part of the world nursing profession is still viewed as females' occupation. Further breakdown of the subjects shows that one hundred and twenty of them were staff nurses, fifty senior staff nurses and thirty principal nursing staff. The mean age of the subjects was 32.5 years and ranges from 21 to 59 years while their working experience ranged from 1 to 34 years.

INSTRUMENTATION

(1) Self-Esteem

This was assessed by using Rosenberg self-esteem scale (Rosenberg, 1966). The instrument is a ten-item scale with response anchors ranging from Strongly Disagree (1) to Strongly Agree (5).

The maximum score on the scale is 50 while the minimum is 10. The negative items on the scale were scored in reverse order. Nwagwu and Salami (1999) established that the instrument has a test retest reliability of 0.78. To further ascertain the psychometric adequacy of the instrument for the present study, it was re-validated. The test-retest reliability after a period of two weeks was 0.81.

(2) Self-Efficacy

To assess generalized self-efficacy, the self-efficacy scale developed by Salami (1999) was used. The instrument has 18 items with response anchors ranging from very unsure (1) to very sure. A typical item on the scale reads "I am strong enough to overcome life's struggle". The maximum score on the scale is 72 and the least a respondent can obtain is 18. The scale as reported by the author has a test-retest reliability of 0.72. The instrument was also said to have content validity. To ensure the suitability of the instrument for the current study however, it was subjected to test-retest reliability analysis. The obtained reliability coefficient was 0.75.

(3) Neuroticism

This was assessed with the aid to Neuroticism subscale of the NEO Five Factor Inventory Forms originally developed by Mcrae (1992) and validated among Nigerian sample by Nwagwu (1998). The instrument was reported to have a test-retest reliability of 0.83 after three weeks of administration with Nigerian sample. The scale has a total of twelve items arranged in likert format.

(4) Locus of Control

The locus of control behavior scale developed by Craig, Franklin, and Andrews (1984) was used as measuring instrument. It consists of 17 items which were scored in the direction of externality. The instrument has a coefficient alpha of 0.79.

Career Commitment: The career commitment subscale by Lam, Foog and Moo (1995) was used to measure career commitment. The instrument was modified and revalidated to suit the present study. The original instrument has a reliability coefficient of 0.88. Following revalidation, the instrument recorded a reliability index of 0.77. The instrument is a five point scale ranging from Strongly Disagree (1) to Strongly Agree (5). A typical item on the scale reads thus: "Nursing is the ideal profession for me". The maximum score on the scale is 40 and the least is 8.

PROCEDURE

Prospective respondents received the questionnaire at work. Of the two hundred and twenty questionnaires distributed only two hundred were returned and found suitable for the study. This represented a return rate of 90.9%. The confidentiality of the information volunteered by the respondents was guaranteed. They were also allowed to fill the questionnaire under the guise of anonymity. These were done to elicit honest and truthful responses from the participants.

DATA ANALYSIS PROCEDURE

The stepwise multiple regression procedure (backward solution) was used to examine the joint and separate contribution of self-esteem, self-efficacy, neuroticism and locus of control) to the prediction of career commitment.

RESULTS

The first research question was interested in knowing the joint contribution of the independent variables (Neuroticism, self-esteem, self-efficacy and locus of control) and dependent variable (career commitment). The results of multiple regression analysis are presented in Table 1 below:

Table 1: Multiple regression analysis on career commitment data

Multiple R	= .09980				
R-Square (R ²)	= .00996				
Adjusted R-Square	= -.01035				
Standard Error (SE)	= 6.14729				
ANALYSIS OF VARIANCE					
SOURCE	DF	SS	MS	F-RATIO	P
Regression	4	74.13302	18.53326	.49044	>0.05
Residual	195	7368.89	37.782		

The above table shows that the predictor variables contributed 0.0996% of the variance in career commitment. The table further reveals that the analysis of variance of the multiple regression data yielded an F-ratio of .49044 which was not significant at 0.05.

The results presented in table 2 below show the contribution of each of the variables to the prediction of career commitment. The table contains the standardized regression weight for each of the variables which ranged from .042139 to .061833 and standard error of estimate which ranged from .046971 to .072965. The t-observed for each of the variable ranged from .897 to .856, all of which are not significant at 0.05 level.

Table 2: Testing the significance of regression weight

Variable	B	SEB	Beta	Tobs.	Signif. T
Self-efficacy	.042146	.04971	.064139	.897	.3707
Locus of control	.037658	.053590	.050838	.703	.4831
Self-esteem	.035808	.080858	.030508	.427	.6700
Neuroticism	.062422	.072965	.061832	.856	.3933
Constant	31.0570	5.8996		5.264	.0000

DISCUSSION OF FINDING

From the results shown in Table 1, it is evident that the four core evaluations of self-efficacy, locus of control, self-esteem and neuroticism contributed 0.0996% of the variance of career commitment. The multiple R value of .09980 demonstrated a low correlation between the predictor and predicted variables. The inference could therefore be drawn that the predictor variables are not potent contributors to the career commitment of the nurses. This was further corroborated by the F-value of .49044 which was not significant at 0.05 level. The result thus shows that these variables have low predictive value in relation to career commitment. The result suggests that other powerful variables which may include, career advancement, job satisfaction, motivation, work environment, turn-over intention, may account for greater percentage of the unexplained variance in career commitment.

Most researchers on career commitment have focused on its relationship with biographical factors (Adeyemo and Aremu, 1999; Mathieu and Zajac, 1990), and job satisfaction (Ajayi, 1981). As indicated by Ajayi (1981). Job satisfaction was related to commitment among university teachers.

Similarly Ojo (2000) found that job satisfaction account for significant proportion of variance in the work commitment of Nurses in Oyo State. These studies have unwittingly confirmed the construct similarity of both job satisfaction and commitment. Nwagwu and Salami (1999) have discovered that teachers' satisfaction was not affected by core self-evaluations of self-esteem, self-efficacy; locus of control and neuroticism. Bearing in mind that job satisfaction and commitment are related construct, it should then be understood why it is not affected by the personality factors considered in the present study. The present finding is in consonance with the previous studies that had looked into the relevance of these personological variables in predicting job satisfaction (Nwagwu and Salami, 1999) and academic performance (Adeyemo, 1999 and Odedele, 2000).

Further reason for the present result could be attributed to the prevailing poverty among the Nigerian workers. The incessant strikes by the workers, demanding for pay-rise and improved condition of service attest to the fact that the Nigerian workers including nurses are embattled lots. In an atmosphere of industrial unrest, irregular payment of salaries and where basic needs are lacking, workers personality make-ups are bound to suffer. Given the prevailing circumstances, it is quite obvious that, psychological factors did not contribute in significant ways to the career commitment of the nurses as there are other potent factors impinging on their work situations and welfare.

IMPLICATIONS OF THE STUDY

The result of the present study has thus confirmed that what engenders career commitment lies outside the control of the workers. A worker with inadequate salary, poor conditions of service and who receives his salary very late will certainly have distorted personality, low sense of efficacy and esteem. Nurses' personality and commitment can be better enhanced by improving conditions extrinsic to the job. As the society will continue to rely on nurses for the effective delivery of health services, it behooves on the society and government to give due recognition and support to Nurses. This will improve their self-image and the quality of services deliver to the people as well as increasing their commitment to nursing profession.

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A Consideration of the Indigenous Communicative Teaching of English: Focusing Health Rights

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Abstract

More and more the world is in search of immediate solutions and short cuts for achieving several educational, social, and health goals. A major approach in seeking solution to most of our problems is adapting an integrative strategy in the teaching and learning process and paying attention to the peculiar nature of the learner and the learning environment. This paper presents the Indigenous Communicative Teaching Approach (ICTA). It discusses the theoretical framework and components of this instructional method in relation to its usefulness in achieving multidimensional goals, especially focusing Health Rights. Using practical examples, the paper provides a step by step procedure for implementing this approach in an English lesson which focuses on Health Rights.

Theoretical Framework:

The Indigenous Communicative Teaching Approach (ICTA) is an initiative generated from a series of in-service training workshops for primary school teachers started in 1998 in Nigeria. These workshops were organized by a non-governmental group, Language Intervention Associates (LIASSO), in collaboration with UNICEF A-field Office, Enugu, and State Primary Education Board of ten states in Nigeria. The focus was the retraining of more than two thousand primary school teachers on improved teaching of four core subjects (English Language, Mathematics, Primary Science, and Social Studies) and Gender Mainstreaming. The initial focus of the approach was effective teaching of English language and Mathematics, but with time, increased local needs and the desire to achieve education of good quality resulted in dynamic changes in content coverage and procedure resulting in what is now known as the Indigenous Communicative Teaching Approach or ICTA for short. LIASSO, with UNICEF support, continuously reviewed and propagated ICTA and by 2003 the training had extended to Supervisors of primary schools and Provosts of Colleges of Education in ten states of Nigeria (Osakwe,2003c)

Osakwe(1997) and Nworgu (1996) initially adapted the ICTA from the communicative language teaching principles and the constructivists theory respectively, but as time went on other theories and factors combined to shape ICTA as we now know it. The major applied linguists in the communicative construct whose ideas influenced ICTA are Hymes 1971; Littlewood, 1981; Widdowson,1983 & 1990; Richards and Rogers 1986; Nunan, 1986 & 1989. These experts identify strongly with the communicative principles which emphasize language instruction that is learner-centered, integrative, interactive, meaning-focused and task-based. The Constructivists also impacted ICTA and the major proponents of this construct are Posner, Strike, Hewson and Gertzog, 1982; Cohen and Minion, 1989; Stofflet and Stodadert, 1994; Hewson, Kerby and Cook,1995. These experts stress that scientific knowledge are personally constructed and re-constructed based on prior experiences. Thus the learner is seen as creative, dynamic and open in exercise of free will and control of his or her environment. The environment is seen as a strong factor which structures the kind of construction a learner does. The learner, therefore, has primary active role to play in the learning process while the teacher only plays a facilitating role, creating situations that increase learner's interaction with the environment. By the year 2000 other theoretical constructs: the Indigenous theory and the idea of Gender Mainstreaming (Manyire, 1997 and Anyakoha, 2003) all combined to form the philosophical framework

grounding the ICTA. The main reason for the changes and evolving methodologies came from the need to satisfy local needs and the challenges faced especially by primary school teachers in the rural areas of Nigeria. So, more and more, LIASSO began to view teaching strategies not only as an avenue for improving content knowledge but also as a channel for addressing social misconceptions which permeate into the school system and are unconsciously sustained, nurtured and internalized over several ages. The focus of the in-service teacher training expanded to embody improvement of content knowledge and method of instruction, as well as social awareness about proper gender attitude and reversal of misconceptions of the teachers. So the idea of gender main-streamlining as an inherent component of ICTA was imperative. The ICTA included in its checklist strategies of identifying and eliminating manifestations of gender bias in classroom instruction, while teaching any subject at all. In all, the ultimate goal of ICTA was propagating gender equality, increasing retention rate through creation of Child-friendly learning environment, and realizing quality education.

The attainment of quality education is a UNESCO injunction inscribed in “Education for All” (EFA) codes. All member nations of United Nations identify very closely with these codes by setting educational goals to realize EFA codes. According to these codes, all participating countries of the United Nation must ensure the actualization of the six major goals of EFA first initiated in the Universal Declaration of Human Rights in its assertion that “ everyone has the right to education” , and then reaffirmed at the World Conference on Education for All held at Jomtien, Thailand in 1990. At the Dakar World Education Forum held in 2000, these goals were further consolidated, with more than 1,100 participants from 164 countries in attendance. At these two major world education conferences the EFA goals were streamlined, focusing on:

1. Ensuring Early Childhood Care and Education (ECCE)
2. Ensuring the attainment of Universal Primary Education for all by the year 2015
3. Ensuring that the learning Needs of all young people and adults are met
4. Ensuring 50% improvement in Adult Literacy by 2015, especially for women
5. Ensuring Gender Equality and elimination of disparity by 2015
6. Ensuring Quality Education in all aspects, especially literacy, numeracy and essential life skills (The Dakar Framework for Action...2000, para 7.)

The ICTA evolved with the awareness of these goals and prevailing pedagogies. In a UNICEF sponsored publication on the ICTA procedure, Osakwe (2003:1) explained that the approach is eclectic in being adapted from several theoretical constructs, especially the communicative and the constructivist theories (Nworgu, 2003:88). The procedure is also influenced by the learner’s immediate situations and local environment. So the indigenous nature of the learner influences the choices the teacher makes in selection of content, teaching material, classroom management and procedure. The whole aim is to bring about quality in education by addressing peculiar inhibitions, through improvement of the content and process of instruction. This position is informed by the view that education of good quality can only be attained in classrooms managed by teachers who are free from gender misconceptions and biases. The Indigenous Communicative Teaching Approach, therefore, has gender mainstreaming as one of its main focus.

The initial stage of LIASSO’s in-service teacher training with UNICEF focused on improving teachers’ method, content knowledge, and gender perceptions, while the second stage centered on developing lesson plans to ensure classroom implementation of ICTA. Details of these components are contained in two UNICEF publications: The Process of the Indigenous Communicative Teaching of Core Subjects and Gender Mainstreaming edited by Nneka N. Osakwe (2003) and A Manual for the Indigenous Communicative Teaching Model and Gender Mainstreaming in Primary Core Subjects edited by Nneka N. Osakwe and Ngozi L. Nwodo (2003).

The ICTA has some outlined characteristics which also constitute a check list for classroom implementation. The Approach is:

- *Learner-centered
 - Learners lead activities
 - Learners' initiative is encouraged
 - Learners' level and rate of learning determine teacher's pace of instruction
- *Task/Problem-based
 - Learners have lots of challenges and problems to solve as means of learning.
- *Interaction-based
 - There is Learner-Teacher interaction
 - Learner-Learner interaction
 - Group/pair work (freedom of expression encourages learning)
- *Communication-based
 - Meaning and information is the base for learning
 - Real-life stories of daily events are used for instruction
 - Fluency is stressed
- *Integrative in nature
 - Various topics e.g. child rights, health rights, water, Sanitation, nutrition and education are integrated in the Teaching of the core subjects and probably other subjects.
 - Various subjects are integrated in teaching and learning of one another, e.g. a concept in social studies, marriage and family, is used in writing an essay in an English Language lesson.
- *Based on the use of authentic materials sourced from pupils' immediate environments.
 - Locally sourced teaching materials are preferred to one meant for a general audience.
 - E.g. Objects in pupils' kitchens, living-rooms and bedrooms are cited as examples of nouns rather than objects in pre-written texts or out side pupils' locality.
- *Gender-balanced
 - Emphasis is on Use of non-sexist expressions and gender balanced textbooks
 - Equal opportunity is created for both boys and girls in class activities.
 - Girls have opportunity to experience leadership.
- *Based on Use of Subject corners (e.g. Reading, Mathematics, Science and Social Studies Reading corners)
 - Established with locally sourced materials, managed by learners
- *Evaluation-based
 - Evaluation is progressive, formative and summative. Feedback from learners determines the pace of instruction, rate of class progress with syllabus and final achievement.

The ICTA Teacher's Manual (Osakwe and Nwodo, 2003b), follows the outlined attributes and recommends a five-step model lessons procedure for teaching the four core subjects. The Manual provides illustrations using various topics. The ultimate aim is to guide teachers in the process of achieving quality in education. The ICTA recommends that an important new direction in teacher training is encouraging teachers' initiatives by retraining them as material writers. This is to enable them to come up with teaching materials that are suitable for their local audience and

needs. Osakwe (2003c) suggested the improvement of the teacher's Creative, Adaptive and Integrative skills. She explains that acquiring creative skills involves training all teachers or a select group of teachers to generate new texts that will consider immediate learners' special needs and settings, especially in the core subject areas. Acquiring adaptive skills involves training teachers to be able to rewrite existing texts and materials to take care of learners' immediate needs. Osakwe further notes that with integrative skills teachers can write or rewrite texts to incorporate vital life issues such as the right to health, water, sanitation, nutrition and education, so as to suit the learner's immediate needs and environment .The three skills, she explains, will make it possible for the teacher to use stories on child's right violation, for example, as a comprehension passage for English or any other language lesson. With such an integrative strategy an English Language instructor can teach health(HIV/AIDS), environmental, social, economic and human rights or any other relevant information while teaching language and literary skills.

What follows is an example of how ICTA can be used in teaching an English lesson which focuses on a component of Health Rights, Immunization. Health Right is an inalienable right established in the United Nation Convention on Human Rights and the convention on the Rights of the Child, Article 24(1&2) provides that "State Parties recognize the right of the child to the enjoyment of the highest attainable standard of health...and shall pursue full implementation of this right and, in particular, shall take appropriate measures: a) To diminish infant and child mortality...." Realizing this injunction calls for collective responsibility. It requires an integrative education process which focuses on Health Rights across the curriculum. At the 3rd Pan-African Reading For All Conference held in Uganda, 2003, Osakwe discusses this integration in a model of writing for social change called story-text. This new attitude should influence our approach in teaching and increasing awareness about all human, health, social and economic rights issues, such as elimination of HIV/AIDS, discrimination and poverty. A present challenge to our education system is integrating these concepts in various subjects of school curriculum, teacher training curriculum and classroom instruction.

SAMPLE OF INTEGRATIVE ENGLISH LESSONS: FOCUSING HEALTH RIGHTS

(The sample below is recommended for teaching primary six (sixth grade))

"Reading a Poem" (a primary six topic in English language for First Term on page 40 of the Nigerian Primary Six Curriculum)

Lesson Topic:

Reading and discussing a poem entitled "IMMUNIZATION" by Chika Nwankwo

Specific Objective: At the end of the lesson the pupils should be able to :

- (a) Read the poem fluently.
- (b) Identify the main message of the poem "IMMUNIZATION", state why immunization is necessary for all.
- (c) Summarize the story of the poem.

Instructional material:

- : Posters showing immunization going on in hospitals. Picture shows children being immunized.
- : Big Cardboard or flip chart displaying poem boldly written.
- : Flash cards with names of different diseases which immunization combats

Time : Objectives could be accomplished in different lessons depending on peculiar time allocation in different schools

STEP 1: Identification of prior ideas about the topic

Mode: Whole class

:Teacher's role/activities

: Ask pupils if any one of them had experienced a child's death in the family or neighbor's family.

: Ask what killed the child (brief story could be told).

Pupil's role/activities

: Give examples from their families and other families' experiences.

STEP II: Content Develop:

Mode – Individual and class reading

Teacher's Role/Activities:

Put up a big chart of the poem "Immunization" and call up a girl and later a boy
To read the poem out aloud. Let the whole class read after individual reading.

"IMMUNIZATION"

by Chika Nwankwo (in Osakwe and Nwodo, 2005 p.220)

Way down the road not too far off
A small girl died of WHOOPING COUGH
She whooped so hard with whooping cough
That she whooped her eyes and nose right off!

Her little brother cried for her
He cried and cried and hurt his legs
The next he saw was swollen legs
Next day his jaws refused to move
And next he died of TATANUS

Their mum beside herself with grief
Goes to the local hospital clutching her other kids.
"Did you immunize your kids?" They ask.
"I know not what you talk about," she replies
"We mean IMMUNIZATION," They say,
"Who is MUMMUNIZATION? She asks.

Immunization is not a man
It means that when you have a child
When yet the child is but a babe
You bring it here to take some drugs
To guard against some deadly diseases.

That way the child will grow up well
He'll grow to full maturity
And be of use to Kith and Kin
Himself and all the nation too!.

STEP III. Discussion

Mode : Group work

Teacher's role/activity

- Divide pupils in mixed gender groups of not more than four each.
- Ask pupils to discuss and find answers to the following questions and report back to the whole class through a group secretary.

1. What is the message/theme of the poem
2. Let some students narrate the story in few words.
3. How many children were mentioned in the story?
4. What happened to each of them?
5. Mention the deadly disease that attacked the children in the poem.
6. Why did the disease kill the children?
7. What will a mother or father do to stop their children from being killed by deadly diseases?

Pupil's Role/activities

- Discuss in groups
- Find answers to questions as they discuss
- Report back to class.

STEP IV: Application to real life

Mode : Individual/whole class

Teacher's role/activities

- Ask pupils to cite examples of children they know in their neighborhood/village who had died because they were not immunized.

-Ask them if their little siblings have been immunized and what actions they will take to ensure that no child will ever die as a result of not being immunized?

Pupils' role/activities

- cite examples
- provide concrete action plans on prevention strategies they will initiate.

STEP V: Evaluation

Mode: Whole class

Teacher's role/activities

- ask pupils to answer questions 5-7 orally.
- Initiate simulations of activities in local immunization centers

Pupil's role/Activity:

- respond orally.
- plan and implement simulations

Assignment: read the poem further at home

: Get more information about immunization and other diseases it prevents.

Further Lessons on same Poem could focus on:

1. Reading poem fluently, with correct pronunciation
2. Identify and stress the rhymes in the poem
3. Site examples of other diseases
4. Write the poem in a prose form beginning with "Once upon a time..." etc

CONCLUSION

The aim of this paper is to show how the Indigenous Communicative Approach (ICTA) can be used in teaching English lessons while focusing on Health Rights- Immunization. The paper gives the background of the approach, highlighting the motivation, theories and processes that culminate in forming ICTA. It points to the relevance of the construct in view of the present challenge to integrate human, health, social and economic rights issues across the curriculum. The procedure presented here is still in its trial stage. However, early UNICEF monitoring and evaluation indicates positive learning effects from the use of ICTA in UNICEF experimental schools in a select group of schools in ten states of UNICEF A-Field Office, Nigeria. Nevertheless Reports from teachers who are presently experimenting on the procedure in Nigeria will determine the modifications that will be made. In the face of various social, health, environmental and economic challenges, education systems in both developed and developing nations need to be more creative in seeking solutions to problems. Emanating social problems generated by single parent families and divorce are such cases in point, common in developed nations. The Indigenous Communicative Teaching Approach(ICTA) is one such innovation to explore for solution.

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The following LIASSO Consultants worked relentlessly together for seven years in re-training more than two thousand teachers while generating ICTA and finally producing the two UNICEF publications on the approach to guide trained and untrained teachers in using the new model:

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