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CONSERVATION EDUCATION IN SCHOOLS OF SELECTED COMMUNITIES AROUND OYO NATIONAL PARK

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Abstract
This study examines the level of conservation education in schools within selected communities surrounding the Old Oyo National Park. Multi-stage sampling technique was employed. Seven local communities were randomly sampled, in which 17 schools were purposively selected for the study based on their accessibility. Stratified sampling method was used to select the teachers and students to be interviewed. Data was collected through the use of structured and open-ended questionnaire. A total of 283 were interviewed. This study shows that conservation education is present in most of the schools sampled (87.3%). Conservation, although not solely taught as a subject but forms an integral topics in the curriculum of many subjects taught in schools. Therefore, the level of adoption of Conservation Education across the selected communities is quite low and there is need for government to introduce and adopt conservation education solely as a subject in schools' curriculum.

Key Words: *Teachers, students, Youth clubs, Challenges, Fauna, Rangeland*

Introduction

Conservation of natural resources including all wildlife; flora and fauna, is as important as ensuring the survival of mankind. Living resources conservation is specifically concerned with plant, animals, and micro-organisms and with those non-living elements of the environment on which they depend. Wildlife resources like other living resources have two important properties: they are renewable if conserved and are destructible if not. Conservation of resources according to the World Resources (2008) is the management of human use of resources so that they may yield the greater sustainable benefit to the present generation while maintaining their potential to meet the needs and aspiration of future generations.

Conservation education is the process of influencing people's attitudes, emotions, knowledge, and behaviors about wildlife and wild places, which is done through the efforts of skilled educators and interpreters, who use a variety of techniques, methods, and assessments to reconnect people with the natural world (IZEA, 2017). Conservation Education (CE) helps people of all ages

understand and appreciate our country's natural resources and learn how to conserve those resources for future generations.

Bosnah (2013) opined that education is often viewed as an unalloyed good and, consequently there have been few empirical studies on the costs and benefits of different forms of education within the field of environmental conservation. The human activities as a result of his search for 'quality standard of living' through science and technology have brought recent environmental issues and problems. Such issues include: the depletion of the upper ozone layer, over population, greater pollution, the potential for rising global temperatures, the death and destruction caused by toxic spills and dumps, the massive deforestation of the world's rain forests for commercial purposes, the harm caused by numerous oil spills, the destruction of wildlife habitats for human development, the release of dangerous gases (green house effects) in the atmosphere such as sulfur-dioxide ($S0_2$), nitrogen oxide ($N0_2$), methane (CH_4), chlorofluorocarbons (Cl_2-C-F_2), the hydroxyl radical (OH), and carbon dioxide ($C0_2$) (Bosnah, 2013). Considering all these, the 'picture' of the world (environment), should be made known to those living in ignorance of it through a 'medium' as to create environmental consciousness and awareness which mandates adequate use of resources It is therefore important to investigate whether or not Education for sustainable development has been implemented in Schools within communities surrounding Old-Oyo National park, to what level and also challenges to its implementation.

The main objective of this study is to determine the level of conservation education in schools within selected communities surrounding the Old Oyo National park and the perceived challenges to its adoption (Bosnah, 2013).

Methodology

Study Area

This study was conducted in schools located in host communities of Old Oyo National Park, Oyo State, South-West Nigeria (Fig. 1). It is one of the seven national parks in Nigeria. The Park derives its name from the ruins of Oyo-Ile (Old Oyo) the ancient political capital of Yoruba Empire. The Park is made up of two previous Native Administrative Forest Reserves, the Upper Ogun Forest Reserve, established in 1936 and Oyo-Ile Forest Reserve established in 1941 (Oguninmi *et al.*, 2016). These unique ecosystem and historical relics were converted to Game Reserves in 1952 and finally upgraded to the present status of a National Parks. Politically, it lies in Oyo State in the South West of Nigeria and borders of Kwara State in the North East.

The Old Oyo National Park which is the focus of this study was created by decree No. 36 of 1991. The Park has total land mass of 2,512 km^2 making it the fourth largest national park in Nigeria and is located in SouthWest park of Nigeria, specifically Northern Oyo State at North latitudes 8° 10′ and 9° 05′, and East longitudes 3° 35′ and 4° 21′, and centered on North latitude 8° 36′ 00 and East longitude 3° 57′ 05″ (Oguninmi *et al.*, 2016). The location has inevitably placed the Park at a vantage position of abundant land area as well as diverse wildlife and cultural/historical settings. The topography of the whole area covered by the Park has a beautiful uniqueness as most of the Park lie in plain lowland between 330 m and 508 m above the sea

level and continues with a gentle slope along the Ogun River valleys (Oguninmi *et al.*, 2016). Outcrops of granite characterize the North Eastern Zone of the Park especially at Oyo-Ile.

The central part of the Park has isolated hills and ridges of numerous rock outcrops. The extreme Northern part on its own has caves as well as rock shelters dominating the axis. The drainage system is also interesting as the Park is well drained by rivers Ogun, Owu, Owe and their tributaries in the central and southern parts, while river Tessi drains the North-East part of the Park. For Eco-tourism development the inventory list with cognizance to the topography of the Park, inevitable include the rock out-crops (for mountaineering), Ikere Gorge Dam/River Ogun (for water recreation) and the archaeological endowments of Oyo-Ile (for Cultural/Historical). It is surrounded by ten (10) Local Government Areas in Oyo State namely: Atisbo (Tede/Ago-Are), Atiba (Oyo), Irepo (Kisi), Oorelope (Igboho) Saki East (Ago-Amodu), Iseyin (Iseyin), Orire (Ikoyi), Itesiwaju (Otu), Olorunsogo (Igbeti), Saki West (Saki) and Kaima Local Government Area in Kwara State (Oladeji*et al* .,2012). The park has an average rainfall of 1,100 mm per year (Aremu, 2007). The vegetation is southern Guinea Savannah, but several Botanists have classified the vegetation in the Park in different ways, but generally there are four sub-types. These consist of dense woodland and forest outliers in the South-eastern part, mixed open savannah woodland in the central part; out crop vegetation in the northeast and riparian grassland and fringing woodland occupying the forest plains and valleys along the Ogun River.

Fauna species still found in the park include Western Kob (*Kobus kob*), Roan Antelope (*Hippotragus equinus*), Western Hartebeest (*Alcelaphus buselaphus*), Grimm's Duiker (*Sylvicarpra grimmia*), Red Flanked Duiker (*Cephalophus rufilatus*), Oribi (*Ourebia ourebi*), Water Buck (*Kobus defassa*), Anubis Baboon (*Papio anubis*), Patas Monkey (*Erythrocebus patas*), Green monkey (*Cercopithecus aethiops*), Bush Buck (*Tragelaphus scriptus*), Buffalo (Synceruscaffer), Red River Hog (*Potamochoerus porcus*),Warthog (*Phacochoerus aethiopicus*), Lion (*Panthera leo*), etc. (Nigeria Park Service, 2010). The park is rich in both National and International migratory birds which could be watched by bird Watchers (tourists). Also abundant in the Park are Fishes, Reptiles, Butterflies, Ants, Mushroom, and Millipede etc. (Nigeria Park Services, 2012).

Old Oyo National Park is divided into Sectors based on the Protection and administrative units of the Park. Sectors are further divided into ranges which are small units for Protection and conservation activities. Within the ranges are the support zone villages of the Parks that were selected for the study. Old Oyo National Park consists of only one sector and divided into five (5) ranges: Ikoyiile, Marguba, Oyo ile, Sepeteri and Tede which are surrounded by local communities (Aremu, 2007).

Sampling Method and Data Analysis

Primary data was collected from seven local communities purposively selected (with at least a community representing each of the five ranges) namely; Ikoyi-Ile, Igbeti, Ipapo, Ago-Aare, Tede, Oje-Owode and Kishi.

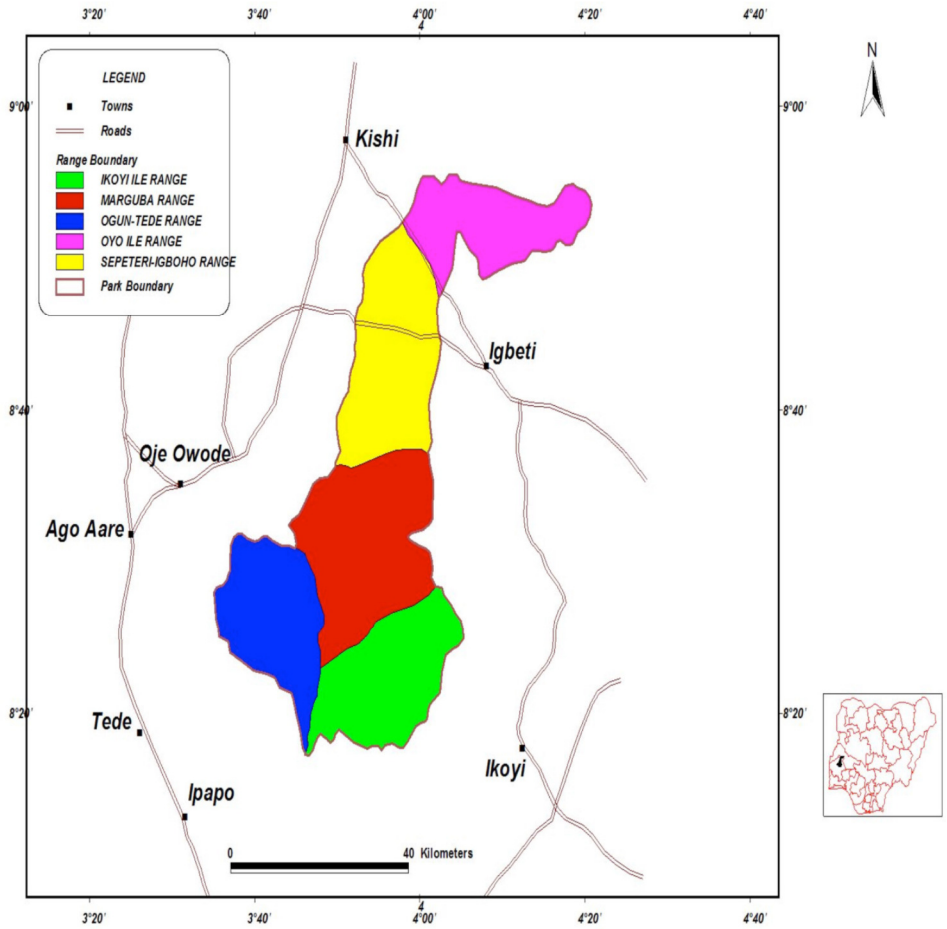

Fig. 1: Map showing Old Oyo National Park, ranges and adjourning communities
(Source: Adapted from Oduntan, 2013)

Across the selected communities there are 25 secondary schools (out of which 10 are private and 15 are public) and 16 are primary (7 are public, 9 are private) totaling 41 schools. Both primary and secondary schools (Public and Private) in each local community were sampled and the schools were randomly selected based on accessibility.

Data Collection

Data was collected from teachers and students who are the respondents in each of the schools. Stratified sampling method was used to select respondents for this study from a total of 17 schools which were randomly selected based on availability and accessibility, hence representing primary, secondary, public and private. Two hundred and eighty-three (283) semi-structured and open ended questionnaires were administered and it was divided into sections accessing demographic characteristics of the respondents, Level of knowledge of conservation education and level of perception was assessed using a 24 point rating scale, Activities on conservation education in the schools were assessed. Also, Questions about Conservation and Conservation Education were asked to assess the knowledge of teachers and students on wildlife and its conservation.

Teachers amongst respondents were asked more questions on the perceived challenges to conservation education and its implementation. Perceptions of teachers and students about wildlife and wildlife conservation were also assessed with this questionnaire.

The questionnaire was aimed at collecting information on the presence of youth clubs, students and teachers' perception and support for conservation, assessing the level of knowledge of the teachers on conservation, assessing limitations to full implementation of conservation (if such limitation exists) and evaluating the perception and reaction of the students to Conservation Education.

Descriptive statistics on the SPSS statistical package (version 21.0) was used to analyze the data obtained.

Results and Discussion

This study reported total populations of 283respondents; 41% were teachers while 59% were students. Likewise, most (53.7%) of the respondents were male and 46.3% were females. Most (54.8%) were public schools including both primary and secondary schools. Majority, (87.3%) of the respondents had conservation present in their schools' curriculum which was taught under different subjects and not solely as a subject while 12.7% (36) of the population in different local communities had no conservation education in their school's curriculum.

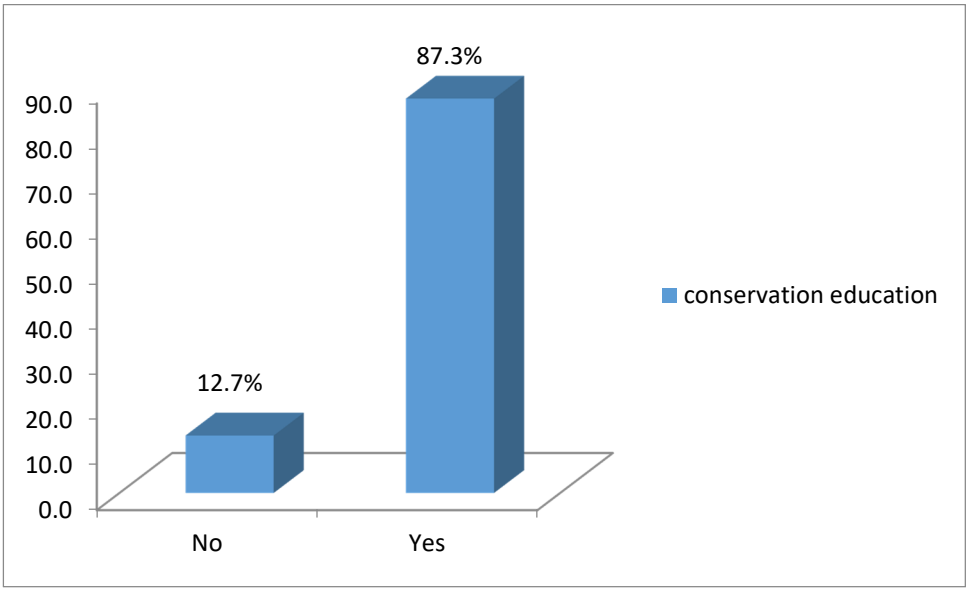

Fig. 2: Presence of Conservation education in the school curriculum

Selected Communities and Presence of Conservation in Schools' Curriculum

Result shows that 17.7% of the total population sampled testified to the presence of conservation education in the curriculum of schools in Ikoyi-Ile while it is not absent(0%) in all schools sampled in Ikoyi-Ile. 1.8% of the total population from Ago-Aare had no conservation in their curriculum while 10.6% of the population sampled representing Ago-Aare attested to the presence of conservation education in school's curriculum. 4% and 13% of the total

population from Igbeti shows the absence and presence of conservation education in schools' curriculum respectively. 2.1% and 9.5% of the total population represented absence and presence of conservation education respectively in Tede. 2% and 13.8% (Ipapo), 1.8% and 4.6% (Oje-Owode), 1.8% and 17% all represented each location the total population with the absence and presence of conservation education in schools' curriculum respectively.

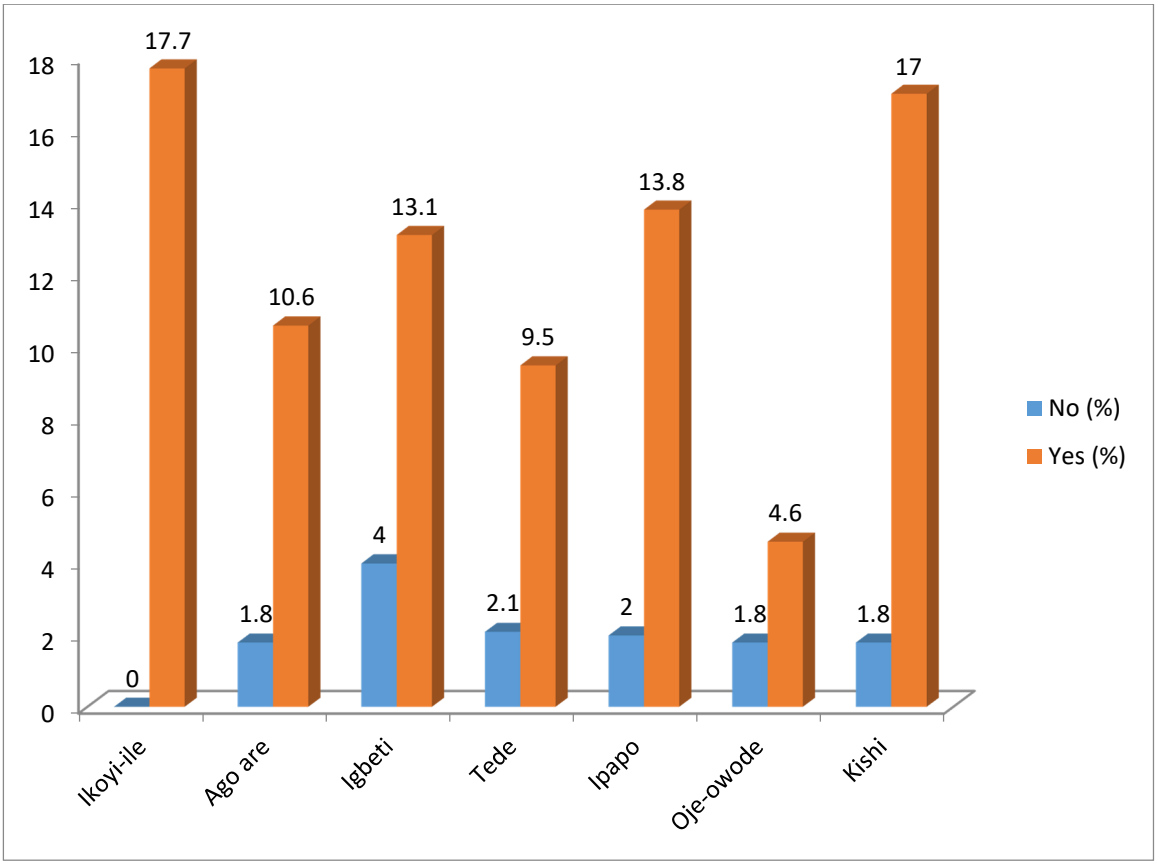

Fig. 3: Selected communities and presence of Conservation Education in schools' curriculum

Level of Conservation Education in Schools' Curriculum

Of the total population of schools that had Conservation education in the curriculum (87.3%), it was completely taught under other subjects (100%) and not as a subject of its own (0%).

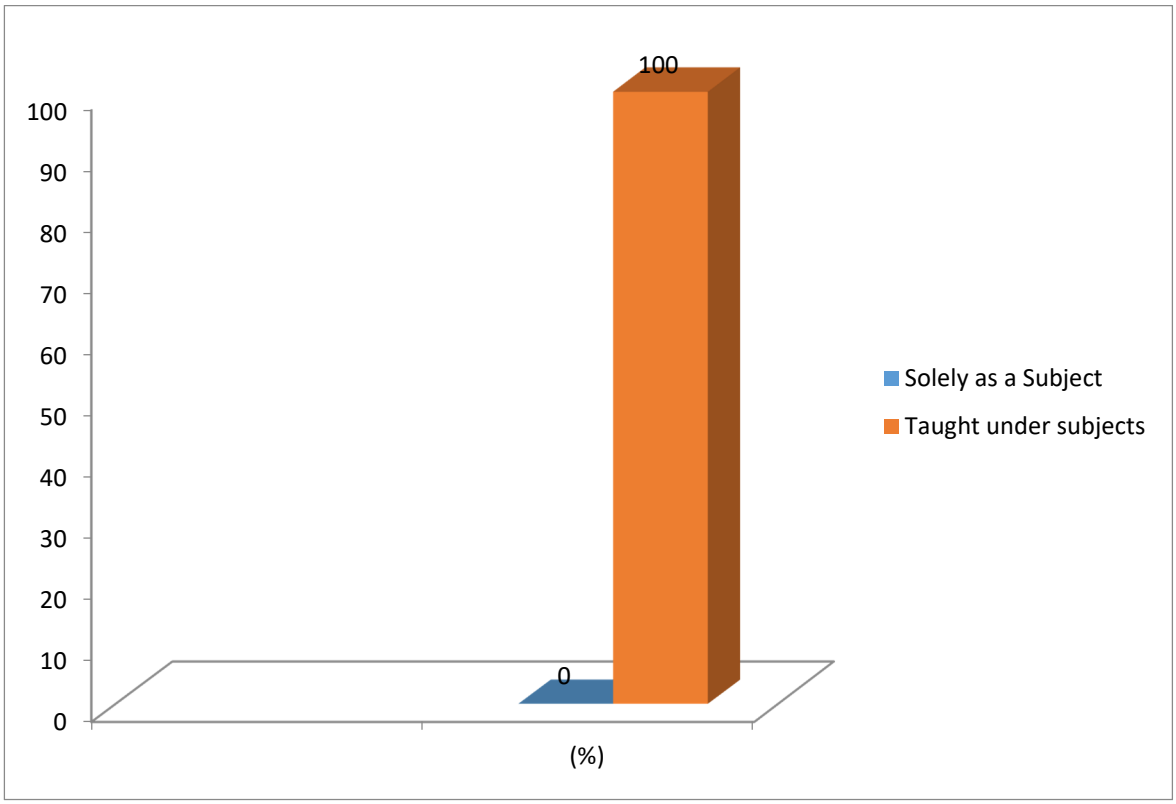

Fig 4: Level of Conservation education in schools' curriculum

Subjects Under which Conservation Education is Taught

The subject under which conservation education comes up in its topics the most is Agricultural science (71.4%) where topics covering Environmental Physiology (covering soil and soil profile), Apiculture, Aquaculture, Animal health management, Animal improvement (Animal introduction, selection and breeding), Range land and pasture management, and forestry are all in the syllabus. This population is closely followed by Biology (60.1%); where anatomy (of some wild animals are discussed), Basic Ecological concepts, Food web and trophic levels, Ecological management, Adaptation of animals, Environmental pollution, Ecological succession, Conservation of Natural resources (covering; The meaning and need for conservation, Problems of conservation, agencies responsible for conservation, conservation education and conservation laws) are all embedded in some in its syllabus then Geography (35%); with topics on Vegetation, climate, Environment, Environmental pollution, Environmental Conservation, Natural resources. English, Social Studies and Basic intro-tech had the least with 6.7%, 2.8% and 4.6% respectively.

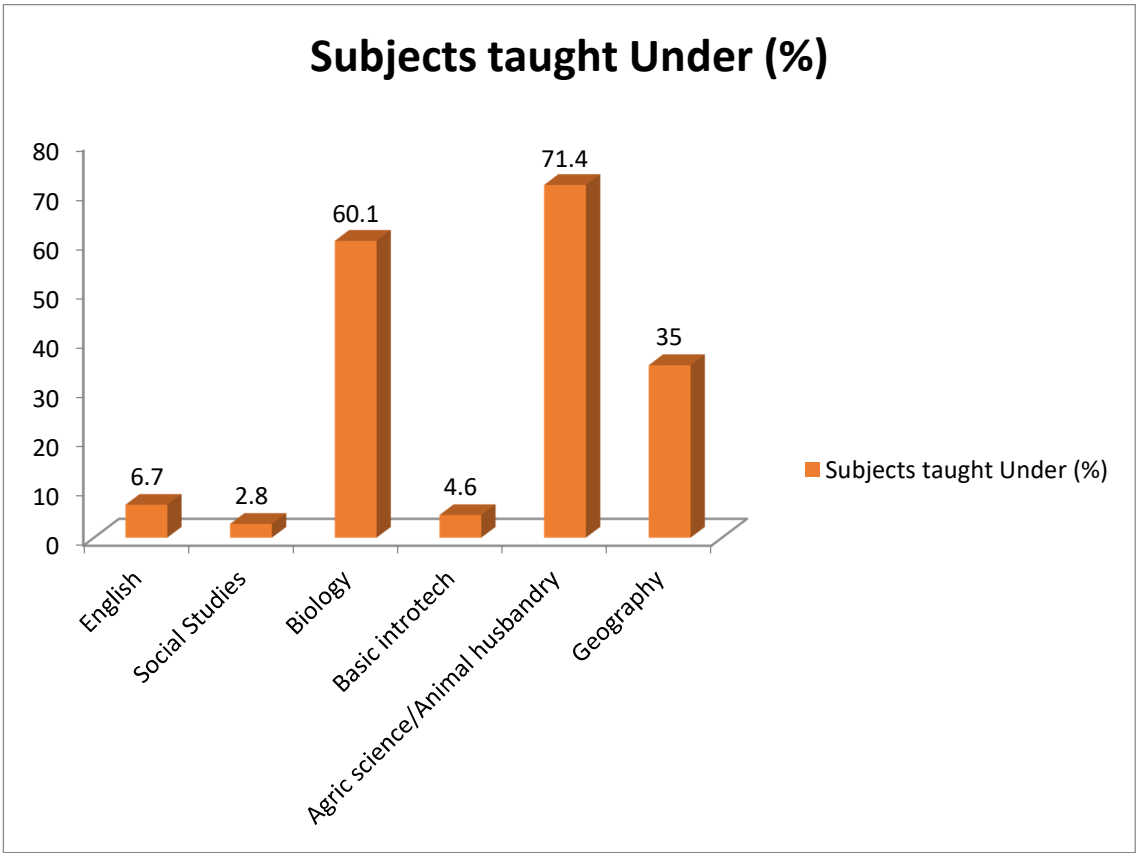

Fig. 5: Subjects under which conservation Education is taught

As regards youth clubs, only 25.9% of the population sampled had youth clubs aimed towards conservation. Although most of these clubs are not majorly on conservation but some of their activities are done with a direct impact; as in the Farmers club where some of their activities involve agro-forestry, planting of range land and so on, and indirect impact on conservation, some of these clubs include: Jets club, Literary and Debating club. Meanwhile, a bigger percentage of the population (74.1%) had no youth clubs aimed on conservation in the schools.

Table 1 Perceived challenges to the adoption of Conservation Education

Items	% of respondents that agreed
There are inadequate teachers to accommodate the inclusion of CE	87.9
Inadequate funds to Employ the right teachers	85.4
Poor Government's commitment to the adoption of Conservation Education.	72.4
Conservation education is not Worthy Of Being taught	33.6
Conservation Education is unimportant to the School Management	68.9

Majority (72.4%) have the opinion that there is a poor commitment from the Government on the adoption of conservation education in schools'

curriculum and activities which is evident in the level of introduction and adoption of Conservation Education and also on the low population of schools having youth clubs aimed solely at conservation. 85.4% of the population of teachers sampled agreed that there is not enough funds for the school management to aid in the employment of the required teachers to handle Conservation education as a Subject. Hence, funding is perceived by a large population of teachers sampled (85.4%) as a major challenge to the full adoption of conservation education. 87.9% of the population of teachers sampled believes that their schools do not have the adequate number of teachers to see to the quality impartation of knowledge on conservation to the students which may pose a challenge to the conservation education and may be one of the reasons why Conservation Education isn't taught solely as a subject across all levels of schools and types in schools of communities surrounding old Oyo National park. 68.9% of the teachers sampled have the perception that Conservation Education is not perceived as important by their school management and hence may be one of the reasons it is not being taught solely as a subject or taught at all. The commitment of the school management to the introduction of CE in its curriculum can be a major determinant on the level of Conservation education in the school and hence should be seen as a challenge. 60.5% of the total population of teachers sampled despite the fact that a vast majority of them had tertiary education agreed that there's still little to no knowledge for them on conservation, wildlife and conservation education to be able to teach students on conservation. This can be due to the fact majority of these teachers have no degree in wildlife, forestry or other related courses, the little Knowledge of wildlife they may possess may have been from informal or indigenous forms of conservation education.

Discussion

Results obtained from this research shows that conservation education is present in most of the schools sampled (87.3%), hence implementing to a certain extent the Sustainable development goal of 2010. This also reveals that the infusion of conservation education in curriculum of schools by the NERDC (NERDC, 2007) was adopted by a large majority of the schools sampled. In the categorization of location, out of the selected communities Ikoyi-Ile and Kishi both had the highest percentage population of schools with conservation education present in their curriculum followed by Ipapo, Igbeti, Ago-Aare, Tede and Oje-Owode in descending order.

This research also reveals that across all schools sampled, Conservation Education isn't taught solely as a course but rather under subjects (100%) possessing a few topics under these subjects. This further agrees with Etinosa Igbinosa (A Lecturer at the University of Benin**,** Department of Microbiology**,** PhD, FASLP, IAP-SAP Fellow) opined that the Primary and Secondary school syllabus contains no specific subject on environmental education except with sketchy mention in Geography, Biology, social studies and Agricultural science (Erhabor, 2016). The subject under which conservation education comes up in its topics the most is Agricultural science (71.4%) where topics covering Environmental Physiology (covering soil and soil profile), Apiculture, Aquaculture, Animal health management, Animal

improvement (Animal introduction, selection and breeding), Range land and pasture management, and forestry are all in the syllabus. This population is closely followed by Biology (60.1%); where anatomy (of some wild animals are discussed), Basic Ecological concepts, Food web and tropic levels, Ecological management, Adaptation of animals, Environmental pollution, Ecological succession, Conservation of Natural resources (covering; meaning and need for conservation, Problems of conservation, agencies responsible for conservation, conservation education and conservation laws) are all embedded in some in its syllabus then Geography (35%); with topics on Vegetation, climate, Environment, Environmental pollution, Environmental Conservation, Natural resources. English, Social Studies and Basic intro-tech had the least with 6.7%, 2.8% and 4.6% respectively. In addendum to conservation education, research also revealed that just about 25.9% of all the schools sampled had the presence of youth clubs aimed at conservation. Of which most of these clubs are not majorly on conservation but some of their activities are done with a direct impact (as in the Farmers club where some of their activities involve agro-forestry, planting of range land and so on) and indirect impact on conservation, some of these clubs include: Junior Engineer Technical Scientists (JETS) club Literary and debating club which engage in Quiz and debating competitions with seldom involvement of wildlife conservation. Indicating that in most of these schools sampled the only form of Conservation education available to them is the formal form of education.

This work highlights some of the perceived challenges to conservation education and challenges with high level of agreement were; inadequate knowledge from teachers, inadequate number of teachers and funding. This goes further to agree with Bosnah (2013) who opined that inadequacy of teachers, poor conditions of service (which could breed care-free attitude and nonchalance) ,incompetence, lack of relevant teaching/learning aid related to poor funding, poor management and improper implementation could be challenges militating against proper implementation of CE (Bosnah, 2013). On funding, she also opined that the poor funding of education tells on teachers, the school and pupil. A poor service, large number of pupil, dilapidated buildings, and insufficient materials due to poor funding retards the system. Regular payment of salary and other rewards and remuneration of various kinds, proper equipment of schools at all levels (current laboratory equipment, machines, conductive environment well-constructed classroom and other basic amenities is better formed would help in achieving the teaching and learning of CE (Bosnah, 2013). Furthermore, Government commitment was also perceived as a challenge by the respondent which also agrees with the suggestions of Bosnah who said that Education being instrument of change demands proper finding. Adequate funding at the Federal, State and Local Government could cater for teaching/learning of materials to enhance CE (Bosnah, 2013). She also suggested that Co-ordination of CE in the school syllabus and its realization depends on educational planners and Government. Realization of CE objectives included in the curriculum demands experts to impact the knowledge training/retraining of teachers towards the new programmes. Specially designed programmes for

teachers/would be teachers in relation to duration, content, mode of practice would enhance the objectives of a new educational policy. The new policy requires new knowledge, experts in the new policy, willingness and commitment from Government to meet its goals and objectives (Bosnah, 2013).

Conclusion

It was concluded that, this research confirms the availability and adoption of Conservation education as reported in a number of publications, although the level of introduction and adoption still varies across states, cities and villages. In schools across the seven purposively selected communities surrounding Old Oyo National park, a vast majority of the schools have the presence of CE in their curriculums. However, this research shows that the level of adoption of CE is still on a sketchy note as it is 100% not taught solely as a course but possesses topics under a few subjects like Agriculture, Biology, Geography, Social studies and Basic Science and technology. Although, it exists the most under Agriculture, Biology and Geography. Despite the fact that a large population of the people sampled perceives that there is need for Conservation Education to be taught solely as a subject. Furthermore, there is a low population of schools with youth clubs directly aimed towards conservation with farmer's club being the only club with activities directly aimed at conservation like; tree planting, agro-forestry and so on.

Recommendations

This study recommends the following for implementation for further and better implementation of conservation education:

- ✓ Conservation education needs to be taught solely as a subject in the curriculum of schools not as topics under subjects.
- ✓ Youth clubs aimed at conservation needs to be introduced, adopted and encouraged as positive impacts of such policy on conservation has been experienced in other African countries like Zambia, Mali, and Zimbabwe.
- ✓ Government should be more committed to overseeing the introduction and adoption of conservation education especially in primary schools of communities where it hasn't been adopted at all.
- ✓ Capacity building (Training and retraining) of teachers in the field of conservation should be encouraged.
- ✓ Further studies on the direct impact of CE on the conservation of wild species present in old Oyo national park since its introduction needs to be encouraged in other to aid evaluation of its impact since its introduction.
- ✓ Old Oyo National Park stakeholders should, as their quarterly responsibility, sensitize and create awareness on CE for the students in their host community.
- ✓ Community Participation and Support Zone should be adequately and sustainably embark upon in the host community.
- ✓ Excursions and visits to conservation sites should be encouraged in all schools to stir up curiosity of students and interest for the conservation of wildlife.

References

Ajiboye, J.O. and Oyetade, E.M. (2005). Environmental education in Nigeria Teach education curriculum.

Nigeria Journal of social States, 1(2): 52-58.

Aremu, D. (2007). The Historical and Archeological Significance of Koso Wall, Old Oyo National Park, Nigeria.

Bosnah, V.O. (2013). Environmental Education in Nigeria issues, challenges and prospects. *Mediterranean Journal of Social Science,* 4(15): 159-168.

Erhabor, I.N. (2016). Actualizing the Goals of Environmental Education in Nigeria. *Journal of Education and Practice,* 7(8): 1-5.

International Zoo Educators Association (2017). Conservation Education theory and practice from internet website http://izea.net/education/conservation-education theory and practice [Accessed July 10, 2017]

Nigerian Educational Research and Development Council (2008). The New Senior Secondary School Curriculum structure at a glance. Lagos, NERDC Press.

Nigerian Educational Research and Development Council (2008). The 9-year Basic Education Curriculum at a glance. Lagos, NERDC Press.

Nigeria National Park Service (2010). Evolution of parks in Nigeria. http://www.nigeriaparkservice.org/okomu/default.aspx. retrieved 21st May 2013

Ogunjinmi, A. (2016). Determinants of Environmental Attitudes and Behaviours of Nigerian Undergraduates: A case of Federal University of Technology, Akure, Nigeria. *Applied Tropical Agriculture,* 21(1): 175-182.

World Resources Institute (2000). People and ecosystems: The Fraying Web of Life. Washington DC: World Resources Institute