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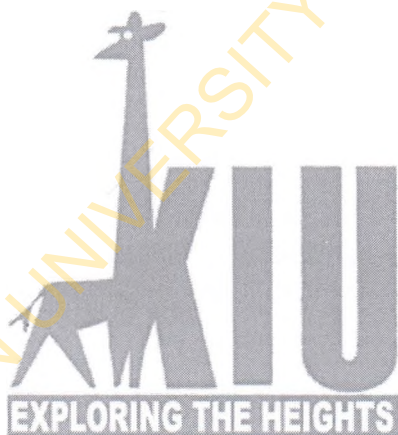
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QUALITY EDUCATION FOR SUSTAINABLE DEVELOPMENT IN NIGERIA: THE ROLE OF MULTIDISCIPLINARY APPROACH TO COLLABORATIVE RESEARCH IN SCHOOL LIBRARIANSHIP

Akande Samson Oyeniyi

*Centre for Educational Media Resource Studies
University of Ibadan*

Abstract

A strong correlation exists between education and sustainable development. In the light of this fact, material, human and financial resources have been committed to education by the three tiers of government in Nigeria. Despite this, there is still public outcry against the continual falling standard of education in Nigeria. In an attempt to solve this problem, individuals and different groups of experts from the same disciplines have been conducting researches without collaborating with researchers from other disciplines. However, it is evident that the educational problem of mass failure of students in public examinations is yet to be solved. This paper therefore proposes a new paradigm of collaborative multidisciplinary research approach which will bring together practitioners and teams of experts from many disciplines in the field of education. This study posits that the outcome of such collaborative approach would include provision of new solutions to the problem; new discoveries in the areas of methods of teaching; better techniques in curriculum delivery; strategies for improved reading culture of students; provision of efficient library services and advancement of knowledge.

Key words: Quality education, Sustainable development, Multidisciplinary, School librarianship.

Introduction

Several scholars like Moronkola (2010), Obioma (2014) and Kolawole (2016) have identified education as the bedrock for national development. This probably informs the inclusion of quality education as goal 4 in the set of 17 sustainable development goals (SDGs) projected to be achieved in 2030. Specifically, on September 25th 2015, countries all over the world adopted a set of goals to end poverty,

protect the planet, and ensure prosperity for all as part of a new sustainable development agenda. Access to quality education at all levels of learning was enshrined in the development goals and Nigeria as a Nation is committed to achieving the goal by 2030.

The current standard of education in Nigeria has been criticized by the public and stakeholders within the educational sector. The outcry has been that the standard is falling and the quality is declining at all levels. According to Uwameiye (2014), the continuing decline in educational standards in Nigeria as shown in students' performance in public examinations as well as the evidently low level of skills possessed by the school products which are inadequate for employment. Olatunbosun (2010) opined that the dwindling educational development in most developing countries of the world calls for surgical measures with a bid to galvanizing all processes that could bring meaningful and rapid growth to the Nigerian educational sector.

The quality of education in Nigeria can be measured by the outcomes of learning of students in schools. UNICEF (2000) has shown that academic achievement is often used as an indicator of school quality because it is easily measurable using standardized tests. A strong link exists between quality education and sustainable development. Therefore, Nigerian students should be empowered with quality education to enhance their chances of contributing significantly to sustainable development. It is therefore imperative to examine the concept of quality education critically.

The term "quality education" has different meanings to many people. As a result, scholars and authors believe that the concept is complex and multifaceted. According to Adams (1993), the words – efficiency, effectiveness, equity and quality have often been used interchangeably when describing quality education. UNICEF (2000) posited that learners, environment, content, processes, and outcomes should be taken into consideration in an attempt to provide quality education to students. As stressed by UNICEF (2000), a quality education must focus among other things the following:

1. Learners who are healthy, well-nourished, and ready to participate and learn, and supported in learning by their families and communities;
2. Environment that are healthy, safe, protective, gender sensitive, and provide adequate resources and facilities;

3. Content that is reflected in relevant curricula, and materials for the acquisition of basic skills, especially in the areas of literacy, numeracy, and skills for life;
4. Processes through which trained teachers use child – centred teaching approaches;
5. Outcomes that encompass knowledge, skills and attitudes, and are linked to national goals for education and positive participation in society (UNICEF, 2000).

A closer look at the above parameters for accessing the quality of education in Nigerian schools reveals that a lot needs to be done to improve its quality. Firstly, the learning outcomes based on performance in public examination is not encouraging. In reporting performance in NECO examinations in 2009, Umameiye (2014) stated that 98.25% of all those that sat for the examination could not obtain five subject passes at credit level. Egbedi (2016) also reported a decline in students' academic performance in West African Examination Council (WAEC) results for Nigerian Students between 2012 – 2014. According to the report, there was 39% success rate in May/June WASSCE in 2012, 36.5% in 2013 and 31% in 2014. The poor quality of school products in Nigeria has been confirmed by NPC and RTI International (2011) assertions that although basic education should afford children the ability to read and write, nearly half (46%) of children who have completed primary school are not able to read a complete sentence.

As regards provision of conducive environment for learning in schools and availability of learning resources, literature has shown that quality education could not be provided with the standard of resources and services provided in schools. Lending credence to the pathetic situation of infrastructure in Nigerian schools, Humphrey and Crawford (2015) as cited in Ikoya and Onyase (2008) revealed that in a comprehensive national survey of primary school infrastructure from five LGAs in each of two sampled states from each geo-political zones and the FCT, the infrastructure was in a bad state. Specifically, it was reported that over 68% of the primary schools have no functioning library. Kolawole (2016) also affirmed the lack of functional libraries with qualified professional school librarians in Nigerian schools. Based on the literature and general public perception, it seems that the

education being provided in Nigerian schools is far from being a quality one.

Conceptual Framework

The importance of education to national development can not be overemphasized. Therefore, education has been regarded as a powerful change agent in society (Tinubu, 2012; Kolawole, 2016; Maduwesi, 2002; Obioma, 2014). The National Policy on Education (2014) also described education as an instrument per excellence for social and economic reconstruction of the nation. Little wonder the Government came to the conclusion that education is the key to the realization of Nigeria's collective aspiration of being among the top 20 developed nations of the world by the year 2020.

A concrete derivative of education is development. This is so as nobody can lay claim to any form of development without a strong foundation built on quality education. According to Moronkola (2010), education is usually seen as an agent or tool for social change that an individual or society needs for any form of development especially those that are social in nature. Education must lead learners to acquire facts, ideas, information that changes attitude towards development. Education for sustainable development has been described by Ayeni (2010) as the process of accomplishing sustainable human development such as economic growth, social development and environmental protection in an equitable manner. Education can transform, change and empower an individual, society or a nation. It can assist an individual to create a sustainable future for himself/herself. Baas, Huisingsh, Mulder and Pojasek (2003) conceptualised education for sustainable development as a new vision of education that seeks to empower people of all ages to assume responsibility for creating a sustainable future for themselves. The National Policy on Education (2014) seemed to agree that education should be a means of empowerment by stating as one of its goals that education should provide development of appropriate skills, mental, physical and social abilities and competencies to empower the individual to live in and contribute positively to the society.

Education for sustainable development involves a comprehensive approach to educational reform. It extends beyond the boundaries of individual school subjects and requires the attention of

teachers, educational administrators, planners and curriculum agencies (UNESCO, 2010). Quality education is a driver for sustainable national development. It is quality education that leads to acquisition of relevant skills and knowledge required for sustainable development. A conspicuous philosophy and goal of education in Nigeria as contained in the National Policy on Education (2014) is that education will maximize the creative potentials and skills of the individual for self-fulfillment and general development of the society. According to Ohurene and Ebele (2014), while many nations around the world have embraced the need for education to achieve sustainability, a lack of vision and awareness has impeded progress in Nigeria, which can be partially attributed to lack of planning, proper supervision and implementation of well-designed policies.

School Library Services and Education in Nigeria

All over the world, provision of quality library services and resources have been identified as strong factors in measuring the quality of education in schools. The cardinal role of school libraries as educational support service has been well marked out in the National Policy on Education (2014). In this regard, the policy stated that:

“The School Library is at the heart of the education enterprise and one of the most important educational services. States/FCT and Local Government, as well as proprietors of schools shall establish functional libraries in accordance with the established standards and actively promote reading culture in all educational institutions. They shall also provide for the training of library officers and library assistants for these services”(pp58).

The National Policy on Education (2014) has recognized the fact that no quality education can be provided in schools without functional libraries administered by skilled - professional librarians. The reason is that school libraries serve students by providing materials to meet their various information needs and encouraging reading and the use of libraries (Clark, 1999). However, Udoh–Ilomechine (2008) revealed that most students surveyed in his study were not satisfied with the services and collections in their school library. Similarly, research reports by Kolawole (2016); Owate and Iroha (2013) have indicated lack of

functional school libraries in some Nigerian schools. This precarious situation is not a recent phenomenon worldwide as shown by Longdale (2003). Over the past thirty years, an extensive body of evidence has been built up by researchers worldwide indicating that good school library programmes are linked to higher academic achievement of students. Yet in spite this, it is evident that libraries are often viewed as non-essential, optional, or even luxury expenditure for schools.

Literature has established a strong correlation between use of library and academic performance of students in Nigerian schools (Ogunsaju, 2004; Jato, Ogunniyi, and Olubiyo, 2014 and Afolabi, 2016). However, the attitude of the government and private owners of schools in Nigeria as regards development of school libraries shows that they are not convinced of the significant roles library could play in academic attainment of students and by implication the quality of education. Although the government clearly stated in the National Policy of Education (2014) that library is at the heart of the educational enterprise, yet, no legislation has been made to back up its position. Even most government owned schools (especially state owned) lack functional school libraries. Why is the Government not taking the lead in the establishment of functional libraries in its schools? Perhaps the claim of Chan (2008) that those that make decisions regarding the staffing and founding of school libraries are not convinced of their intrinsic value may explain the negative and lukewarm attitude of the government towards development of school libraries in Nigeria. According to Ohunene and Ebele (2014), lack of implementation of policy on education has been identified as one of the factors that impede progress in Nigerian education.

This paper has established that Basic Education and Post Basic Education provided in Nigeria lack quality that can lead to sustainable development in Nigeria. A significant indicator of poor quality is the poor performance of students in public examinations as shown by studies (Egbedi, 2016; Uwameiye, 2014). In an attempt to solve the problem of academic performance of students, several studies have been conducted to determine the factors responsible. Studies like Olanipekun and Aina (2014) focused on the role of teachers in improving students' academic performance in Nigerian schools; Duruji and Oviasogie(2014) considered learning environment and poor students' academic achievement in schools; Usman and Auwal (2016)

investigated parents' socio-economic status and students' academic performances.

Without any doubt, serious research efforts have been made to investigate causes of declining performance of students in schools. However, it appears little or none of these studies adopted multidisciplinary research approach of collaboration of researchers from different subject backgrounds or collaboration of researchers and stakeholders who will combine their expertise to generate knowledge that could be used to solve the perennial problem of declining standard of education. Without any doubt, collaborative approach will provide the opportunity to look holistically at the problem of falling standard of education and proffer solution to it. This paper will therefore look at the role of proffering solution to the poor performance of students in public examinations.

Multidisciplinary Collaboration In School Librarianship Research

The positive impact of school libraries on educational attainment of students has been established in the literature. Research shows that test scores of students that use the library is higher than those that do not interact with library resources and services. While much investigation has been done in the field of librarianship to determine the role of school libraries in education, most of these researches are uni-disciplinary and involves little or no collaboration of experts from other disciplines in solving social problems.

The multi and trans-disciplinary approach to solving social problem is now being globally embraced. This involves a collaborative research team where expertise of group members is sought from different subject backgrounds. According to UNESCO (1997), a basic premise of education for sustainability is that just as there is a wholeness and interdependence to life in all its forms, so must there be a unity and wholeness to efforts to understand it and ensure its continuation. This calls for both interdisciplinary inquiry and action.

Multidisciplinary and inter-disciplinary researches have been used interchangeably in the literature (Lyon, 2005; Olaniyi, 2015). However, Klein (2005) averred that the two terms are different approaches to research. In Klein's view, multidisciplinary refers to situations where separate disciplinary approaches are utilised in common research interest, but the approaches remain separate and

distinct and disciplinary boundaries are not crossed. According to Klein (2005), inter-disciplinarity is the integration of different disciplinary approaches in order to solve a common problem or issue. A very close term to multi-disciplinarity and inter-disciplinarity is trans-disciplinary. A trans-disciplinary research traverses all possible disciplines. It is conceptualised as both a specific kind of interdisciplinary research involving scientific and non-scientific sources or practice and a new form of learning and problem solving involving cooperation among different parts of society, including academia, in order to meet the complex challenges of society (McGregor, 2004). Multidisciplinary research involves several disciplines and methods. Multidisciplinary research is a subset of research collaboration. According to Choudhary (2015), the terms multi-disciplinary, inter-disciplinary or trans-disciplinary are vague and not well differentiated. The distinctions between the concepts revolve around the degree of collaboration and cross-fertilization between the disciplines.

Solving society's problems requires inputs from many disciplines or specializations just as a variety of specialists need to work together to solve problem in the world outside the classroom, disciplines should not be separated unnecessarily inside the classroom. In multi-disciplinary research, each discipline maintains its distinctiveness (Collins, 2002). However, in interdisciplinary research, the people involved in solving problems offer parallel analyses of parts of a problem. A new synergy appears from the transfer of knowledge between disciplines. In the words of Lyons (2005) in interdisciplinary research, the integration of knowledge from different subject backgrounds leads to formation of new ideas and concepts and create a whole new field which is interdisciplinary. This implies that the identity of specialties in mono-disciplinarity and multi-disciplinarity is lost when it comes to interdisciplinary research collaboration. Education has become a social problem in Nigeria and it appears that the research problems cannot be easily addressed within the confines of particular disciplines. They required the concerted efforts of many experts from different disciplines each reflecting a different perspective. Olaniyi (2015) lamented the current education framework in Nigeria and the clear absence of multidisciplinary and collaborative framework. He embraces the coming together of people from different disciplines to form a synergy where the aggregate contributions of the research team

in multidisciplinary research will be better than the contributions of individuals in a mono-disciplinary research. Knapp (2011) advocated interdisciplinary research by stressing that it is a grieving and continuing movement that has great potential for addressing specific problems in society. According to him, interdisciplinary research has a high potential for new discoveries and the advancement of knowledge as new perspectives from scholars of different academic backgrounds usually provide at least a spark in igniting new advancements.

The educational process in Nigeria affect and is being affected by school libraries. Therefore, the National Policy on Education (2014) advocated the establishment of school libraries as an educational service for teachers and students. The problems confronting the educational process in Nigeria is multifaceted in nature and attempts have been made by several authors to investigate the factors that militate against provision of quality education in schools. Researchers in science, education, social sciences and librarianship have been looking into the problem from different perspectives. Although several attempts have been made to generate knowledge through empirical research on what could be the root causes of perennial students' failure in public examinations, it appears as if there is little or no collaboration between various disciplines and stakeholders in provision of education in schools. For example, literature has shown that many scholars have written on the role of school libraries on students' academic achievement. In the same vein, researchers in the field of education have looked into students' factors, teachers' factors, learning environment, while the social scientists have considered the social aspects of the problem. What is very apparent from the efforts made so far to proffer solution to the problem is that there is no collaboration among the different disciplines. Perhaps this lack of research synergy is responsible for little success record so far as evident in the continuing decline in standard of education of Nigerian youth. This paper is on school librarianship and it will look at the multidisciplinary collaborative research approach in solving the problem of declining performance of students in public examinations. Previous studies in the field of school librarianship have been mainly mono-disciplinary in approach. This means that only one discipline is brought to bear in solving a societal problem. In this framework, the researchers in one discipline study the same research objects, use common methodologies, and speak the

same language (Regeer, 2002). According to McGregor (2004), although single disciplinary work has its place, it is limiting when trying to solve complex societal problems because only one lens is brought to bear on the dynamics inherent in complexity.

School library provides services in the areas of reading, information literacy, technology transformation, e-learning and e-resources, reading motivation, literature appreciation, advocacy and collaboration with teachers in curriculum implementation. Based on these, this paper is proposing a collaborative research that is multidisciplinary in approach which will bring together expertise from various disciplines like school librarianship, education, information technology, mathematics, statistics, curriculum development, English and communication as a new research paradigm. From this stance, school librarianship will serve as a root discipline and experts in this field will work with group of researchers from other disciplines mentioned earlier to help look into the problem holistically. Although many perspectives will be shared, the intent is to serve the root discipline that initiates the collaboration. These synergetic principles of collaborative and multi-disciplinary research of academics, professionals and practitioners have potential of advancing knowledge in school librarianship research. Withes (1975) described this approach as the joint, coordinated, and continuously integrated research done by experts from different disciplinary backgrounds, working together and producing joint reports, papers and recommendations. There is very like hood that multidisciplinary research can lead to interdisciplinary research. According to Haapasaari, Kulmala and Kuikka (2012), there is possibility of being thrown out of our comfortable disciplinary borders and landing within the arena of interaction (interdisciplinary). The study highlights that there are learning processes taking place on three levels: between individuals, between disciplines, and between types of knowledge. The closer the interaction, the faster the learning processes. As the experts interact and learn from each other, there is every possibility that a new insight into the perennial problem of student failure in public examinations will be gained.

Fundamental Principles and Guidelines for a Multidisciplinary Research Collaboration

The collaborative model of multidisciplinary research approach proposed will work if the following principles are strictly adhered to:

1. Goal setting: The team members must agree on what should be the objectives and research goals (research agenda);
2. The team must have extensive knowledge of the problem;
3. The researchers must have a timetable of operations which will specify time of regular meetings to discuss issues relating to the research problem;
4. A memorandum of understanding must be written before the work will commence.

Lyons (2005) suggested the following elements as content of the memorandum of understanding:

- i. A rationale for the work programme to be undertaken;
- ii. A summary of the work programme;
- iii. Details of the team members and their expected contribution;
- iv. An approximate timescale for the work;
- v. Specification on how the outcome of the work will be disseminated;
- vi. An agreement on the publication of the work and
- vii. An agreement on any possible commercialization of the work (pp. 24).

Benefits of Multidisciplinary Research

The society is besieged with problems which are multidimensional and complex in nature. An attempt to solve them will involve knowledge of different disciplines. Many factors are responsible for mass failure of students in public examinations. Some of the factors identified as causes of this educational problem are regarded as economic, social, political, psychological, scientific, technological, and governmental. Arriving at a definite plan to address the problem will need a synergy of research effort which is multidisciplinary in nature. Below are some benefits of such research approach.

1. Multidisciplinary research provides a deep insight of the problem being investigated from different perspectives.

2. Coordinated collaborative research approach that cut across multiple disciplines assist in solving complex problems.
3. The research team has the privilege of learning from each other because the process offers learning experience.
4. It leads to better skills in communication, collaboration and professional abilities (Cuevas, et.al, 2012).
5. Forming a multidisciplinary team, or by working with other disciplines makes it possible to think outside the box which is essential to solving the problem in question (Lyons, 2014).
6. Multidisciplinary research employs the expertise of a group of people from different specialties to investigate a particular problem.
7. It can lead to new inquiries and opportunities for discovery and problem solving that go beyond the original focus

Proposed Conceptual Model for Multidisciplinary Research in School Librarianship

The research framework proposed will be both multidisciplinary and interdisciplinary in nature. This is because it will be very difficult to completely avoid interactions and integration between the various disciplines involve in the project. The team will comprise group of experts from school librarianship, education, natural sciences, social sciences and government agencies. As indicated by Qin, Lancaster and Allen (1997), there is bound to be interaction and integration at several levels in this collaborative research framework. This includes:

1. Interactions among the experts from the various disciplines
2. Interactions between the experts
3. Interaction between the experts and their organization
4. Interaction with resources.

The problems to be solved by the research emanate from nature and society which are complex and subject to many forces. Understanding the elements and forces within them requires examination from the perspective of multiple disciplines. In this case, the research environment, in its broadest sense, is nature and society. As the individuals in the research team interact with themselves, with their organizations and with resources, new information, knowledge, and solutions to the problems are generated as the outcome and product of

the research. As earlier mentioned, the root discipline that will initiate the research is school librarianship. However collaboration will bring together other disciplines like education, psychology, sociology, media technology, statistics, management, economics, practitioners, professionals and other stakeholders in education of Nigerian children and youth.

The Conceptual Model Is Shown Below

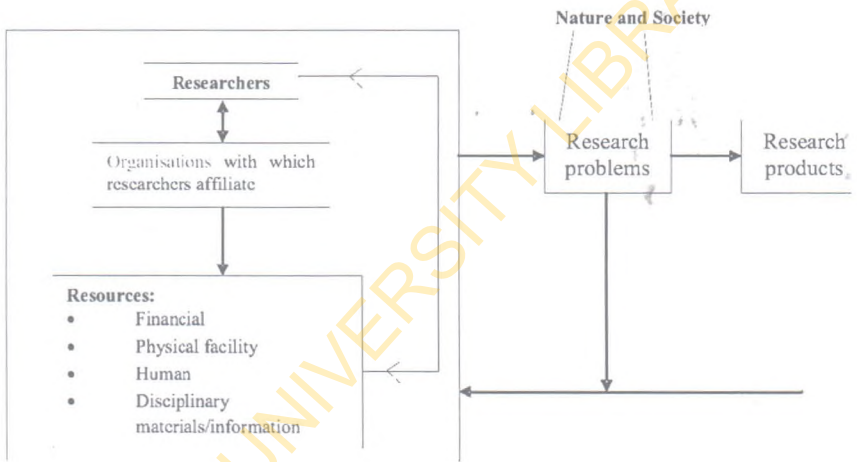


Fig 1: Scientific Research Environmental: adopted from Qin, Lancaster and Allen (1977)

The fig. 1 above depicts a research cycle in which the researchers, organizations and resources all interact to tackle problems raised from the social and natural environment. The society in this instance refers to the students from Nigerian Secondary Schools whose mass failure in examinations constitutes the research problem to be investigated. The educational outcome i.e performance in public examinations can be studied from different perspectives involving different disciplines to arrive at a holistic solution. The society at large refers to the parents, the school community, the government and the teachers.

In the research cycle shown by the arrows, the researchers will have to interact with their organizations and the resources. This may imply using the facilities, the library resources, in site observation of documents and personnel, collecting data through questionnaire, interviews, focus discussion, access funds. Interactions will also occur among and between the researchers/academics as they settle down to sort out some issues before they start working like goal setting, educating each other on the research problem, raise research questions, and writing a memorandum of understanding. After the work is distributed, interaction will also occur between the researchers and the resources they need in the course of investigation and pertinent among them is interaction with information. Both journal articles in print and electronic form are highly needed.

The products of the various interactions will be the result in a new knowledge/information, new research questions, an awareness of a lack of information for the research cycle to begin a new process or continue to complete the process (Qin, Lancaster and Allen, 1997). When problems of students' academic failure in Nigeria is considered as a research problem, the product or solutions of such research may include discovery of new teaching strategies, new ideas on effective classroom management, discovery of new technology for teaching and learning processes, development of appropriate learning resources and curriculum relevant to the learning needs of the students, more integration of technology into teaching – learning process. Such research will provide empirical information on declining standard of the Nigerian youth and children's education from the political, sociological, psychological, and pedagogical perspectives.

Conclusion

Modern society is confronted with many challenges imposed by the forces of globalization, liberalization, and technological advancement. However, education has been widely accepted as the most effective means through which society can confront those challenges.

In this regard, nations all over the world have made a commitment to quality education as a means to achieve sustainable development. With the increasing decline in standard of education in Nigerian schools despite several mono-disciplinary research conducted, this paper proposes a research collaboration of various disciplines with

multidisciplinary approach to arrive at new insights in tackling the declining quality of education in Nigeria particularly at the primary and secondary levels.

Recommendations

Multidisciplinary research has a lot of benefits but it must be clearly stated that it also has some challenges to overcome if it must work. In the light of this, the following suggestions are made to ensure its success in our institutions.

1. The research team must be encouraged by placing more emphasis on collaborative work than individuals work especially during promotion and appointment exercise.
2. Institutions must encourage interaction between different disciplines by organizing events where researchers can meet and share ideas in an informal setting like the interdisciplinary discourse regularly organized by the Postgraduate School, University of Ibadan, Nigeria.
3. Available resources should be made accessible for multidisciplinary research.
4. Researchers in faculties and departments can be kept on their toes by requesting them to constantly embark on multidisciplinary research that will take them out of the comfort zones of their disciplinary boundary with a promise of reward.

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