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ENGAGEMENT OF UNIVERSITY LIBRARIES IN MITIGATING PLASTIC POLLUTION IN NIGERIA

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ABSTRACT

Plastic pollution is one of the challenges plaguing the world in recent times. Plastic pollution affects the health, socio-economic and educational sectors in Nigeria in a profound way. The safe storage and handling of plastic objects present a pressing and often overlooked problem in many University libraries and archival collections in Nigeria. Through literature review and participant observation, this study identifies how universities libraries can be effectively engaged in mitigating plastic pollution in Nigeria. This study identifies the innovative tools for plastic pollution education such as eco-poetry, eco-photography and eco-musicology which can be engaged by the University libraries in mitigating plastic pollution in Nigeria. It concludes with the clarion call for more research and funding for Universities libraries to enhance their capacity in plastic pollution mitigation for enhancing climate resilience in Nigeria.

KEYWORDS: Climate Resilience, Education, Library, Mitigation, Plastic Pollution, Universities.

INTRODUCTION

Solid waste management is the most pressing environmental challenge facing urban and rural areas in Nigeria. Nigeria's population is estimated to double by 2050 and that could mean more solid waste hanging around and more plastic for recycling(Okolo, Amaechi, Olisah, Onwuzurike.& Anabaraonye, 2023).Climate change, environmental degradation, plastic pollution and other adverse effects of improper plastic waste management in Nigeria have necessitated the introduction of plastic waste management and recycling education which is meant to enable children and adults to respond to these environmental problems. Plastic waste management and recycling education encourages people to take action towards improving life and protecting the environment by reducing, recycling and reusing plastics. Nigeria is a country which has the abundance of human and natural resources, including skills and talents which are needed to maximize the green entrepreneurial opportunities in plastic waste management for our sustainable development and economic growth locally, nationally and globally(Anabaraonye, Chukwuma & Hope,2019). Plastics are a group of materials, either synthetic or naturally occurring, that may be shaped when soft and then hardened to retain the given shape. Plastics are durable, light weight, and inexpensive materials, which mold readily into a variety of products with a wide range of applications (Olanrewaju and Oyebade,2019). Plastic, one of the frequently used materials in today's technologically advanced world is posing serious threat to environmental health in many profound ways (Rustagi, Pradhan & Singh, 2011). The increased consumption of goods and services packed in plastics for a better quality of life is resulting in the generation of plastic wastes in Nigeria, especially in libraries. In Nigeria, the use of sachet water, bottle water, bottle drinks, takeaway food packs, straws, cups, and spoons, among others in homes and occasions is alarming. These packages come in handy for most people and are widely accepted by many Nigerians. The wide acceptance is attributed to the fact that one doesn't really need to remain at the point of purchase or service to consume them. Nigerians eat and drink from this different packages comfortably anywhere as the need arises; hence the increase in the rate of plastic waste generation(Okolo, Amaechi, Olisah, Onwuzurike.& Anabaraonye, 2023)..Climate

change education is the best channel to educate people on the need for promoting awareness, by inculcating responsible and reasonable behaviour in them so that their attitude will be environment friendly(Anabaraonye,Nji & Hope,2018). Plastic pollution is the accumulation of plastic wastes which can come in the form of plastic bottles, plastic bags, and much more, in the environment that adversely affects animals and humans (Laura, 2018). Plastic pollution is destroying wildlife, damaging ecosystems, clogging drainage systems, and harming fisheries and tourism on a global scale. The plastic pollution problem needs to be solved with urgent alacrity which is also part of solving the climate change problem ravaging the world. Solutions for plastic waste and plastic substitutes will need to come through innovations(including bioremediation, plastic recycling, etc.). New skills, knowledge and education(including the use of poetry and music) can help create enduring solutions to plastic pollution and develop systems whereby communities can turn waste into wealth, a concept that helps to view waste management of all types as a resource rather than a refuse (Sosale et al., 2021; Anabaraonye, Nji & Hope, 2018). Olanrewaju and Oyebade (2019) opined that **t**he Nigerian plastics and packaging sector started with about 50 plastics companies in the 1960s and had grown to over 3,000 companies in 2013 with a production capacity of over 100,000 tons per year. Being a versatile, lightweight, strong, and potentially transparent material, plastics are the drivers for their growth and ideal suitability for a variety of applications. This study identifies the great role which libraries can play in enhancing plastic pollution education for environmental sustainability in Nigeria.

METHODOLOGY

Materials used for this study were derived from online academic journals, magazines, articles, conference papers, textbooks, and educational materials from libraries. The researchers gathered a lot of materials for the research but summarized the characteristics of the papers that centered more on “Engagement of University libraries in mitigating plastic pollution in Nigeria”. This enabled the researchers to generate the synthesis of various views of other researchers on the subject matter.

THE USAGE OF PLASTICS IN THE LIBRARY ENVIRONMENT

The usage of plastics, in library preservation and distribution of information and appliances, are too many to mention. Specially designed plastic chairs and tables have been an integral part of the library services. These properties made of plastic that make it so valuable also make its disposal problematic. This has an environmental impact associated with its disposal.

Some of the plastic products used in the library environment include:

A) **Plastic Chairs**
B) **Plastic Tables**
C) **Plastic Water Tanks**
D) **Plastic Waste Bins**
E) **Plastic Shelves**
F) **Plastic Covered photocopying machines and laptops**
G) **Plastic Book Covers, Bags, etc.**



Fig 1: Some of the Plastic Products Used in the University Library Environment

In libraries, plastics are littered in the environment, causing plastic waste pollution. Plastic pollution is a global, and raising concern. The unsustainable use and disposal of plastic products have threatened the library environment. It is a major environmental hazard, and it has been shown to have negative impacts on the environment and human health in Nigeria, especially the library environment, as in many other countries around the world. The question is how this can be managed in a library environment where there are student and staff populations using plastics. It is ultimately important to address plastic pollution in the library environment. Also, there is a great need of curbing this pollution in the University community. New innovative solutions for reducing our dependency on plastic products such as the use of environmentally friendly alternatives, along with increasing recycling of plastic waste should be carried out in the library environment.

Zobundžija and Dolaček-Alduk, (2021) opined that path to green awareness is the first official statement on environmental sustainability in higher education, on the *Talloires Declaration signed in 1990 by* presidents, rectors, and vice-chancellors of universities from all regions of the world to create awareness of their role in education, science, information sharing to save the planet.



Fig 2: Littered Plastic Waste In The University Library Environment

THE ROLE OF LIBRARIES IN ENHANCING PLASTIC POLLUTION EDUCATION FOR A SUSTAINABLE ENVIRONMENT IN NIGERIA

The library is a link between the user and the information they require and the active players in achieving this aim are librarians. Librarians down the ages have been charged with the responsibility of information dissemination, managing information resources, and the library users. One of the management practices in the library is the preservation and conservation of library resources which is aimed at ensuring the longevity of the library resources. Most of the library resources are made up of plastics, such as computer hardware, printer, plastic chairs and tables, Nylon plastic handbook, and waste bins. This study identifies the role of libraries in enhancing plastic pollution education for sustainable environment in Nigeria.

The library can play this role through:

A) **CREATING AWARENESS AND ADVOCACY CAMPAIGNS**: One of the ways libraries can achieve plastic pollution in the library environment is by organizing seminars, workshops, and training sessions on plastic waste management for different categories of students. For instance, the library can host

workshops for school children to educate them on the different types of plastics, their ways of disposal, how to segregate various kinds of plastics and recycling practices. Also, the library can collaborate with Non-Governmental Organizations (NGOs), local authorities, and policy-makers to hold seminars and awareness campaigns for students on the environmental degradation and negative health impacts caused by plastic debris. It may directly contribute to the reduction in plastic pollution. Libraries can be involved in advocacy campaigns aimed at sensitizing policymakers, stakeholders, and the public to the need for effective plastic waste management practices. Libraries can collaborate with environmental organizations and advocacy groups to advance policies that will promote plastic waste reduction and improve management in Nigeria.

B) **LIBRARY ENVIRONMENTAL EDUCATION:** Library environmental education may also play an important role in changing users' attitudes toward plastic waste pollution. Educating library clients about plastic waste pollution will provide users with awareness about the issue and the appropriate actions to be taken, and will motivate the users to help the environment. Babalola, Babalola, and Okhale, (2010) stressed that the Nigerian Federal Environment Protection Agency (FEPA) and other relevant agencies established an environmental reference Library at its Headquarters in Abuja in 1994 in addition to the existing Library in Lagos office (FEPA, 1989) to educate the public on environmental issues. FEPA was advised to collaborate with the Federal Ministry of Education to set up an Environmental Conservation Club in secondary schools. In its efforts, the Federal Ministry of Education developed an Educational Master Plan and Curricula for both formal and informal educational systems in Nigeria to provide the public with excellent and up-to-date reading materials on environmental issues.

C) **PROMOTING SUSTAINABLE DEVELOPMENT:** Zobundžija and Dolaček-Alduk, (2021) maintained that the momentum for promoting sustainable development in higher education libraries are in ten points: raising awareness of sustainable development, creating an institutional culture of sustainability, educating environmentally responsible citizens, promoting environmental literacy for all, implementing institutional ecology, involving all stakeholders, cooperation for an interdisciplinary approach, increasing the capacity of primary and secondary schools, expanding services and responses at the national and international level.

D) **ENHANCING GREEN LIBRARY INITIATIVES:** The Green library according to Hauke, (2019) are libraries "designed to minimize the negative impact on the natural environment and maximize indoor environmental quality by means of careful site selection, use of natural construction materials and biodegradable products, conservation of resources (water, energy, paper), and responsible waste disposal (recycling, etc.)". Such libraries also focus on services, activities, events, literature, and projects related to any kind of sustainability that follows the United Nations Agenda 2030, demonstrating the social role and responsibility of libraries as leaders in sustainability education.

Some libraries like the Academic library at the University of Nigeria, Nsukka are promoting environmental awareness and consciousness not only amongst the library users but to the general public through the organization of workshops and seminars on library education. Awareness creation through library orientations may lead to multiple possibilities for breaking the plastic pollution chain and thus will improve our daily decision-making toward green library solutions.

E) **LIBRARY EXHIBITION:** Libraries can host exhibitions and displays that showcase plastic recycling ideas and innovations in plastic pollution. They can organize programs such as seminars, workshops, and

exhibitions to educate people about the proper disposal of plastic waste, recycling, and reuse. These displays may feature art pieces made with recycled plastics, informative posters on the different types of plastics and their uses, and educational videos on plastic pollution and related hazards. These initiatives would create a sense of consciousness in students about proper plastic waste management tactics.They could employ poetry recitations and drama presentation in their exhibition to entertain and educate their audience on eradicating the menace of plastic pollution.

F) **COLLECTION CENTRE:** Libraries can serve as collection centers for plastic waste pollution. The library can request local communities to bring in their plastic wastes for proper disposal or recycling. The library can also liaise with nearby recycling companies to have a waste truck stationed on its premises every week or month to recycle plastic wastes.



Fig 3: A lady trading on plastic waste she picked from the library environment

G) **RESEARCH AND INFORMATION DISSEMINATION:** Libraries can serve as a repository of information on plastic waste management. Libraries can collate data and information on plastic waste management, recycling initiatives, and best practices globally and make them available to users through their resources. Libraries can be involved in research on plastic waste management. They can provide

materials and resources for researchers to study the impact of plastic waste on the environment, develop new technologies for recycling, and create biodegradable alternatives.

H) **COMMUNITY ENGAGEMENT AND COLLABORATION:** Libraries can collaborate with waste management organizations in the country to create a forum for sharing information on effective plastic waste management practices that promote sustainable environmental development. Libraries can involve the local community and schools in plastic waste reduction and management initiatives. They can organize community awareness campaigns, school programs, and reading clubs that involve environmental themes, including the challenges of plastic waste and how to reduce it.

I) INSTITUTIONAL SUPPORT: Libraries can provide institutional support to government agencies, civil society groups, and academic institutions that are working towards developing policies and plans that will help manage plastic waste effectively. Libraries can encourage community building by organizing programs that bring together community members to learn about recycling ideas, techniques, and best practices. They can also engage in advising, counseling, and training programs for community members to help them adopt sustainable plastic waste management practices.

J) **BOOSTING INNOVATION**: Libraries can encourage innovation in plastic waste management by organizing hackathons and contests for young innovators. This initiative can boost local talent and provide solutions to the problem of plastic waste management.

RECOMMENDATIONS

There is a need to enlighten and inspire staff from all areas within the library to help create awareness of plastic pollution mitigation campaigns in all sections for responsible waste disposal. The library campaign will help to lessen the number of plastic bottles, sachet water, and biscuit pack wastes that are dumped each day by staff and students in the library environment. The awareness campaign will help to promote the engagement of libraries and librarians in the advancement of environmental sustainability standards and the promotion of specialized knowledge within professional practice. A major element of the campaign is communications, with the use of poetry, large posters, pull-ups, and banners, etc. across the library and in key locations, everyone is exposed to the message that the library is going for plastic pollution education. Everybody must now take their waste from their desks upon leaving the Library, and dispose of it at the waste stations. To reduce plastic pollution in the library environment, there is a need for water fountains in the library, where students and staff should be encouraged to refill their water bottles at the fountains. The University libraries e.g. Nnamdi Azikiwe Library, University of Nigeria, Nsukka, Nigeria can approach companies such as the Benjy Poetry and Music Global Concepts(Project Green Initiative), African CleanUp Initiative(ACI), Plogging Nigeria Club, etc. for collaboration to enhance plastic pollution education for environmental sustainability in Nigeria.

CONCLUSION

University libraries can be effective in enhancing plastic waste management for sustainable environment in Nigeria by providing education, information, advocacy, research, innovation, and community engagement. This paper is therefore very significant as it explored new opportunities, practices and policies for plastic waste management and recycling education in Nigeria. University Libraries must recognize the importance of their role

and actively commit to addressing plastic waste challenges to achieve a sustainable environment. Collaboration among libraries, individuals, businesses, and government agencies is necessary for achieving an efficient plastic waste management system. Eco-poetry, Eco-photography and Eco-musicology which provide green entrepreneurial opportunities can be innovatively used by university libraries in mitigating plastic pollution thereby enhancing climate resilience in Nigeria (Onnoghen, Nwafor, Odoh, Ewa & Anabaraonye, 2024; Okolo, Orji & Anabaraonye ,2024).

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