

Utilization of Mass Media as an Environmental Adult Education tool for Curbing Oil Pollution in Ogoni Land, Rivers State, Nigeria.

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Abstract

This study examined the utilization of mass media as a tool in environmental adult education for curbing oil pollution in Ogoni Land. The research was conducted in Khana and Gokana Local Government Areas, Rivers State, Nigeria. Its primary objective was to examine the impact of oil pollution and determine the most suitable channels for conveying environmental information to fisherfolk and farmers in the area of study. The study population comprised 1,604 fisherfolk and farmers, with a sample size of 320 participants. Data were collected through a structured questionnaire and analyzed using simple mean and percentage distribution. The findings revealed that the impact of oil pollution results in extinction of aquatic plants and animals, makes the land infertile and reduces soil nutrients, leads to fish migration to safer waters. The finding also revealed that radio is the most accessible and trusted medium for receiving information on environmental issues, with respondents expressing a preference for content delivered in English and their native dialects. Based on these findings, it is recommended that the government ensures reliable power supply in rural areas to facilitate the use of audio-visual media, such as television, to enhance information dissemination.

Keywords: Environmental Adult Education, Oil Pollution and Mass Media.

Introduction

Environmental adult education is essential for bringing transformation and change because it raises awareness, enhance values, change attitudes and improve skills for actualization of environmental sustainability. It can help protect human health and reinforce the desire to safeguard natural resources for future generations. Environmental adult education gives an individual a comprehensive understanding of the environment by imparting the knowledge, attitude and skills to work both individually and collectively towards solving present problems and preventing new

ones. It will instil into the people living in the society the idea that human activities have direct impact on the environment through illegal oil activities and vandalization of pipeline. Gimah and Bodo (2019) stated that without environmental adult education and a strong plan to create terrestrial and marine protected areas, the environment will continue to suffer degradation. Akomalefe in Ewelum, Ogbonna & Chieke (2018) maintained that there is a need to increase public sensitivity to environment and development.

According to Apel and Camozzi in Ewelum, Ogbonna & Chieke (2018), through environmental adult education, individuals are sensitized and awareness is created, which would lead to the acquisition of appropriate knowledge, skills and attitude towards the environment.

In Ogoni, the difficulty in reaching fisherfolk and farmers with relevant and credible environmental information exacerbates environmental illiteracy, undermining efforts to safeguard natural resources and promote sustainable development. Effective utilisation of mass media to disseminate information can enhance awareness and understanding of the environmental impact of human activities. Secondly, it can equip rural dwellers with knowledge, attitudes, and skills to mitigate environmental challenges and adopt sustainable practices. Furthermore, efforts aimed at addressing this concern will foster community participation in environmental preservation. These efforts ensure long-term protection of natural resources. In addition, they will help bridge the information gap caused by limited digital access and promote inclusivity in environmental adult education.

Objectives of Environmental Adult Education

The objectives of environmental adult education are designed to achieve the following:

1. Awareness: Environmental adult education creates consciousness and sensitivity among individuals and social groups about the environment and its associated problems. This knowledge will make individuals appreciate the beauty and usefulness of environmental resources. In most situations, people lack knowledge of what is happening in their environment and the possible problems they might encounter in the process of interaction with their immediate surroundings. This is where environmental adult education plays a crucial role in sensitizing the public by creating awareness about the total environment and

its associated problems, enabling individuals to clearly grasp the issues facing the environment and the options available to them.

2. **Knowledge:** It provides individuals and social groups with a fundamental grasp of how the environment functions, how humans interact with and rely on the environment, and how to address environmental problems. Often, awareness of a problem may not be enough in combating its consequences; having in-depth knowledge of environmental occurrences is the key to resolving any possible challenges. Knowledge of the environment and its associated problems can also come from one's experiences or through activism.
3. **Attitude:** Environmental adult education will influence individuals and social groups to develop moral principles, social values, ethics and a strong sense of care for the environment and the personal zeal and commitment to actively participate in environmental conservation. Human reaction to the environment reveals their understanding of the environment. It aids in the development of social values, strong a sense of care and the necessary drive to instil in us an attitude that encourages the preservation and enhancement of our environment.
4. **Skills:** It will make individuals and social groups develop the fundamental skill needed to recognise and address environmental issues. It aids in the development of the necessary skills needed in identifying and solving environmental problems and also helps individuals seek balance between immediate and long-term implications while making environmental decisions.
5. **Participation:** Environmental adult education will enable individuals and social groups to have the chance to actively take part at all levels in working towards the resolution of environmental problems. When the aim of environmental adult education is achieved, citizen participation in identifying and solving their environmental challenges is usually expected. The participatory approach is used to ensure that everyone is included in the process of solving environmental problems (Bodo, Gimah & Seomoni, 2021; Ewelum, Tobenna & Chukwutobe, 2018; Norris, 2016).

The promotion of these objectives through media campaigns is important for creating awareness of oil pollution in the environment.

Oil Pollution

Pollution is an undesirable change in the physical, chemical or biological characteristics of air, water and soil that may harmfully affect the life or create a potential health hazard to living organisms (Mbalisi, 2016). Oil pollution has detrimental effects on the environment, and also has negative socio-economic impacts. In terms of environmental damage, when oil slicks reach the coast, the oil coats almost everything within the vicinity including plants, sand and grass, making the area unsuitable for the habitation which lead to habitat loss or extinction of species. The oil may subsequently sink into the sea and it has damaging effects on underwater ecosystems, either killing or contaminating fish and organisms, which is detrimental as underwater ecosystems are essential to the global food chain resulting in negative effects on both reproduction and cellular growth (Cherry, 2015). Therefore, oil pollution can be defined as the release of liquid petroleum hydrocarbon into the environment which contaminates the air, water, and land due to human activity leading to some negative impacts on the environment and the inhabitants of that locality.

According to Akponauvie in Oyebamiji and Mba (2015), the incidents of oil spillage have caused irreparable damage to farmlands, and streams in the oil producing communities especially in Ogoni, often reducing inhabitants of the affected villages and communities to refugees. The activities of numerous oil exploration companies have led to fragmentation, deforestation and degradation of the mangrove forest ecosystem. Mangrove forests are affected by toxicity of the oil spill. Fishes are driven away into the deep sea, lives are endangered because of this oil spill, crops are destroyed, farms are no longer fertile, farmers toil in the fields, yet they have to buy food to eat, hunters go home without a catch (Gima & Bodo, 2019).

Media for Information Dissemination

Mass Media

Mass media are powerful channels of communication that inform, educate and amuse the general public. The first and foremost function of the media is to provide news and information to the masses because people need information for various reasons. To address the issue of oil pollution in the region, mass media campaigns have emerged as a powerful tool. Mass media comprising television, radio, newspapers, magazines, social media and other digital platforms, play a pivotal role in shaping public ideology and behavioural patterns. According to Okoro in Arikebi, Ainakhuagbor, Ikhara & Jimba (2023), mass media serve as powerful platform for

raising awareness and educating the public about environmental issues. It will help bridge the information gap between experts and the rural dwellers. These can influence individual and collective behaviour by promoting eco-friendly practices, conservation efforts and responsible consumption. Also, mass media can advocate for policies and reforms that support environmental protection. Effective mass media in the area will employ various strategies to engage and educate the rural dwellers on environmental sustainability. These media share stories of environmental challenges and success stories to evoke emotions and connect with the audience.

Mass media have demonstrated significant impacts in promoting environmental adult education. They have successfully raised awareness among the public on various environmental issues. Mass media will impact positively by engaging local communities, empowering citizens to take ownership of environmental initiatives and fostering a sense of responsibility for their surroundings. It can raise awareness, drive behavioural change and advocate for policy reform. According to Odufuwa in Arikenbi, et al (2023) environmental adult education should be able to create awareness about environmental problems, motivate people to avoid extravagance conserve resources and protect the environment to the best of their knowledge; facilitate understanding and co-operation among people towards sustainable environmental issues; conserve indigenous knowledge, tradition and culture friendly to the environment. Such will inspire widespread public participation on all fronts and enable all from the grassroots through the relevant agencies to the leaders to understand the stakes, the urgent need for action and the necessary steps that must be taken towards sustainable environmental protection.

According to Lev in Ijah (2020), it is not surprising that individuals spend a substantial amount of time receiving media messages during the course of their daily routine. It asserts that media messages have a great deal of power and may directly affect passive and susceptible audiences. The words have a powerful effect on the recipients, striking them like a bullet, expecting a change in conduct or attitude as a consequence. The media, therefore, is enormously influential in shaping public opinion. Different forms of media such as radio, television, newspaper, magazines, bill-boards and the internet are some popular media channels regularly consumed in our society (Ijah, 2020). Umoren, Ntia and Biao in Tommy and Mbalisi (2020), mass media can be used for dissemination of information through news, bulletins and radio/television jingles and advertisements. It is a valuable tool for communicating skills, knowledge and experience to the

general public including those who cannot read and write because it captivates the mind and interest of the viewers due to its multisensory nature.

Radio: This also serves to complement other mass media. This is particularly crucial in rural communities. Even where there is no electricity, there are battery operated radios in all parts of Nigeria. The major advantage of the radio is that the audience need not be literate. The environmental awareness messages delivered in local languages will reach a wider audience. Moreover, it does not rely on the audience being physically present at a specific location before broadcasting. Radio is the most widely used medium in many oil-producing rural and semi-urban communities. It is accessible, affordable and can broadcast in indigenous languages. Radio can help by publicizing early information about oil pollution occurrence in some areas and also enlighten the public on the effects. It can help by presenting programmes on the dangers of illegal refining of crude. By so doing, people may reduce their involvement in illegal refining of crude which causes oil pollution.

Television: The advantage of television is that the audience can hear and see, the combination of the two sense organs can enhance message assimilation. However, it has a relatively smaller audience than radio because of its reliance on electricity which is not available in most villages and the expenses of owning a television set. The use of television is of great importance because it stimulates awareness. It captivates the viewer's mind because of its multi-sensory involvement. Television is a useful means of communicating environmental skills, experiences and knowledge to the public. Documentaries on the health effects of oil pollution are vital media tool in transmitting information to rural dwellers because people tend to believe what they see and hear. Through documentary, people will be exposed to the consequences of oil pollution.

Campaigns/Rallies: Through public campaigns and rallies, the general public gains awareness which may contribute to a paradigm shift from harmful or outdated behaviours and towards an appreciation of the realities of the present or current reality.

Posters: Posters have high value to communicate messages to illiterate people because they can serve as a visual aid. The main purposes of posters are to reinforce or remind people of a message received through other channels, and to give information and advice (Ekenedo & Okereke, 2019).

It is very important to visually inform people about what is happening in other places and consequences of their actions on the environment.

Exhibition: Exhibition displayed at substantial events enhances appreciation of the problem by the audience who may not in the first instance be familiar with the problem. According to Ballantyne & Packer as cited in Ghilardi-lopès, Pimental, Kremer, Almeida & Meireles (2019), exhibitions are widely used in formal education or as a free choice learning experience, being important vehicles for building knowledge, transforming values and raising public awareness when carried out within critical strand. For this, they can use thematic spaces for the promotion of debates, group dynamics and even mobilization (campaigns or community, for example) for the conservation of our environment. Thus, lack of effective communication channels hinders awareness, participation, and adoption of environmental practices necessary for sustainability.

Statement of the Problem

The impact of oil pollution in Ogoni Land has been devastating as was evidenced to the UNEP team during an early reconnaissance mission along the creeks. Oil pollution has made fisher folk and farmers in the area economically vulnerable and displaced, leading to the migration of indigenous people, etc. So many NGO's have organized programmes in order to mitigate the effects of oil pollution, yet the situation still remains the same. Information on environmental adult education can get to the rural dwellers and the uneducated with limited access to digital technology via alternative media. These media when widely explored can contribute greatly to the solution of environmental problems that plague different communities. This study, therefore, aimed at identifying the effectiveness of the utilization of mass media as a tool in environmental adult education for curbing oil pollution in Ogoni land.

Research Questions

The following research questions were used to guide the study:

1. In what ways has oil pollution impacted on fishing and farming activity in Ogoni?
2. What are the media through which information on environmental adult education can be disseminated to rural dwellers?

Methodology

Descriptive survey method was adopted for this study. The design is considered appropriate for the study because according to Ukwuije and Adutchay (2012), survey research is one in which a group of people or items are studied by collecting and analyzing data from only a few people or items considered to be representative of the entire group. The population of this study comprised 1,604 farmers and fisherfolk in Khana and Gokana Local Government Areas. Taro Yamane formular was used to derive a sample size of 320 fisherfolk and farmers from the total population. A proportionate sampling technique was adopted to ensure equal representation of the samples among LGAs. The instrument used in this study were designed by the researcher titled “Questionnaire on Utilization of Mass Media as a Tool in Environmental Adult Education for Curbing Oil Pollution in Ogoni Land” (QUMMTEAECOPOL). The questionnaire was made up of two sections based on the research questions raised for the study. Responses were based on a four-point modified Likert-scale of: Strongly Agree (SA) (4 points); Agree (A) (3 points); Disagree (D) (2 points); and Strongly Disagree (SD) (1 point). Content and face validity were used to validate the research instrument. To ensure the reliability of the instrument, a test-retest pilot study was conducted and copies of the instrument were administered to 20 persons. To ascertain the internal consistency of the instrument items, Pearson Product Moment Correlation Coefficient yielded a coefficient index of 0.64 to justify acceptability. The instrument was administered to the respondents by the researcher and two other trained assistants. The data collected were analyzed using mean (\bar{X}) for research question one and percentages for research question two. A criterion Mean of 2.5 was established to determine if the result of an item was accepted or rejected.

Research Question One

What are the impacts of oil pollution on fishing and farming activities?

Table 1: Mean analysis of the impact of oil pollution on fishing and farming activities

S/n	Statements	SA	A	D	SD	M	R
1	It leads to death of seabirds	116 (464)	152 (456)	17 (34)	5 (5)	3.3	Agree
2	It leads to extinction of aquatic plants and animals	142 (568)	178 (534)	0	0	3.4	Agree
3	It damages the ability of fish to reproduce	99 (396)	167 (501)	45 (90)	9 (9)	3.1	Agree
4	It leads to fish migration to safer water	134	159	20	7	3.3	Agree

		(536)	(477)	(40)	(7)		
5	It reduces the amount of oxygen in water for aquatic habitats	74 (296)	179 (557)	49 (98)	18 (18)	3.0	Agree
6	It reduces air penetration into the soil	107 (428)	193 (537)	13 (26)	7 (7)	3.2	Agree
7	It causes deforestation	102 (408)	179 (537)	28 (56)	11 (11)	3.1	Agree
8	It makes the land infertile	138 (552)	164 (492)	13 (26)	5 (5)	3.3	Agree
9	It destroys plants and crops around that environments	98 (592)	222 (666)	0	0	3.3	Agree
10	It makes the surrounding water unhealthy for drinking	167 (668)	153 (459)	0	0	3.5	Agree

From Table 1 above, it is shown that item 10 has the highest grand mean of 3.5; item 2 with the grand man of 3.4; items 1, 4, 8 and 9 with the grand mean of 3.3; item 6 with the grand mean of 3.2; items 3 and 7 with the grand mean of 3.1; item 5 with the grand mean of 3.0, which indicated that the effect of oil pollution led to the extinction of aquatic plants and animals and made the water around the region unhealthy for drinking; it also led to death of seabirds, fish migration to safer waters, makes the land infertile, reduces the soil nutrients, air penetration, and it destroys plants and crops around the environment, damages the ability of fish to reproduce, causes deforestation and reduces the amount of oxygen in water for aquatic habitat.

Research Question 2: Percentage analysis of the various media through which information on environmental adult education can be disseminated.

Table 2: Percentage analysis of the various media through which information on environmental adult education can be disseminated

S/n	Statement	Radio	Newspaper	Poster	Outreach	Television
11	I mostly get information through	124(38.7%)	73 (22.8%)	34(10.6%)	26(8.1%)	63(19.3%)
12	I understand information I get from	126(39%)	57 (16%)	44 (13%)	13(8.1%)	77 (24%)
13	I believe any information I get from	183(57.2%)	33 (10.3%)	0 (0%)	0 (0%)	104(32.5%)
14	Information on oil pollution is easily	146 (46%)	0 (0%)	131 (41%)	0 (0%)	43 (13%)

	accessible to me, anywhere					
15	I get up to date information through	179 (56%)	27 (8%)	51 (16%)	0 (0%)	63 (20%)
16	Due to language used, I enjoy information in	Khana 108 (34%)	Gokana 87 (27%)	English 125 (39%)	Others 0 (0%)	

From Table 2 above, items 11, 12, 13, 14 and 15 show that radio has the highest percentage, indicating that radio is the most effective and efficient means of disseminating information on environmental adult education to rural dwellers, and due to language used they enjoy information presented in English Language followed by that of their native dialect.

Discussion of Findings

Based on the analysis of research question one, the outcome revealed that the impact of oil pollution has led to death of seabirds, damaged the ability of fish to reproduce, fish migration to a safer water, land infertility and reduced the soil nutrient, destroys plants and crops in the affected areas. These findings are in agreement with the findings of Digha, Amabah, & Jacob (2017) which state that oil pollution reduces the soil fertility, most of the essential nutrients are no longer available for plant and crop utilization and also result in death and extinction of fishes. With respect to the ways information on environmental adult education can be disseminated, the finding obtained in the study shows that information on environmental adult education can be disseminated through radio, television, posters, newspaper and outreach programmes. The finding is in agreement with Umorem, Ntie and Biao in Tommy & Mbalisi (2020) that mass media can be used as an effective tool for dissemination of information through news, bulletins and radio/television jingles and advertisements.

Conclusion

In conclusion, oil pollution has done more harm than good in the area study because it has destroyed the people's source of livelihood and has made most fisher folk and farmers abandon their fishing and farming occupation as a result of the depletion of land and water species. The finding revealed that radio is the most accessible and trusted medium for receiving information on environmental issues, with respondents expressing a preference for content delivered in English language and their dialects, reliance on radio for up-to-date information and their understanding and belief in the credibility of information from this medium.

Recommendations

1. Government should embark on rural electrification to facilitate the use of audio-visual media for enhancing information dissemination.
2. Government should always disseminate information relating to the environment through radio jingles or television advertisement to consistently create environmental awareness.

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