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Protective Roles of Quercetin, Vitamin C and Pyridoxine on Lead Neurotoxicity via Enhanced Haematopoietic and Antioxidants Components

By

Nnachi Ifenna Salvator, Elizabeth Finbarrs-Bello, Ozor Ignatius Ikemefuna, Mba Christian Ejuiwa, & Vivian Ugwu

Abstract

Background: The harmful effects of lead exposure, especially its effect on the nervous system, raise serious concerns worldwide. This study is aimed at evaluating the effect of Quercetin, Vitamin C and Pyridoxine on Haematology, biochemical and histology of the cerebral cortex on lead induced neurotoxicity using adult Wistar rat models.

Materials and Methods: Forty male Wistar albino rats were divided into five groups: control, lead only, lead + Quercetin, lead + Pyridoxine, lead and Vitamin C. 100mg/kg/bw of lead was used to induce-toxicity for 7 days and treated with the following: Quercetin, Pyridoxine and Vitamin C were administrated orally respectively for 14 days. Hematological and biochemical samples were collected in three phases. The cerebral cortex was examined under light microscopy after H&E staining. **Results:** lead decreased all hematological parameters (PCV, WBC, RBC, HB and Platelets) examined and in the biochemical parameters, decreased slightly SOD, increased MDA and reduced significantly (p values) GSH. Quercetin, Vitamin C and Pyridoxine had strong curative effects on both hematological and biochemical parameters. On the histology, lead revealed mild glial cell infiltration. All treatment groups showed normal neuronal cells. **Conclusion:** Quercetin, Vitamin C and Pyridoxine showed neuroprotective effects against lead-induced neurotoxicity; therefore, they can be used as routine supplements against lead toxicity in endemic communities.

Keywords: Quercetin, Pyridoxine, Lead, Ascorbic acid, neurotoxicity, lipid peroxidation

Introduction

Lead (Pb) is one of the most widely used heavy metals, especially in batteries, paint pigments, and plastics. This heavy use has produced local and global contamination of the air, soil, and water originating from lead-based pipes. The effect of exposure to Pb vary from mild to severe,

depending on the degree of exposure, and is referred to as lead toxicity (Raymond, 2011). The nervous system (central and peripheral components) is the primary target of lead poisoning or toxicity (Brent, 2006; Bellinger, 2004). Pb toxicity is also known to induce a broad range of hematological, biochemical, and histomorphological dysfunctions in lab animals and humans (Hsu & Guo, 2002; Pande & Flora 2002). This is characterized by persistent vomiting, anemia, encephalopathy, lethargy, delirium, convulsions and coma, and death in extreme cases (Flora et al., 2006; Pearce, 2007). One of the possible mechanisms underlying Pb-induced toxicity or poisoning is its ability to induce oxidative stress in blood and other tissues, which contributes to the pathogenesis of poisoning by interfering with the delicate prooxidant/antioxidant balance that exists within the mammalian cells. Several investigators suggest a possible involvement of reactive oxygen species (ROS) in Pb-induced toxicity (Adonaylo & Oteiza, 1999; Pande & Flora, 2002; Hsu & Guo, 2002) where Pb increased lipid peroxidation indicator the malondialdehyde (MDA) and decreased the activities of antioxidants enzymes: glutathione peroxidase (GPx), and superoxide dismutase (SOD) in the rat brains (Kuhad & Chopra, 2007).

Antioxidants have been identified to protect the neurons against various experimental neurodegenerative conditions (Kuhad & Chopra, 2007). Vitamin C, vitamins E and B6, zinc, and selenium are antioxidants used to reverse Pb-mediated toxicity by ameliorating oxidative stress status (Hsu & Guo, 2002). Flavonoids have now become a topic of interest due to their beneficial effects on different diseases. Quercetin is a natural flavonoid, ubiquitously found in common fruits and vegetables such as onions, broccoli, and apples (Sriraksa et al., 2016). Studies have reported that quercetin exhibits substantial antioxidant property, has the ability to scavenge free radicals, and aids many biological processes involved in oxidative stress (Formica et al., 1995). This study, therefore, evaluates the hematological, biochemical, and histomorphological effects of Quercetin, Vitamin C and Pyridoxine on lead-induced neurotoxicity in adult Wistar rats.

Materials and Methods

Procurement of Compounds, Chemical and Drugs

5g of Quercetin was procured from Zigma, Aldrich USA. Lead (Pb) weight of 5.2g was procured from registered chemical store at Ogbete main market Enugu Metropolis, Nigeria. 5g of Vitamin C (ascorbic acid) and Pyridoxine (Vitamin B6) were procured from Omaryon group of companies Enugu Metropolis, Nigeria.

Animal Handling

Forty (40) Wistar rats weighing between 150 - 250g were purchased from the animal house of the University of Nigeria, Nsukka, Enugu State, Nigeria. The rats were housed at the animal facility of the College of Medicine, Enugu State University of Science and Technology Enugu Nigeria. The rats were housed for a period of 4 weeks to attain desired weights and to get them acclimatized in their new environment. The rats were fed pelleted rat chow (Vital, Nig. Ltd.) and allowed water *ad libitum*. Thereafter, the rats were grouped into five (5) groups; each group had eight rats housed in two different cages 2 (n=4) per group. The rats were kept in ventilated cages at optimum temperature 28°C with 12 hours light/dark cycle, and humidity of 60%. The study was reviewed and approved by the Faculty Ethics and Research Committee.

Induction of Lead Toxicity

The used dose for lead induction was adopted from Highab et al., (2018), 100 mg /kg/bw of lead was administered orally for 7days across groups. Thereafter, Quercetin was administered as modified using methods of Tian *et al.*, 2019, at 50mg /kg / bw). Vitamin C and Pyridoxine (Vitamin B6) were used as standard drug for the experiment, the doses were adopted from Razmkon *et al.*, (2011) at dosage 500 mg /kg /bw for Vitamin C and 100 mg/ kg/ bwt for Pyridoxine (Vitamin B6).all treatment were administered via oral gavage for 14 days.

Experimental Design

Group	Description of Treatments
GROUP A	Control group – 0.1mL Normal Saline
GROUP B	Treatment group: Lead 100 mg/kg + Pyridoxine 100 mg/k/ body weight
GROUP C	Treatment group: Lead 100 mg/kg + Quercetin 50 mg/k/ body weight
GROUP D	Treatment group: Lead 100 mg/kg + Vitamin C 500 mg/kg/body weight
GROUP E	Negative control: Lead 100 mg/kg/body weight

Hematological and Biochemical Evaluations

Blood samples were collected from all the rats thrice to form a baseline, after induction and after treatment as well as parameter for post induction. Materials used for collection of samples are; capillary tubes and plain EDTA bottles. The following were evaluated; PCV, WBC, RBC, HB, and Platelets for hematological studies using standard protocols. While serum Superoxide dismutase (SOD), Malondialdehyde (MDA) & Glutathione (GSH) antioxidant marker enzyme were determined using the respective kit in accordance with manufacturers

recommended protocols (Fortress diagnostic limited UK). Measurement of Malondialdehyde (MDA), a prototype of the thiobarbituric reactive substances (TBARS) as a biomarker of lipid peroxidation and oxidative stress using modified thiobarbituric acid method (Todorova et al., 2005). The IBM SPSS package (IBM Corp., IBM SPSS Statistics for Windows, Version 25.0, Armonk, NY, USA), was used to analyze the data. Descriptive statistics was evaluated for hematological and antioxidative markers and presented as means and standard deviations. An analysis of variance test (One-way ANOVA) was used for comparison of the means for the hematological, and antioxidant enzymes. The P values for comparing means were considered significant at $p \geq 0.05$.

Termination of Study and Tissue Collection

On the 15th day (day one post treatment), the rats in all groups were sacrificed under light ether and the brains were harvested. The brains were fixed in 10% neutral formal saline for 48hrs. Thereafter the cerebrum were isolated for routine paraffin processing and stained with Haematoxylin and Eosin. Representative photomicrographs were captured after the interpretation.

Results

Hematological Analysis

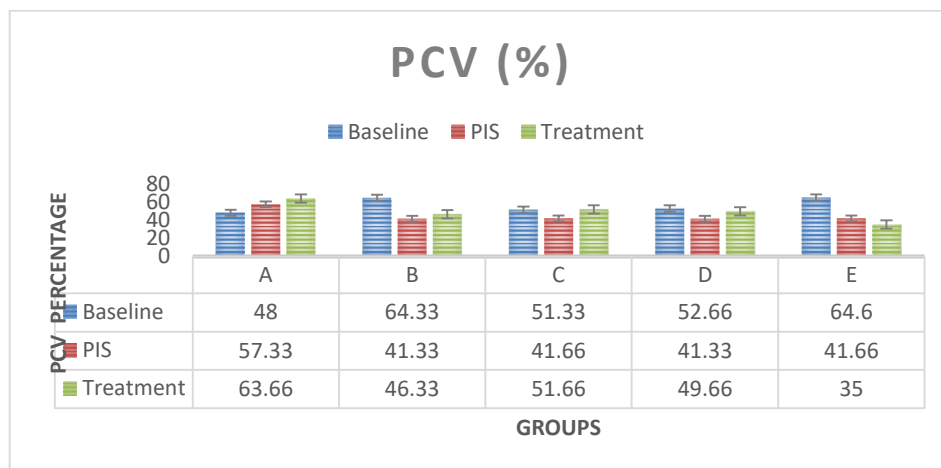


Figure 1: Shows PCV test results across groups. The PCV values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. In group E (Lead only), the PCV values regressed with continuous administration. Treatment groups B, C and D was observed to have increased PCV values after treatment which is similar when compared to observations in control group A. However, PCV values were not significant ($P > 0.05$) in paired sample correlations

across groups in 2nd and 3rd study.

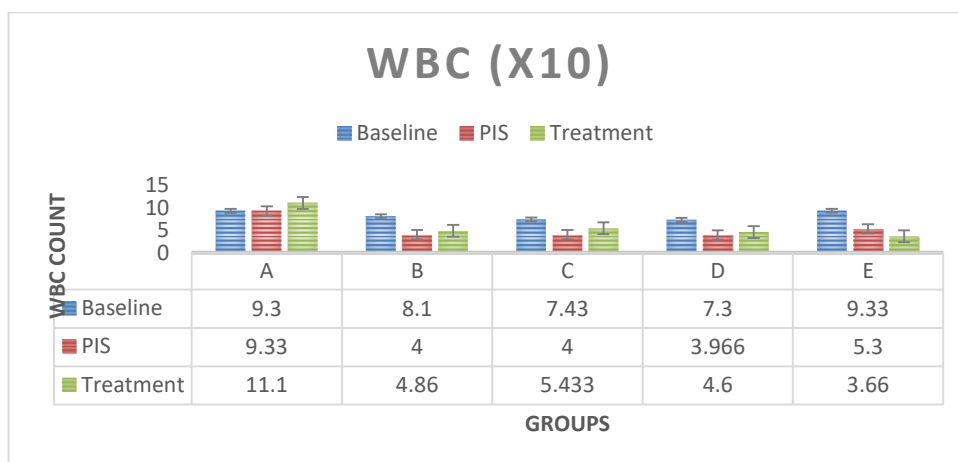


Figure 2: Shows WBC test results across groups. The WBC values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. In group E (Lead only), the WBC count was significantly lower ($P < 0.05$) compared to the control group A and treatment groups B, C and D. WBC values was observed to increase after treatment across treatment groups. WBC count was also significant ($P < 0.05$) in paired sample correlations across groups in 2nd and 3rd studies respectively.

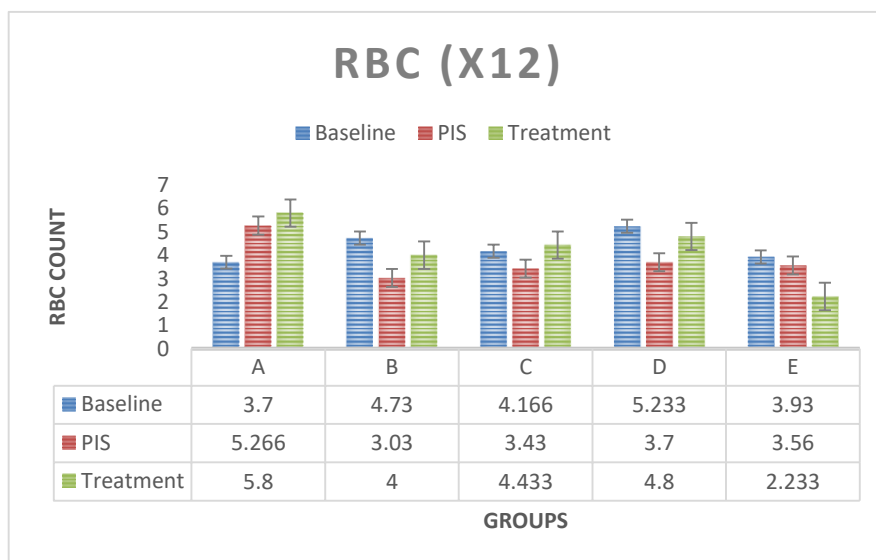


Figure 3: RBC test results across groups. The RBC values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. RBC values was reduced in the post induction study (2nd study) and increased at the treatment study across treatment groups (B, C & D) in comparison to lead only (E) group, which registered steady decline in RBC values. Paired sample correlates across groups in 2nd study and 3rd study groups also showed

no significant difference ($P > 0.05$).

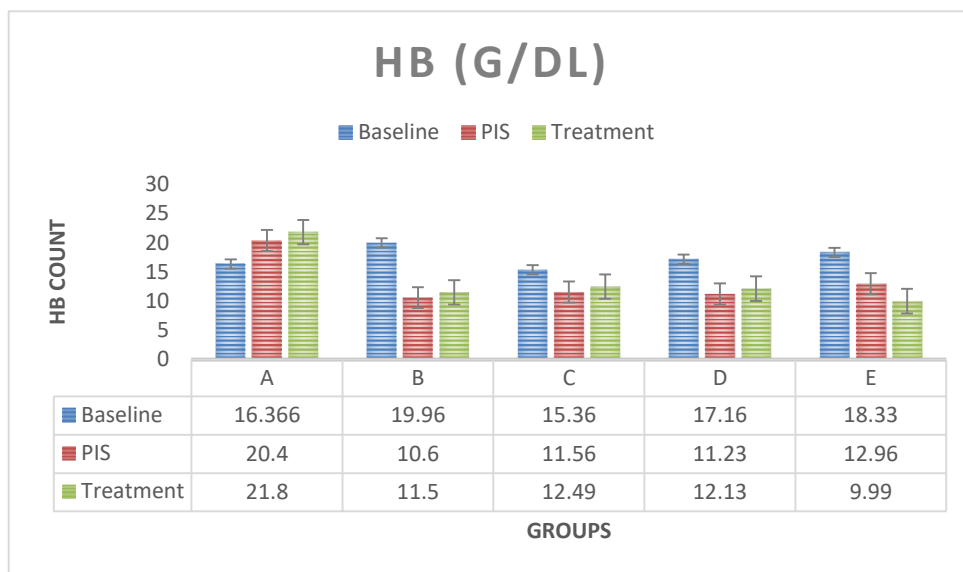


Figure 4: The figure above shows HB test results across groups. The HB values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. Hemoglobin values was lower with continuous administration in group E (lead only group), in comparison to control group A and treatment group B, C and D. however, HB values was seen to reduce in the post induction study results and increase in the treatment study result across treatment groups. hemoglobin was significant ($P < 0.05$) in paired sample correlation across groups in post induction (2nd study) and post treatment (3rd study) groups.

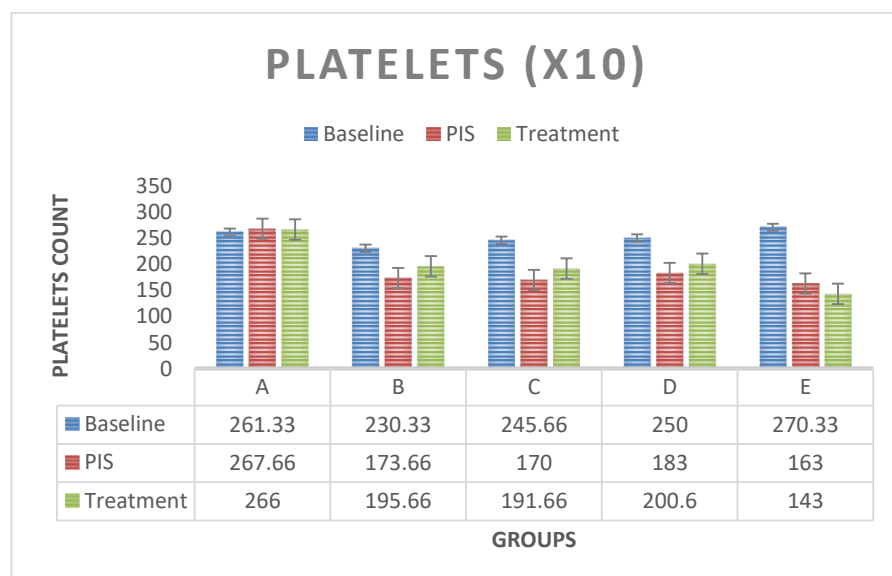


Figure 5: Platelets test results across groups. The platelets values for the baseline study, the post induction study (2nd study) and post treatment

study (3rd study) were distinguished. Platelets values were continuously decreased in group E (Lead only) but there was no difference between treatment groups C, D and B. Platelet values were reduced in post induction study and increased in treatment group across treatment groups in comparison to control group A. However, paired sample correlations were significant ($P < 0.05$) across groups.

Biochemical: Antioxidant Evaluation

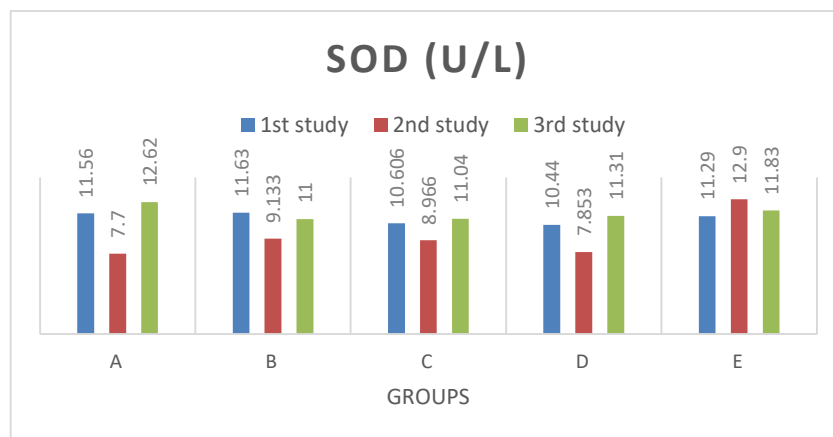


Figure 6; Shows SOD test results across groups. The SOD values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. There was no significant difference ($P > 0.05$) in SOD values across all groups. Also consistent with paired sample correlation of 2nd and 3rd study.

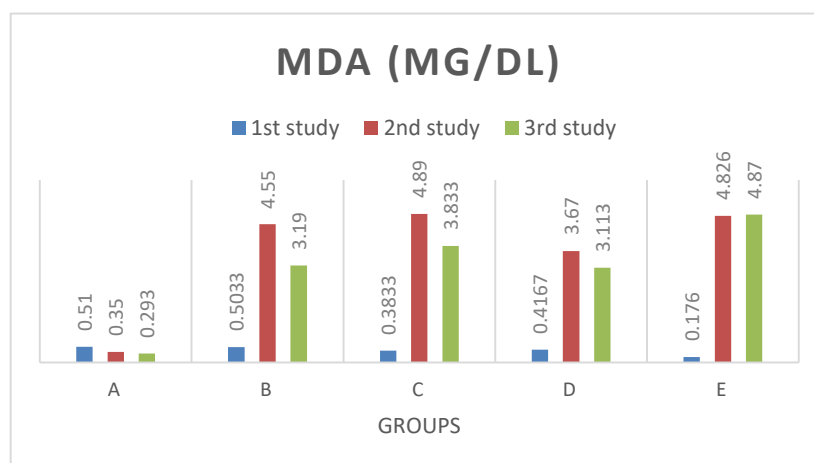


Figure 7; Shows MDA test results across groups. The MDA values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. In group E (lead only), MDA values increased at continuous induction of lead in comparison to control group A, treatment group B (lead and pyridoxine), C (lead and quercetin) and D (lead and ascorbic acid) where values were reduced after treatment.

Values were significant at $P < 0.05$ across groups. Also consistent with findings from paired sample correlation.

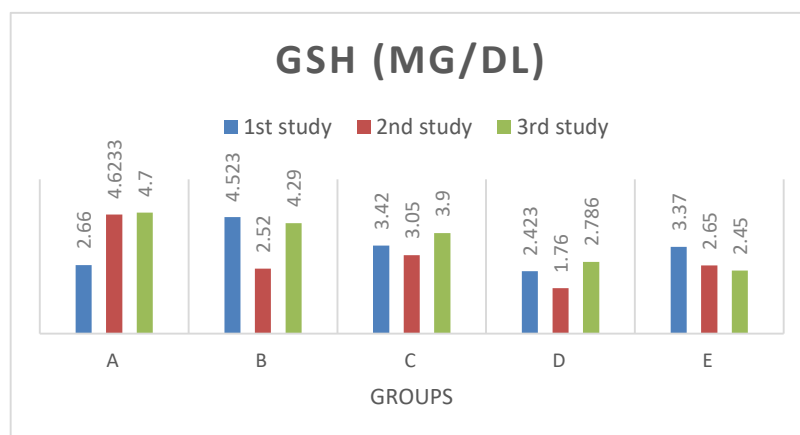


Figure 8: Shows GSH test results across groups. The GSH values for the baseline study, the post induction study (2nd study) and post treatment study (3rd study) were distinguished. GSH values continuously decreased in lead only group (group E), while there was notable increase in GSH values of treatment groups. There was significant difference ($P > 0.05$) in GSH post treatment values when compared with results of the baseline studies across group.

Histomorphological analysis

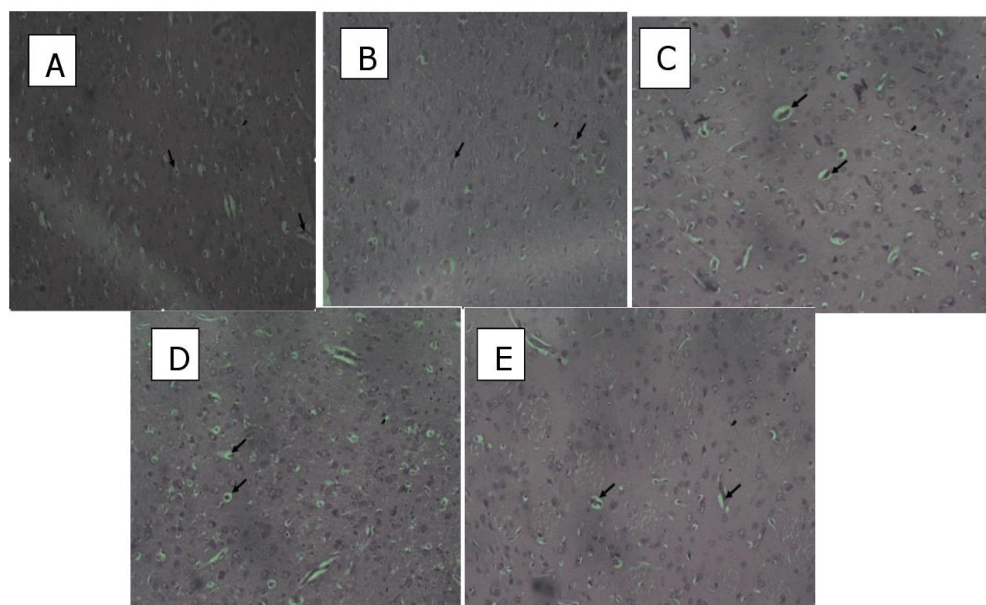


Figure 9; Sections of temporal cortices: (A) control rat (normal saline only) neuronal cells (arrow). cytoarchitecture appears normal. (B). Lead and Pyridoxine treated the cytoarchitecture appears normal with neuronal cells (arrow) (C) Lead and Vitamin C the cytoarchitecture appears

normal with neuronal cells (arrow) (D) Lead and quercetin treated the cytoarchitecture appears normal with neuronal cells (arrow) (E) Lead only distortion of the cytoarchitecture (arrow) with mild glial cell infiltration. H&E. x200.

Discussion

Lead poisoning is known to cause iron deficiency which in turn is a strong contributing factor in the etiology of anemia (Staudinger & Roth, 1998). Anemia is classified as macrocytic, normocytic, or microcytic based on the size of red blood cells and the amount of hemoglobin (Sarma, 1990). A low level of hemoglobin reflects reduced PCV value, which is defined as the ratio of the RBC volume to the total blood volume (Beutler & Waalen, 2003). Additionally, anemia can be hypochromic when the MCHC value is low. In this study, lead toxicity was evident owing to the slightly decreased PCV and RBC values (Fig 1 & 3) across treatment groups. This is consistent with the findings of Mahdi *et al.*, (2013) in a clinical study on lead-exposed workers. Also, WBC, HB, and Platelets count greatly decreased after induction of lead across all treatment groups (Fig 2, 4 & 5). This is consistent with the findings of previous studies (Omotayo *et al.*, 2022; Mahdi *et al.*, 2013; Nabil *et al.*, 2012; Mugahi *et al.*, 2003).

Vitamin C was also observed to show curative effects by increasing PCV, RBC, WBC, HB and Platelets count after observed reduction by lead administration. This was attributed to its functional ability to donate reducing equivalents to prevent the formation of reactive oxygen that damage the RBC. This finding is in line with Ozor, (2020). In another study, ascorbic acid demonstrated a substantial rise in RBC, and WBC in ascorbic acid therapy (Masar *et al.*, 2021). Pyridoxine also exhibited a similar effect as vitamin C on the PCV, RBC, WBC, HB, and Platelets counts. This is in line with the findings of Boleslaw *et al.*, (2019). Quercetin enhanced all the blood parameters evaluated: PCV, RBC, WBC, HB, and platelets count. This is suggestive of haematopoietic enhancing property and affirms reports supporting quercetin supplementation enhanced RBC, WBC HB, PCV and Platelets count (Yahaya *et al.*, 2020; Kasmi *et al.*, 2018; Keskin *et al.*, 2016; Selvakumar *et al.*, 2013; Mahmoud *et al.*, 2013).

Antioxidants play a vital role in mitigating the effect of oxidative stress on tissues and observations in this study showed SOD values after induction of lead were reduced but not significant across groups. Other studies have earlier reported similar outcomes (Jin *et al.*, 2006; Ahmed *et al.*, 2008). However, significant increases in SOD activity has been

reported in lead-exposed workers (Kasperczyk *et al.*, 2009; Rendon-Ramirez *et al.*, 2014). Lead toxicity level is evident as an increased level of MDA recorded in this study. Thus is consistent with several studies which found MDA levels to be significantly higher in lead-exposed groups (Tenchova *et al.*, 1997; Ye *et al.*, 1999, Yucebilgiç *et al.*, 2003, Gurer-Orhan *et al.*, 2004, Kasperczyk *et al.*, 2013, Oktem *et al.* 2004, Patil *et al.*, 2006; Garçon *et al.*, 2007; Ergurhan-Ilhan *et al.*, 2008; Khan *et al.*, 2008, Mohammad *et al.*, 2008, Grover *et al.*, 2010, Permpongpaiboon *et al.*, 2011; Singh *et al.*, 2013). Further findings from this study also showed a significant decrease in GSH values on exposure to lead and several studies also identified a reduction in GSH levels in lead-exposed group (Mohammad *et al.*, 2008; Feksa *et al.*, 2012; Kasperczyk *et al.*, 2013). However, few studies identified increased GSH levels in lead exposed group (Gurer-Orhan *et al.*, 2004; Conterato *et al.*, 2013).

Evident from our findings quercetin considerably reduced MDA levels and increased SOD and GSH levels, thereby reaffirming its already described antioxidant properties (Yagmurca *et al.*, 2015) and confirming the protective properties of Quercetin via the regulation of antioxidant and lip peroxidation entities (Polat *et al.*, 2006; Ikizler *et al.*, (2017). Vitamin C reduced lead-induced oxidative stress by decreasing MDA levels while increasing SOD and GSH levels. Vitamin C has the tendency to ameliorate oxidative stress levels (Bailey *et al.*, 2011; Ozor, 2021). Vollaard *et al.*, (2005) also posited that Vitamin C supplementation decreased serum MDA in exercise-induced oxidative stress. Pyridoxine also improved antioxidant markers. Pyridoxine supplementation exerted antioxidant and lipid profiles of lead-induced neurotoxicity (Tas *et al.*, 2017).

Histological observations revealed normal cytoarchitecture of the temporal cortices of the treated groups but not lead which revealed mild glial infiltrations. This was attributed to the lead effect on the cortex. Lead acetate caused mild histomorphological alterations in the brain (Jarrar *et al.*, 2012) and dose- dependant cellular degenerative changes (Highab *et al.*, 2018). Thus, lead exhibited a neurotoxic effect while the treatment quercetin, vitamin C, and pyridoxine exerted neuroprotective potential. This result was consistent with previous studies which reported the protective and antioxidant roles of quercetin, vitamin C, and pyridoxine (Vollaard *et al.*, 2005; Ikizler *et al.*, 2017; Amanda *et al.*, 2019; Ozor, 2021). Quercetin, particularly, enhances the survival of neuronal cells in the cerebral cortex (Khan *et al.*, 2018).

Conclusion

Lead-induced oxidative stress consequently altered hematological parameters and temporal cerebral microstructure. The treatments with quercetin, ascorbic acid, and pyridoxine mitigated the adverse effect of lead via hematopoietic, antioxidant, and neuroprotective mechanisms.

Conflict of Interest

The authors declared that the research was conducted in the absence of any commercial or financial relationship that could be construed as a potential conflict of interest.

Acknowledgement

We thank the staff of the histology laboratory for providing the technical assistance.

Author Contributions

FBE: conception and design and supervised the research; MEC: wrote the draft; assembled and analyzed the histology; NIS and VU: performed the study, contributed to the discussion, reviewed; OII: review literature and edited the draft. All authors read and approved the manuscript.

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Assessment of Employees' Satisfaction with Human Resource Management Practices in Selected Public Universities in Southeast Nigeria

By

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Abstract

Human resource practices remain cardinal factor towards the productivity of employees, as well as the overall performance of organisations. Yet, the feeling of employees in many public organisations remains unclear due to scanty empirical researches in that regard. This study was therefore positioned to assess employees' satisfaction with Human Resource Management Practices (HRMPs) in selected public universities within the Southeast Nigeria. The study adopted the descriptive cross-sectional survey research design. The sample size for the study was 205 non-academic employees comprising of 83 males and 122 females, who were selected for the study through self-sampling technique. Data for the study were collected through questionnaire administration which measured seven dimensions of human resource management practices. Data collected were processed using the Statistical Package for Social Sciences (SPSS) software package version 26. Data analysis was performed using descriptive statistics including frequency count and simple percentage, and data analysed were presented using tables and charts. Findings of the study showed that in the overall, majority employees in the two selected public universities were dissatisfied with HRMPs in their organisations. However, in specific dimensions, it was found that the respondents expressed dissatisfaction in the HRMPs of: providing security to employees, hiring employees, managing effective teams, and training of employees in relevant skills; while they only expressed fair level of satisfaction on fair and performance-based compensation, creation of a flat and egalitarian organisation and making information easily accessible to employees. The study therefore recommended, among other things, the need for the establishment of regulatory framework that would guide human resource management practices in the public tertiary institutions.

Keywords: employees, satisfaction, human resource, practices

Introduction

Human resource management practices remain cardinal factor towards the productivity of employees, as well as the overall performance of organisations. This is considering the view that human resource management takes into account all aspects of the working relationships that could influence the satisfaction and overall welfare of employees, and enhance their commitment to organisational goals. Human resource management practices connote the process of attracting, motivating, and retaining employees to ensure the survival of the organization (Chong, Ngolob & Palaoang, 2020). Such practices may include: provision of security to employees, hiring the right employees, management of effective teams, fair and performance-based compensation, training in relevant skills, creating a flat and egalitarian organisation and making information easily accessible to those who need it (Vulpen, n.d).

An important thing to highlight is the fact that employees' level of satisfaction with human resource management practices within organisations could either promote their job satisfaction which would invariably increase their motivation and job morale, or constrain these aspects. This fact has been recognised by different organisations across the globe; consequently, various organisations are prioritising the human resource unit of their organisations, so as to influence positive job satisfaction level among their employees. In human resource management, there are two schools of thought that recognise how employees should be managed. The first school of thought is 'best fit' while the second school is 'best practices'. For the former, human resource policies of any organisation should align with the business strategy of the organisation, while the later assumes that there is a set of universal human resource management practices that lead to optimal organisational performance (Van-Vulpen, n.d).

Human resource management practices literature has appeared severally within the extant management literature and quite a number of scholars have highlighted that a relationship exists between human resource management practices and other employees' work behaviour such as employees' performance (Lim & Ahmad, 2021; Shaukat, Ashraf & Ghafoor, 2015), employees' engagement (Ferdian, Azis, Prasetyo & Darmawan, 2020), job satisfaction (Cherif, 2020), sustainable organisational performance (Rasool, Samma, Wang, Zhao & Zhang, 2019), organisational commitment (Al-Aali, 2021), among other important variables. However, there appears to be scanty empirical literature on employees' satisfaction with human relations practices, particularly within the context of public universities in Southeast Nigeria.

This gap in empirical research could becloud the understanding about the activities of the human resource departments and the working conditions of employees in the public tertiary institutions in Nigeria, particularly within the Southeast zone of the nation. Consequently, this present study aims to fill this gap in empirical research on the theme of this present study.

Research Question

1. What is the employees' satisfaction with human resource management practices in the selected public tertiary institutions within the Southeast Nigeria?

Methods

Participants

This study was conducted among 205 non-academic staff (Males = 83, Females = 122) in two selected public universities within the Southeast zone of Nigeria, who aged between a minimum age of 24 years to a maximum age of 59 years, with a mean age of 35.9 years. All the respondents completed the secondary school level of education which is an indication that all respondent could read and write basically. The respondents included in this study included non-academic staff from three different cadres: junior, intermediate and senior level staff. The respondents were selected through self-selection sampling technique in which respondents participated in the survey on their own accord. Specifically, the respondents were invited to participate in the study through Google Form data collection tool (A web-based data collection tool).

Materials

In this study, an online survey questionnaire was developed based on existing literature on the study variables. The questionnaire was titled 'Employee Satisfaction with Human Resource Management Practices (ESWHMRP)' which was used to measure the satisfaction of non-academic staff regarding the human relation practices in public universities within Southeast Nigeria. It consisted of two parts – the first part dealing with the socio-demographic characteristics of the respondents, while the second part contained seven items which were designed to obtain data on the employees' satisfaction with human resource management practices. Items for the socio-demographic variables were designed on multiple response formats, while items for the substantive issues were designed on 5-point response options ranging

from '1' – completely dissatisfied to '5' – very satisfied. An example of the question is 'How satisfied are you with human resource management practices of your organisation in terms of providing security to employees?' with response option of 5 – very satisfied, 4 – somewhat satisfied, 3 – neither satisfied nor dissatisfied, 2 – dissatisfied, and 1 – completely dissatisfied. To ensure validity of the instrument, the questionnaire was subjected to content and face validity, in which a draft of the questionnaire was submitted to two experts who vetted the instruments to ensure that its contents actually measured the intended purpose, as well as made necessary corrections in terms of wordings and overall fit of the instruments before the final copy was uploaded on the web.

Procedure

The instrument was administered to the respondents through different social media groups for the non-academic staff of the selected universities, through the help of the groups' administrators. While conducting the research, the researcher had to inquire from few non-academic staffs regarding their social media groups and how to connect to the groups' administrators. After the information was obtained, the research got acquainted with the groups' administrators and expressed the research intention as well as seeking their help in uploading the survey link to their various groups. In all, three different social media groups including Whatsapp, Telegram and Facebook were identified and used for data collection. Through the help of the groups' administrators, as well as the letter contained in the introductory part of the online-questionnaire, the respondents were made to understand that the research was purely for academic purpose, confidentiality of their responses were guaranteed and that the response time for the questionnaire was approximately five minutes. Considering the fact that the research was online-based, the questionnaire was customised in such a way that could not allow multiple entry, which means that each respondent was allowed to complete the survey only once. A timeline of two weeks was set for the data collection process, after which any other entry was discarded. Thus, only data entries or responses obtained within the set timeline were used for data analysis. At the end of data timeline, only 205 data entries were obtained and used for data analysis. Data obtained from the study were initially contained in Excel document format; however the researcher applied data transformation in which the data contained in the original Excel format were transformed to the Statistical Package for Social Science (SPSS) software package version 26, which was used in processing all the relevant data for the study.

Data Analysis

Data analysis in this study involved descriptive analysis of the responses gathered from the survey. First the socio-demographic variable was analysed using frequency count and simple percentage and presented in a composite table. Thereafter, the research question was equally answered using descriptive analysis applied on each of the seven items that measured employees' satisfaction with human resource management practices.

Results

Table 1.

Respondents' Socio-Demographic Characteristics

Socio-Demographic Variables	Frequency	Percent
Gender		
Male	83	40.5
Female	122	59.5
Total	205	100.0
Age Distribution		
24 - 29 Years	35	17.1
30 - 35 Years	38	18.5
36 - 41 Years	71	34.6
42 - 47 Years	27	13.2
48 - 53 Years	25	12.2
54 - 59 Years	9	4.4
Total	205	100.0
Marital Status		
Single	53	25.9
Married	115	56.1
Separated	7	3.4
Divorced	12	5.9
Widowed	18	8.8
Total	205	100.0
Level of Educational Attainment		
Secondary School	36	17.6
Tertiary (Diploma)	98	47.8
Tertiary (Bachelors)	55	26.8
Tertiary (Post-graduate)	16	7.8
Total	205	100.0
Official Rank		
Junior Staff	96	46.8
Intermediate	79	38.5
Senior	30	14.6
Total	205	100.0

Table 1 contains results of data analysis in relation to the respondents' socio-demographic variables. From the gender dimension, result of the analysis showed that higher proportion (59.5%) of female non-academic employees participated in the study compared to lower proportion (48.0%) of male employees. The respondents aged between the minimum ages of 24 years to the maximum age of 59 years, with those aged between 36 – 41 years constituting the highest proportion (34.6%) of the respondents within the sample. This implies that the majority of the respondents individuals within their mid-adult ages. This could also explain why more than half proportion (56.1%) of the respondents were married, compared to about a quarter proportion (25.9%) of those who were single.

Data equally showed that all the respondents completed at least the secondary school level. However, nearly half proportion (47.8%) of them attained up to the tertiary (Diploma) level of education. These data imply that the respondents were literate enough to understand the contents of the questionnaire and to respond effectively to the questions. With regards to the respondents' ranks, the majority (46.8%) of them were within the junior level, another significant (38.5%) of them were within their intermediate level, while the least proportion (14.6%) of them were at the senior level.

Employees' Satisfaction with Human Resource Management Practices

Table 2.

Respondents' Satisfaction with Provision of Security to Employees

Response Options	Frequency	Percent
Completely Dissatisfied	66	32.2
Dissatisfied	46	22.4
Neither Satisfied nor Dissatisfied	56	27.3
Somewhat Satisfied	24	11.7
Very Satisfied	13	6.3
Total	205	100.0

Table contained in table 2 showed that majority (32.2%) of the respondents expressed complete dissatisfaction with the HRMPs regarding the provision of security to employees. However, about a quarter proportions (27.3%) of them were neither satisfied nor dissatisfied in this regard.

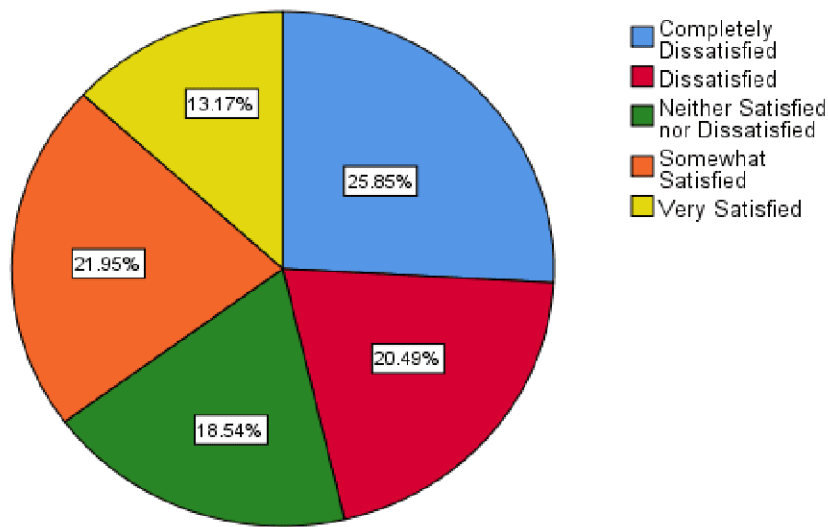


Figure 1. Respondents' Satisfaction with HRMP of hiring employees

Data contained in figure 1 provide clear evidence that the largest proportion (25.6%) of the respondents were equally completely dissatisfied with the human resource management practices in terms of hiring employees. This could imply that the human resource management practices in terms of hiring employees in the public Universities within the Southeast Nigeria is less optimal.

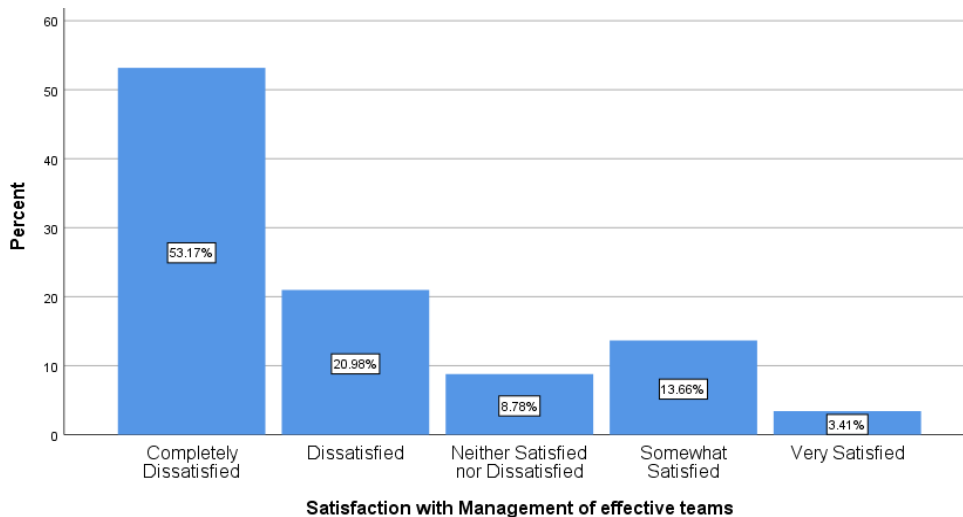


Figure 2. Respondents' Satisfaction with HRMP practice of Managing Effective Teams

Figure 2 clearly showed that more than half (53.2%) of the respondents were completely dissatisfied with the human resource management practice of managing effective teams for the employees. This was followed by approximately 21.0% of the respondents who ticked the

option ‘dissatisfied’. These suggest that the human resource management practice of managing effective employees’ teams in the selected public Universities fall below average.

Table 3.

Respondents’ Satisfaction with HRMP of Fair and performance-based compensation

Response Options	Frequency	Percent
Completely Dissatisfied	32	15.6
Dissatisfied	45	22.0
Neither Satisfied nor Dissatisfied	48	23.4
Somewhat Satisfied	55	26.8
Very Satisfied	25	12.2
Total	205	100.0

Table 3 shows that the highest proportion (26.8%) of the respondents ticked the option ‘somewhat satisfied’. This implies that the respondents were fairly satisfied with the human resource management practices in terms of fair and performance-based compensation for the employees.

Table 4.

Respondents’ Satisfaction with HRMP regarding Training of Employees in Relevant Skills

Response Options	Frequency	Percent
Completely Dissatisfied	141	68.8
Dissatisfied	39	19.0
Neither Satisfied nor Dissatisfied	10	4.9
Somewhat Satisfied	11	5.4
Very Satisfied	4	2.0
Total	205	100.0

Data contained in table 4 showed that a very large proportion (68.8%) of the respondents expressed complete dissatisfaction with the human resource management practices in terms of training employees in relevant skills. This implies that the human resource practices in the public Universities in the Southeast Nigeria do not take appropriate steps to train their employees in relevant skills that facilitate their job performance.

Table 5.

Respondents' Satisfaction with HRMP regarding Creation of a Flat and Egalitarian organisation

Response Options	Frequency	Percent
Completely Dissatisfied	12	5.9
Dissatisfied	19	9.3
Neither Satisfied nor Dissatisfied	58	28.3
Somewhat Satisfied	61	29.8
Very Satisfied	55	26.8
Total	205	100.0

In table 5, it could be seen that the highest proportions (29.8%) of the respondents expressed a fair level of satisfaction regarding the human resource management practices of their organisation in terms of creating a flat and egalitarian organisation. This finding implies that the human resource units of public Universities in the Southeast Nigeria are effective in the practice of creating a democratic atmosphere that enhances employees' workability.

Table 6.

Respondents' Satisfaction with HRMP in terms of making Information Easily Accessible

Response Options	Frequency	Percent
Completely Dissatisfied	18	8.8
Dissatisfied	24	11.7
Neither Satisfied nor Dissatisfied	54	26.3
Somewhat Satisfied	58	28.3
Very Satisfied	51	24.9
Total	205	100.0

In table 6, it is also clear that the highest proportion (28.3%) of the respondents chose the response option 'somewhat satisfied', which implies that they were fairly satisfied with the human resource management practice in their organisations, in terms of making information easily accessible for the employees. This equally translates to the view that employees in public Universities within the Southeast Nigeria do not find it difficult accessing information relevant to their workability because the human resource units of their organisations are effective in that regard.

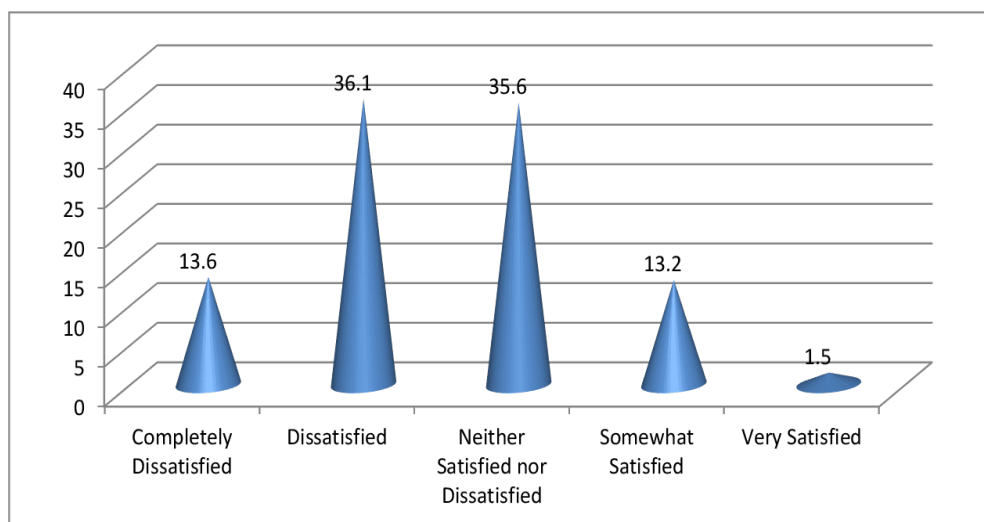


Figure 3: Respondents' overall level of Satisfaction with Human Resource Management Practices

Figure 3 shows that in the overall analysis, the largest proportion (36.1%) of the respondents were dissatisfied with the human resource management practices in their organisations. However, it is equally observed that another significant proportion (35.6%) of the respondents was neither satisfied nor dissatisfied with the human resource management practices. These findings translate to the view that the human resource management practices within the public universities in the Southeast of Nigeria are not quite impressive.

Conclusion/Recommendations

The importance of human resource management practices towards the productivity of employees, as well as the overall performance of organisations cannot be overemphasised. Thus, this present study was positioned to investigate the satisfaction of non-academic staff of public universities in the Southeast of Nigeria, towards human resource management practices in their organisations. This study has succeeded in describing the satisfaction of employees towards human resources management practices within public universities particularly in the Southeast of Nigeria, which contributes to the extant empirical researches on organisational management and practices. Conducting this study was considered an important step in establishing what goes on in terms of human resource management in public universities, which is very crucial for the employee productivity and overall positive working conditions. Judging

from the analysis conducted on the overall data on the measures of employees' satisfaction with the human resource management practices, it is concluded that non-academic employees of public universities in the Southeast of Nigeria are dissatisfied with the human resource management practices within their organisations. This has serious implications for the sustainability of productive working environment particularly within the academic environment; as such dissatisfaction could produce negative work behaviours that could jeopardise the overall productivity in the university environment.

With appropriate regulatory policy frameworks for the universities' human resource management, the working conditions of employees particularly the non-academic staff of public Universities would be improved, which would ultimately improve their workability, organisational commitment and overall productivity. Without a policy directed human resource management within the public universities, it would be impossible to establish positive human resource management practices that could translate the working environment into a pleasant experience for the employees. Consequently, the productivity of the employees would be marred and poor organisational productivity could be the long term effect of it. Against this backdrop, the following are recommended for way forward:

1. There is need for the National Universities Commission to establish a regulatory framework that would guide human resource management practices in the public tertiary institutions. This would ensure that human resource managers become compliance with recommended practices, as well as consciously and actively involved in providing the atmosphere that could engender positive human resource management practices.
2. There is need for the management of public universities to ensure that officers appointed for the office of human resource manager are competent and qualified to discharge the expected responsibilities.

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The Ubiquity of Signs

By

Stella Tonyo Akinola

Abstract

Language is a means of human communication that sets man apart from other animals. Language gives structure to experience and every other aspect of life. Language, of course, is primarily spoken and society is dominated by the spoken form, but for those who are unable to speak, communication takes place through signs. This article seeks to find out if the society can do without signs and symbols in daily communication. The population of sign language users is insignificant as compared to the population of persons that use spoken language yet some aspects of society seem to function better with signs and symbols. This is a descriptive work and it is qualitative. The instrument in operation here is the questionnaire and the theoretical framework hinges on Functionalism. Seventy-four (74) respondents took part in this study. This study concludes that the society in general cannot function maximally without signs and symbols.

Keywords: ubiquity, signs, iconicity, signals, symbols

Introduction

Language is essentially a communication system in the sense that it associates meaning (i.e. the message) with a set of signs (i.e. the sounds or symbols). All linguistic units of expression (sounds, words, sentences) are the signs of the objects, entities or states of affairs that they represent. There is a relationship between a sign and the entity it stands for. Language contributes to the totality of knowledge immensely. It is a unifying factor for everything and connects environmental practice with knowledge of culture and transmits everything synchronically and diachronically among members of a speech community between various generations, (Crystal, 2000; Egbokhare, 2011). Language gives structure to experiences and establishes and maintains social relations. Language is also used to release nervous tension physiologically and psychologically. The necessary tool to acquire skills and knowledge is of course, language.

Language can be described as a code which comprises meaningful

sounds and symbols shared by a speech community for the purpose of communication. The set of sounds and symbols are governed by a system and structural rules which permit combination possibilities.

Ndimele (2006) describes language as a semiotic system that entails the use of certain agreed upon symbols or signals to convey meaning, from one person to another within a given speech community. This definition seems to be all encompassing as it recognizes every variable that make up the entity called language. Semiotics investigates the properties of signaling systems, both natural and artificial, especially with regard to the meanings or messages that they convey. This is the most convenient definition for this paper as is bothers on signs, which forms an integral part of communication.

Sign language interpretation can be regarded as semiotic in a sense but that has to do with the fact that all simultaneous interpretation – indeed all use of language – is semiotic, rather than establishing language in opposition to other semiotic systems. From Ndimele's perspective, linguistic translation, including the simultaneous interpretation of sign languages as well as spoken languages, are not as distinct from semiotic translation but as subset of the more general category of semiotics.

Recent findings about sign languages are but one entity in a growing list of factors pointing to the inadequacy of contemporary linguistics to describe human languages, (Hymes, 1973). Thus, one of the problems to be overcome with regard to language is the linguist's usual conception of it. A broader, differently based notion of the form in which we encounter and use language in the world therefore is needed. To Hymes, this broader view is represented by the term, "ways of speaking" or "the ethnography of communication".

Ingram (1977), in his study of sign language interpretation, declared that we must combat the assumption that sign languages are not only grammatical surrogates of spoken languages, but also that they overlap spoken languages semantically. A sign language output may seem easier to facilitate than a spoken language output simply because the former is easier to fake. An interpreter can always shift into a sign language form that is easier for him, but not necessarily more comprehensible. A spoken language output, though is not so easy to fake, its flaws become readily apparent to the hearer/receptor and an interpreter's only recourse is to complain that interpretation from a sign language to a spoken language is a more difficult task.

Societal pressures being what they are, may have likely established the

spoken form as the dominant language. It is expected that the greater the linguistic dominance the more likely an interpreter will identify with the speakers of the dominant language, rather than with clients speaking his “other” language.

Sign languages use two different modalities, the visual and the gestural. Although, the two modalities clearly differ in the production and perception of communicative signals, the underlying linguistic structures seem to be very similar across both modalities (Meier 2002, 2012, Sandler & Lillo-Martin, 2006). Nevertheless, sign languages, retain some modality-specific properties that may impact the linguistic structure and the cognitive processes underlying the perception and production of signed communication.

First of all, sign languages employ various articulators such as the hands, the upper part of the body, the head, and the face to express grammatical features simultaneously. Second, sign languages use the geometrical properties of the signing space to realize morphosyntactic, semantic and pragmatic categories in the three dimensional space (Pfau & Stanbach 2016).

Third, sign languages grammaticalize and integrate gestural elements, since sign languages and manual as well as non-manual gesture use the same modality. As a consequence, the interface between these two systems is permeable and leads to a more prominent presence of iconicity at different grammatical levels. By contrast, there is much less transparency between the signals used in auditory communication and their meaning (Schlenkes 2018). Besides these linguistic differences, sign languages differ from many spoken languages also in various socio-linguistic dimensions (Aronoff et al., 2005).

Problem Statement

The study of signed languages is of great theoretical interest. By and large, claims about what is universal across human languages are based on the examination of a relatively small percentage of the world’s languages. And signed languages have not been included among that small percentage.

Language whether spoken or signed, is a tool of communication. But this tool of communication can sometimes create a communication gap when two people do not have a common means of a communication language. This is the reason globalization came with a demand for a standardized language for international platforms. In-depth studies of signs could reveal a great deal about the characteristics of language that are truly

universal. Signs seem to cut across cultures and languages. Signs have meanings that permeate all languages. Thus, the common means of communication we seek for is embedded in signs.

Conceptual Review

Signals, signs and symbols, these three related components of communication processes found in all cultures have attracted considerable scholarly attention because they do not relate primarily to the usual conception of words or language. Each is apparently an increasingly more complex modification of the former, and each was probably developed in the depths of prehistory before or at the start of early human experiments with vocal language.

Signals

A signal may be considered as an interruption in a field of constant energy transfer. The basic function of such signals is to provide the change of a single environmental factor in order to attract attention and to transfer meaning. A code system that refers interruptions to some form of meaningful language may easily be developed with a crude vocabulary of dots, dashes or other elemental audio and visual articulations.

Taken by themselves, the interruptions have a potential breadth of meaning that seems extremely small: they may indicate the presence of an individual in a room, an impatience, agreement, or disagreement with some aspect of the environment or in the case of a scream for help, a critical situation demanding attention. Coded to refer to spoken or written language, their potential to communicate language is extremely great. It seems likely that the underlying opposition between “sign” and “background” needs to be invoked and that much of the point of these proposals is precisely that they address cultures and persons without discussing mode of production or treating social class as a factor in change (Hymes, 1978).

Signs

While signs are usually less germane to the development of words than signals, most of them contain greater amount of meaning and by themselves. Ashley Montagu, an anthropologist, has defined a sign as a “concrete denote” possessing an inherent specific meaning, roughly analogous to the sentence. The most common signs encountered in daily life are pictures or drawings, although a human posture like a clenched fist, an outstretched arm or a hand posed in like a “stop” gesture may also serve as signs.

communication. This shows that communication with signs is possible across board.

The main difference between a sign and a signal is that a sign (like a policeman's badge) contains meanings of an intrinsic nature while a signal (like a scream for help) is merely a device by which one is able to formulate extrinsic meanings. Their difference is illustrated by the observation that many types of animals respond to signals while only a few intelligent and trained animals (usually dogs and apes) are competent to respond to even simpler signs.

Symbols

The world is filled with symbols: sports uniforms, company logos and traffic signs are symbols. In some cultures, a gold ring is a symbol of marriage. Some symbols are highly functional, stop signs, for instance, provide useful instruction. As physical objects, they belong to material culture, but because they function as symbols, they also convey non material cultural meanings. Some symbols are valuable only in what they represent.



Trophies, blue ribbons, or gold medals for example serve no other purpose than represent accomplishments. But many objects have both material and non-material symbol value.

A police officer's badge and uniform are symbols of authority and law enforcement. The sight of an officer in uniform or a squad car triggers reassurances in some citizens and annoyance, fear or anger in others.



It's easy to take symbols for granted. Few people challenge or even think about stick figure signs on the doors of public bathrooms. But those figures are more than just symbols that tell men and women which bathrooms to use, they also uphold the value that public restrooms should be gender exclusive. Even though stalls are relatively private, most places do not offer unisex bathrooms.

Symbols are more difficult than signs to understand and to define, because unlike signs and signals, they are intricately woven into an individual's ongoing perception of the world. The symbol has been defined as any device with which an abstraction can be made. Although far from being precise construction, it leads in to profitable direction. The abstractions of the values that people imbue in other people and in things they own and use, lie at the heart of symbolism.

In Whitehead's opinion, symbols are analogues or metaphors (that may include written or spoken language as well as visual objects) standing for some quality of reality that is enhanced in importance or value by the process of symbolization itself.

Even the destruction of a symbol is symbolic. Effigies representing public figures are burnt to demonstrate anger at certain leaders. In 1989, crowds tore down the Berlin wall, a decade old symbol of the division between East and West Germany, communism and capitalism.

While different cultures have varying systems of symbols, one symbol is common to all languages. Language is a symbolic system through which people communicate and through culture is transmitted. Some languages contain a system of symbols used for written communication while others rely on only spoken and non-verbal actions. Societies often share a single language and many languages contain the same basic elements. An alphabet is a written system made of symbolic shapes that refer to spoken sound. Taken together, these symbols convey specific meanings. Some

gestures are nearly universal, smiles often represent joy and crying often represents sadness. Shakespeare says, “action speaks louder than voice”

Iconicity

The visual-gestural modality of signed languages has greater resources for iconic representation than does the oral-aural modality of spoken languages. Aside from onomatopoeic representations of sounds (e.g., bow-wow, meow), the mapping between form and meaning in the words of spoken languages is seldom imagistic; rather, form-meaning mappings are typically arbitrary. In contrast, the movement of the two hands in the transparent, three-dimensional signing space allows signed languages to represent the shape and movement of objects imagistically. Whether in sign or speech, the mapping between form and meaning need not always be arbitrary, but all languages must allow arbitrary form-meaning mappings in order to have lexical items for abstract, non-imageable concepts (Meier, 2002). Crucially, whether arbitrary or imagistic, form-meaning mappings in signed and spoken languages are conventional within particular linguistic communities. Rich clusters of related and unrelated symbols are usually regarded as icons. They are actually groups of interactive symbols, like the “brick house” in Port Harcourt, “Aso Rock” in Abuja.

Methodology

A survey research design method was adopted. The target population comprised two groups: students and lecturers in the University of Africa, Toru-Orua, Bayelsa State. The study adopted simple random sampling. The bulk of the relevant data were collected through questionnaire. A questionnaire containing ten (10) items was administered to students and lecturers across the four (4) faculties in the University. One hundred (100) questionnaires were given out, twenty-five (25) per faculty, out of which seven (7) were given to lecturers in each of the faculties and eighteen (18) to students in the various faculties as well. Out of one hundred (100) questionnaires, eighty-seven (87) were returned, of which seventy-four (74) were found useful for the data analysis. Functionalism theory was employed in the analysis of data.

Data Presentation and Analysis

The data gathered in the course of the study was carefully harnessed and analyzed based on the theory of Functionalism which has to do with the extent to which a given activity promotes or interferes with the maintenance of a system.

Demographic Information of Respondents

The sex and age were the only demographic information that was taken from the respondents. The essence is to ascertain the gender and the age range of the respondents so as to validate the data in relation to the respondents. This is because the study does not require detailed demographic information. The total number of males that took part in the study is forty-two (42) while the total number of females is thirty-two (32). The implication is that, both genders were satisfactorily represented. Thus, there is gender balance.

Age is another factor that is important to this study. Issues about language almost always depend on the age factor. The age range of respondents is between fifteen (15) and above fifty (50). It means that there is no gap within the age groups, that is, all the useful, productive age groups were fully represented in the study. The level of the student respondents was taken not for anything significant but to enable one get across all the age groups. Thus, the different age groups were captured between 100 level – 400 level. Secondly, it was easier to distribute the questionnaires when the students were taking their various faculty courses, hence the uniformity of levels across faculties.

S/N	FACULTY	LEVEL	NO. OUT	NO. RTND
1	ARTS & EDUCATION	200	18	16
2	SOCIAL & MANAGEMENT SCIENCES	300	18	14
3	SCIENCES	400	18	16
4	AGRICULTURE	100	18	18
TOTAL			72	64

Table 2: Distribution of Questionnaires (lecturers)			
S/N	FACULTY	NO. OUT	NO. RTND
1	ARTS & EDUCATION	7	7
2	SOCIAL & MANAGEMENT SCIENCES	7	5
3	SCIENCES	7	5
4	AGRICULTURE	7	6
TOTAL		28	23

As clearly stated in Tables 1 and 2, a hundred questionnaires were given out to students and lecturers but eighty-seven (87) were returned and seventy-four (74) were found useful for the analysis of the data.

Data Analysis

This paper is an attempt to find out if the world can do without signs in communication, since prominence is given to the verbal form of language. Sign language may not necessarily be the use of signs but it uses more of signs and gestures. People tend to live their daily lives without actually acknowledging the place of signs and symbols in communication. We encounter signs and symbols on daily basis in our interaction with the world especially in public domains yet sign language is seen as inferior to spoken language. Thus, this paper regards the use of signs as a part and parcel of sign language.

The first item in the questionnaire which has to do with what sign language is, received an interesting response. 73% of the respondents agreed that any language that uses visual modality to convey meaning is a sign language including non-verbal communication. Thus, the respondents view road signs, laurels, uniforms, traffic lights, gestures, etc., as part of sign language.

The implication is that virtually all the respondents are conversant with what signs and symbols are, which is attributed to sign language. It means that there are other significant modes of communication other than spoken and written forms and these tend to be in close association with sign language. That is, sign language is not strange to the respondents. They all have a peripheral idea about sign language but not its complexities.

Concerning the level of importance of sign language in society, some of the respondents are of the view that life can go on smoothly without signs and symbols. Signs and symbols are of no importance to the society that is free of deaf and dumb persons. Precisely, 87% strongly disagree that sign language is very important. The respondents think that their lives are not connected to sign language in any way. Better still, sign language is not involved in their day to day activities since they can speak. That is, they strongly disagree on the importance of sign language while an insignificant percentage which is about 13% of the respondents agree that sign language is very important.

Other respondents think it is important because of the signs, symbols, gestures and the likes encountered on daily basis in their interaction with the world. Driving around town, one comes across road signs that give direction as to know when, where and how to go. The sea sign is indicative of a vehicle that stopped on the road as a result one thing or the other. As a matter of fact, when a vehicle breaks down, the driver makes attempt to put it in order by calling a mechanic or moves away to look for solution. Nobody expects him/her to stand there and continue to flag down vehicles to give such information for as long as the vehicle remains there. The sea sign, for instance, speaks to everyone driving along a road. Little wonder, the road signs are taught before one is allowed to handle the steering, hence their importance.

91% agree that spoken language is the primary mode of human communication while 8% are of the opinion that sign language is the primary mode. There is no argument as to which of the modes is primary. It is obviously the spoken is the primary mode of communication but life does not leave a vacuum. So, if there are communication barriers, signs take the stage. This implies that communication with signs is possible for everyone pending on the situation a person finds himself.

Some respondents identified the spoken form of language as being superior to sign language since the spoken form is the primary mode of expression. Others observed that both are forms of communication and that no one is superior to the other. This is similar to prescriptive linguistics where some languages were seen as being superior to others. Today, descriptive linguistics has taken over, thus the question of superiority does not exist anymore. The spoken form and the sign form are both distinct and they perform communicative roles that are unique.

Humans, consciously and subconsciously are always striving to make sense of their surrounding world. Symbols such as gestures, signs, objects, signals and words – help people understand that world. They

provide clues to understand experiences by conveying recognizable meanings that are shared by societies. Signs and symbols come to play here as society searches for universal communication modes.

Examining the response to this item further reveals that people have a negative notion about sign language. They seem to think that it is the language for imbeciles, language of the down trodden in the society. Thus, the exhibition of negative attitudes. As a matter of fact, they are not willing or do not want to have anything to do with signs and symbols in communication, since such communication is perceived to be sign language.

People tend to have stigma towards sign language just as the deaf and dumb are stigmatized. The stigma towards signed languages is based on assumptions, from attitudes and beliefs that signed languages are not “real” or full languages. But the tools of linguistics reveal that signed languages are just as complex as spoken languages: they have phonetics, phonology, morphology, syntax & semantics. Furthermore, neural imaging has revealed that users of sign languages recruit the same areas of the brain for producing and understanding language as users of spoken languages do.

Safety signs are crucial in any work environment. The primary importance of displaying safety signs is to prevent emergencies and ensure staff and visitors are well aware of the possible dangers and hazards ahead in certain situations and/or environments. Without signs, many employees would lack the necessary direction in times of crisis and employers might find themselves in significant legal difficulties, if any accident arises as a result.

Conclusion

Language is constantly evolving as societies create new ideas, in this age of technology. Even while it constantly evolves, language continues to shape our reality. Symbols tend to appear in clusters and depend upon one another for their accretion of meaning and value. They are not a language by themselves: rather they are devices by which ideas too difficult, dangerous or inconvenient to articulate in common language are transmitted in common ways. It does not appear possible to compile discrete vocabularies of symbols because they lack the precision and regularities present in natural languages that are necessary for explicit definitions.

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Workplace Harmony and Organizational Productivity of Selected Deposit Money Banks in Anambra State

By

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ABSTRACT

This study examined the relationship between workplace harmony and organizational productivity of selected deposit money banks in Anambra State. Four hundred and thirty-five (435) employees comprised of senior and junior staff of selected deposit banks were sampled in the study. The study adopted a correlation research design using a structured questionnaire to elicit data. Pearson's Product Moment Correlation was used to test the hypotheses. The result revealed that there is a positive and significant relationship between mutual trust and organizational productivity. It was also found that there is a positive and significant relationship between communication and organizational productivity in selected deposit money banks in Anambra State. The study concludes that workplace harmony adopted by banks significantly influences their productivity in various dimensions. Based on findings, the following recommendations were highlighted: banks need to adopt a harmonious work environment that enhances the employees' skills and makes them have a sense of belonging; constant training and development of employees should be encouraged to enhance their knowledge in tune with the need of the environment.

Keywords: workplace harmony, mutual trust, communication, organizational productivity

INTRODUCTION

In the fast-changing organizational environment, organizations are turning their focus to the human intellectual management and information system resources as a driving force behind their success and the sustainability of their competitive advantage; they are also

encouraging innovation practices (Altamony et al., 2012). To some extent, these factors may contribute to the progress of the organization as well as determine whether they achieve their goals irrespective of the constituted workforce. Indeed, building a productive working environment is an quintessential part of every organization to survive and sustain in any business world. This is because the primary objectives of most organizations are to maximize productivity and provide a flexible work arrangement that benefit both the employer and employees' who are committed and hence reduce labour turnover (Adim & David, 2020). Thus, every organization strives to develop a committed and conducive workforce that would facilitate effective and significant productivity by adopting the optimal methods to ensure employee retention (Yew; Riveros & Tsai, 2013).

Given the competitive nature of banking sectors in Nigeria, there is a continuous struggle to stand out among others by inventing new service delivery strategies, good customers' relationship and minimising the cost of change implementation. Despite the good number of efforts situated by the management of the banks, the poor survival rate of the workforce shows lack of a fundamentally valid framework of how to employ and manage organisational productivity (Igudia, 2021). Unfortunately, there is dearth of literature that examine the impact of organizational climate and work productivity among financial institution in Nigeria to the best of the researchers knowledge. Consequently, this study wants to bridge the lacuna in the literature within the Nigeria context.

Organizational productivity defines the magnitude of output that results from performance behaviours as well as external contextual and opportunity factors of an organization (Zhang, Liao, Li & Colbert, 2020). It is an organizational asset that can be equated to progress and success (Asio, 2021). Specifically, this productivity significantly facilitates satisfaction to the employees, the organization, and other stakeholders. Thus, it is considered an essential component of any successful organization. Although organizational productivity may be viewed from different perspectives, it depends largely on its human factor and the physical work environment or arrangement. Research has opined that work-related productivity is measured in two ways such as subjective and objective measures (Farooq & Vij, 2018; Vij & Bedi, 2016). Subjective measures of productivity are capable of making cross-industry comparisons but can have problems with common method bias, social desirability, and supervisor biases (Vij & Bedi, 2016). The use of subjective measures of productivity is preferred over objective measures because managers can use the relative measures of performance.

Improving work productivity is one of the important objectives of the organization because higher levels of employee productivity can be beneficial to both its employees and organizations (Hanaysha, 2016).

Given these reasons, workplace harmony is an essential component of organizational turnout which facilitates positive growth and job involvement (Irawan & Sari, 2021). Although this may not be absolute in all organizations, other factors may play a subtle role in influencing the outcome of an organization depending on its goals. For example, literature has demonstrated that having a motivated, involved, and committed workforce is an important asset to an organization's success that helps in maintaining employee motivation, commitment, and job involvement which is likely to improve productivity and lower turnover rates (Fossey, Harvey & Srivastava, 2013). Given the unstable global business workforce precipitated by the global pandemic which has continued to ravage Nigerian's economy and its working environment (Asio, 2021), there is a considerable need to explore factors that could improve work productivity to attract investors.

Interestingly, building and maintaining a harmonious work environment has been underlined as a high priority in achieving a productive outcome in the organization (Leung & Brew, 2009). A harmonious workplace that guarantees the satisfaction of workers' and employers' aspirations is essential for enhanced organizational productivity and growth (Elangovan & Xie, 2000). It is critical to the success of an organization, especially the bank sector, managers of both the private and public sectors are faced with the challenge of ensuring workers' satisfaction, commitment, and loyalty, increasing productivity level, and most importantly, sustaining harmony and mutual trust in the workplace (Adim et al., 2020). Organizations that rely on the material of remunerative control tend to use monetary rewards and fringe benefits in harnessing and controlling workers' behaviour, while organizations that normative rely on the use and manipulation of symbolic representations and rewards in the control of workplace behaviour usually adopt a mix of the remunerative and symbolic control.

In other words, a disharmonious work environment presents itself in the form of disagreement or opposition to particular ideas, interests, persons, or state of things and indicates a level of incompatibility in the society, organization, or group (Adim et al., 2020). However, workplace disputes are now becoming commonplace in most organizations today. Although not planned, but it has led to the collapse of several once viable organizations in the world today particularly in Nigeria. Securing

effective organizational productivity is not one of those easiest things to do, but with a harmonious work environment, there is the possibility of attaining it. Given the above submission, this present study wants to bring to the fore the possibility of securing efficient and effective productivity through workplace harmony.

Statement of the Problem

The current competitive workforce in Nigeria has provided an advantage for employers and employees to establish a positive relationship in order to achieve their organizational goals. Consequently, this has empowered the employees to become more conscious of their rights and privileges in the collective contribution to the organizational productivity (Nwinyokpugi, 2015). This recent awareness in the organizational workforce has become a spotlight in increasing managerial process and the environmental condition of both the employers and the employees. The trend appears to be affecting workplace harmony since the frequency of management-workforce confrontations is rapidly increasing in many areas of the global economy. It is noteworthy that the workplace environment plays a crucial role in the lives of employees. Hence, organizations need to reconfigure their workplace in a manner that will allow employees to feel as an integral part of the organization (Amah and Ahiauzu (2013). Unfortunately, the inability to offer a pleasant and harmonious work environment has resulted in several issues and losses for both the company and its employees. Disrespect, continuous abuse, theft, gossiping, sexual harassment, absenteeism, lack of dedication, organizational sabotage, low worker morale, and frequent or excessive breaks are examples of such issues. As a result of these, the damages to the workplace environment have become immersed to the extent that the workplace is experiencing low productivity, poor level of goal attainments, lack of cohesiveness, poor communications, and poor growth level. Essentially, these have led to disharmonious workplaces that sometime inhibit the effective of organisation. This is perhaps due to unprofessional behaviour of managers of such unions that are responsible for workers' rights and privileges at work who do not play to the rules that guide workplace affairs. As such, it is our focus in this paper to find out how organizational productivity can be developed effectively through workplace harmony.

Objectives of the Study

The broad objective of this study is to determine the nature of the relationship between workplace harmony and organizational productivity

of selected deposit money banks in Anambra State. However, the specific objectives are to;

- Ascertain the nature of the relationship between mutual trust and organizational productivity of selected deposit money banks in Anambra State.
- Determine the nature of the relationship between communication and organizational productivity of selected deposit money banks in Anambra State.

Research Questions

In the context of the above objectives, the following research questions are raised for the study;

- What is the nature of the relationship between mutual trust and organizational productivity of selected deposit money banks in Anambra State?
- What is the nature of the relationship between communication and organizational productivity of selected deposit money banks in Anambra State?

Research Hypotheses

In the context of the research questions above, the following null hypotheses are formulated to give direction to this study:

H₀¹: mutual trust has no significant positive relationship with organizational productivity of selected deposit money banks in Anambra State.

H₀²: Communication has no significant positive relationship with organizational productivity of selected deposit money banks in Anambra State.

REVIEW OF RELATED LITERATURE

Concept of Workplace Harmony

Workplace harmony refers to a friendly and cooperative agreement on working relationships between employers and employees for their mutual benefit (Osad & Osas, 2013). According to Puttapalli and Vuram (2012),

workplace harmony is concerned with the relationship between management and employees with respect to the terms and conditions of employment and the workplace. In effect, it is a situation where employees and management cooperate willingly in pursuit of the organization's aims and objectives. A positive work atmosphere is essential to a company's success (Nkiinebari et al., 2014). Managers in both the commercial and governmental sectors confront the task of guaranteeing worker happiness, dedication, and loyalty while also boosting productivity. Workplace harmony in its ideal form presupposes an industry in a condition of relative equilibrium where the relationship between individuals and or groups is cordial and productive. Workplace Harmony can only come out of what is known as "organizational Democracy" a situation in an organization where to a larger extent, the participation of workers is adequately sought in the process of making decisions that will determine the conditions of their working lives. Workplace harmony enhances labour productivity and in turn improves performance in organizations, achieving economic growth, and enhancing living standards and quality of life. It creates a peaceful working environment conducive to tolerance, dialogue and other alternatives (to strike) means of resolving workplace or labour disputes (such as negotiation, mediation, arbitration, conciliation, and litigation or court adjudication). This creates a high level of employee satisfaction.

Concept of Trust

Trust is the "willingness of an individual or group to be vulnerable to the actions of others based on the expectation that they will perform a particular important action, irrespective of the ability to monitor or control performance" (Mayer, Davis, & Schoorman, 2007, p.712). Trust helps you to develop effective individual, intergroup, and cross-group relationships and provides the foundation for a minded set that can lead to greater levels of performance, as well as collaboration, within your organisation (Jones & George, 1998; Poon, 2006). This mindset therefore includes a sense of obligation to cooperate with others, a high degree of self confidence and confidence in one's colleagues, a willingness to support one's colleagues, willingness to subjugate one's personal needs for the greater good. Trust can therefore be demonstrated in two levels namely trust in self which focus on task oriented that is competencies and the other level is trust in others which refer to the relationship. To have a greater performance requires an everyday feeling or level of trust in an organisation. Failure to these, lead to a low trust climate and low performance in an organisation. This therefore end up with employees feeling angry and betrayed because their expectations of the

organisation's toward them are not met. Trust is being vulnerable to someone even when they are trustworthy; trustworthiness is the characteristics or behaviours of one person that inspire positive expectations in another person, and trust propensity being able to rely on people. Once trust is lost, by obvious violation of one of these three determinants, it is very hard to regain. Trust should exist among all the people in the organisation especially the hierarchical relationship. There should be a relationship between the supervisor and the peer, also between co-workers and the entire stakeholders of the organisation. To create trust and gain trust is quiet challenging but not impossible. Since organisation exist to successfully satisfy stakeholders there must be a pro relationship between all the levels in the organisation and also quality human resource practices, leadership style, human resource policies in managing to be able to work effectively and achieve greater performance.

Concept of Effective Communication

It is often said that employee relations refer to how the human resources department communication with its employee. If there is effective interaction between the employer and employees, it will become a huge impact on the organisation's performance, enhancing its productivity. Normally, the department of human resources assists in handling employee relations by identifying and solving problems at work. Besides that, the human resource department should measure and increase the employee's morale, and the conflict in the organisation can also be reduced when the employee relations are positive. Based on Schroth (2019), communication skills involve the content and expression of social interaction. This involves the use of proper words and phrases, as well as the appropriate tone of voice, facial expressions, body language, and direct eye contact with the audience (Schroth, 2019).

In a similar, Kumar and Manjula, (2017) stressed that transparency in communication is crucial for a healthy employee-employer relationship as it initiates group activities in the workplace, it helps an employees to develop a friendly approach with his/hercolleagues. Communication in an organization deals with the extent of exchanging information among employees to aware of the important aspects of the organization which includes institutional policy, strategy, procedures, and manuals that help them to understand what is expected of them and how they are going to accomplish their duties.

In line with this assertion, Sequeira and Shriti (2015) in a study confirmed that well-informed employees are much higher in performance

than those ill-informed employees. Furthermore, research carried out by Hasen and Salman (2016) asserted that there is a positive and significant influence of effective communication on employee performance as effective communication is an essential tactic that has been performed which can extract the ultimate of the employee to help both organizations and the employees to achieve their ultimate goal.

Organizational Productivity

Organizational productivity remains a primary element for success in most organizations (Haenisch, 2012). Organizational productivity can be defined as a measure of the quantity and quality of work done, considering the cost of the resources used (Mathis & Jackson, 2010). It shows whether the activity of an organization is efficient and effective (Saxena, 2014). In some cases, the terms productivity, efficiency, and effectiveness are used interchangeably by researchers who sometimes alternate their meanings. For example, Igudia (2021) stressed that work productivity measures the efficiency and effectiveness of production within an organization.

Similarly, Igudia (2021) argued that work productivity encompasses the capacity or aptitude to maximise the use of physical resources, human resources, and other factors at lower production costs, increase market expansion, increase employment and, a rise in living standards. In this context, the human resource appears to be the most driving force of productivity needed to achieve the desired goals and objectives of any organisation as it is the only factor that gives effect to organisational change and guarantees the survival of the organisation using other resources (Igudia, 2021). Although other factors may play a significant role in determining productivity, human resource coordinates all other factors for the accomplishment of organisational goals. As opined by Tavakolia (2010) motivation, creativity, innovation, competitiveness, activity cost reduction, the improvement in the quality of activities, work time reduction, job satisfaction, and the spirit to achieve goals positively affect the level of productivity. Regardless of the workforce situation, every activities of an organization are design to achieve the set objectives (Ho, 2008). Employees' inputs may contribute best output for the organisation with great impact on the total production, sales, profit, progress and market position of the company in the market (Igudia, 2021).

In the same vein, economists define productivity as the relation between output which consists of a given product, service, and the amount of

both, and input which consists of resources used in the product creation process, such as labor, materials, energy. Productivity could be seen as a the efficiency of a person, system, machine, factory, etc., in converting inputs into outputs. There are many different ways of measuring productivity. For example, factory productivity might be measured based on the number of hours it takes to produce a good, while in the service sector productivity might be measured based on the revenue generated by an employee divided by his/her salary (Ibid). In general, productivity is a measure of production efficiency; how much output is obtained from a given set of inputs (Al-Abri, 2017).

In the context of service delivery firms like the financial institution sector, the firms invest more on their working force to sustain long term relationship with customer to provide service satisfaction (Khosa et al, 2016). Thus, lack of adequate workplace harmony may affect workers productivity which inturn affect their attitude to the job and customer's relationship.

Theoretical Framework

This study is anchored on the theoretical framework of systems management theory developed by Jacqueline and Francesco (2010). The theory asserted that businesses consist of multiple components that must work in harmony for the larger system to function optimally. The organization's success, therefore, depends on synergy, interdependence, and interrelations between subsystems. According to the theory, employees are the most important components of a company, and departments, workgroups, and business units are all additional crucial elements for success. According to this theory, managers should evaluate patterns and events within the organization to determine the best management approach. They need to collaborate and work together on programs to ensure success. Organizational success depends upon interaction and interdependence between the subsystems, synergy between the sub-systems, and interaction between internal components (closed system) and external components (internal system).

The systems approach implies that decisions and actions in one organizational area will affect other areas. For example, if the purchasing department does not acquire the right quantity and quality of inputs, the production department would not be able to do its job. This approach recognizes that an organization relies on the environment for essential inputs. Further, the environment serves as an outlet for its outputs.

Empirical Review

Opara and Mbani (2022) examined the relationship between avoidance management strategies and workplace harmony in oil servicing firms in Rivers State. The study adopted cross sectional and ex-post facto design. Data were generated by quantitative and qualitative method. The study used purposive sampling techniques. A total population of 330, sample size of 321 was determined using Yaro Yamane's formula at 0.05 level of significance. Also, 321 copies of questionnaire were distributed to the respondents, while 317 copies were completed and retrieved. The instruments were validated with reliability above 0.7 co-efficient, using Cronbach Alpha technique. The reliability coefficient analysis was avoidance ($\alpha = .882$), accommodating ($\alpha=878$), mediation ($\alpha=866$), infrequent strike ($\alpha=884$), mutual trust ($\alpha=870$), management workers cooperation ($\alpha=882$) and organisation culture ($\alpha=887$). Three hypotheses were raised which was tested with Pearson Product Moment Correlation. From the findings, the concept of avoidance conflict management strategies creates positive impact on infrequent strike, mutual trust and management workers cooperation. In conclusion, avoidance strategies have significant influence on the workplace harmony of the oil servicing firm. Based on the findings and conclusion, this study contributes to the knowledge that effective conflict management encourages enthusiasm, boosts morale, and stimulates individual and organizational development; while ineffective conflict management produces more conflict and destructively effects the whole organization. It could be recommended that oil producing firms in Port Harcourt should endeavor to adopt and use mediation as a means of settling organizational conflicts to achieve lasting harmony. Also, workers or employees should do their best to avoid confronting organizational matters in such a way that it will result to management- worker non-cooperation.

Mojaye and Dedekuma (2015) conducted a study on the influence of communication on Industrial Harmony in the Civil Service of Delta State Nigeria. The study tries to establish a link between communication and good industrial relations and industrial peace. The study focused on the Delta State Civil Service and attempted to find out the role that effective communication had played in ensuring industrial peace since the advent of the state. Questionnaires were administered to 325 civil servants out of which only 299 were useful. One of the research questions was whether there is any relationship between industrial harmony and effective communication. The study showed that while effective communication may not necessarily lead to good industrial relations but it may engender industrial peace.

Ukonu and Gideon (2016) investigated the role of the national industrial court in sustaining harmony in the Nigerian health sector: a case of the University of Abuja teaching hospital. The main objective is to examine the role National Industrial Court (NIC) has played in sustaining harmony in Nigeria health sector while the specific objective is to examine the role National industrial Court has previously played and can still play futuristically to enhance the desired industrial harmony in University of Abuja Teaching Hospital, the entire health sector and other sectors of the economy. This study concludes, that the role of the National Industrial Court in sustaining industrial/organizational harmony especially in the health sector cannot be over emphasized. Industrial harmony is requisite to economic growth, development, and industrial advancement in any economy. As such, whether in the instances of inter-union disputes or the demesnes of employee and employer relationships, NIC has risen to the challenge to extinguish the rising tensions that might have escalated out of proportion in UATH as well as other institutions.

Akuh (2015) investigated industrial harmony for academic excellence: an imperative for a productive educational system in Nigeria. The objective of the study was to discuss the imperative of industrial harmony for academic excellence and a productive educational system in Nigeria. To ensure harmonious industrial relations, the leader of every institution will need to encourage, open and frank discussion of the institution's problems with the subordinates; seek the opinion of those doing the institutional job i.e. the staff; explain their discussion to those who have to carry them out; recognize the contributions of all involved in the institutional job; set collaborative goals to encourage teamwork instead of autocracy and listen to rather than talk at their subordinates. In conclusion, an effective and understood grievance procedure that is simple, straightforward, flexible, proactive, responsive, devoid of protocol, and time conscious is central to harmonious industrial relations. Above all, promoting visionary and disciplined leadership within our educational system is a key to a conducive environment for learning devoid of corrupt practices and indiscipline.

Sholokwu and Olori (2016) investigated management practices and industrial harmony in oil and gas firms in Rivers State, Nigeria. The study examined the relationship between Management Practices and Industrial Harmony in the Oil and Gas Firms in Rivers State. A sample size of 343 was derived using the Taro Yamane formula from the population of 2400 respondents that consist of managers and employees in twelve oil and gas firms in Rivers State. A descriptive survey method of research was adopted and data were collected through a questionnaire.

The demographic data were analyzed using simple percentages and Mean scores were used in the analysis of items on the questionnaire. The Spearman's Rank Correlation statistical method was used to test the seven hypotheses at 0.01 level of significance which was facilitated by Statistical Package for Social Sciences (SPSS) software. The results revealed a significant relationship between Management practice and Industrial harmony. It was also found that organizational culture significantly moderates the relationship between managerial practices and industrial harmony in Oil and Gas Companies in Rivers State. Therefore, the study concludes that Management practice affects Industrial harmony in Oil and Gas Companies in Rivers State. Based on the findings, the study recommended that Oil and Gas Companies should embark on good management practices by implementing the collective agreement, reducing casualization of staff, and developing a promotion policy, to fewer incidences of strikes and grievances to attain industrial harmony. However, this research is not exhaustive; hence, it suggests that future research should be carried out on the effect of staff casualization practices on industrial harmony in manufacturing firms in Rivers State.

Nwokocha (2015) conducted a conceptual study on the title Employers and the Enhancement of Industrial Harmony in Private Sector Organizations in Nigeria. The study examines the role of employers in enhancing industrial harmony in organizations with a focus on private sector organizations in Nigeria. The paper posits that conflict is inevitable in all organizations and, as such, the employer who has the responsibility of making major organizational policies to achieve corporate objectives must play a dominant role in ensuring industrial harmony. The paper exposes some of the factors that undermine industrial harmony and productivity in private sector organizations to include leadership behaviour, lack of effective communication, work environment, and non-recognition of the trade union as a bargaining party. It further explicates that productivity and growth are not fully enhanced because of management practice of exclusionism, poor labour-management policies, and dehumanization of the work environment. As a panacea to mitigate conflict and promote a culture of harmony that will achieve the organizational goal, the study proposes that management of private sector organizations in Nigeria should fashion out a framework of joint committee/expanded collective bargaining, create a work culture that is based on collaboration and teamwork, initiate participatory management and develop and restructure an effective communication process. Instituting these measures will help to close conflictual loopholes that hinder industrial harmony and productivity in private sector organizations in Nigeria.

Mojaye and Dedekuma (2015) conducted a study on the influence of communication on Industrial Harmony in the Civil Service of Delta State Nigeria. The study tries to establish a link between communication and good industrial relations and industrial peace. The study focused on the Delta State Civil Service and attempted to find out the role that effective communication had played in ensuring industrial peace since the advent of the state. Questionnaires were administered to 325 civil servants out of which only 299 were useful. One of the research questions was whether there is any relationship between industrial harmony and effective communication. The study showed that while effective communication may not necessarily lead to good industrial relations but it may engender industrial peace.

In South Africa, Green (2016) examined the perceived influence of organizational productivity. The study employed a quantitative paradigm using a non-probability sampling technique. Data were collected from a total of 161 employees using a structured questionnaire across two different office sites in KwaZulu-Natal, South Africa. The researcher found that an association exists between organizational policies and employee benefit; organizational policies and performance appraisal; and performance appraisal and employee benefit.

Furthermore, in a case study of selected bank in Nigeria, Igudia (2021) examined the effect of organisational change on employee productivity in the banking sector. The primary data collection method was adopted employing questionnaire strategy. 102 respondents were selected as sample size. The study used the multiple regression statistical analysis through SPSS statistical package version 25 for analysis. The results showed that organisational change has a positively significant impact on employee productivity.

Similarly, Okolocha (2021) investigated the effect of job satisfaction on employee productivity of public universities in South-East, Nigeria. The researcher adopted a survey research design. Data collection was ensured through the use questionnaires distributed among academic staff of South-East States of Nigerian public universities. Regression analysis was used to test the two formulated hypotheses with aid of SPSS version 20.0. the result revealed that working condition and salary have positive significant effect on the employee productivity of public universities in South-East, Nigeria

Gap in Literature

Although there are several empirical literature that shows some promising interrelationship between performance, organizational change and employees productivity, majority of these research had been conducted outside the banking sector domain and devoid of considerable attention on workplace harmony. The existing research is well documented in the literature that dissatisfaction among employees due to inhibiting factors within the organization may adversely effect organizational productivity. However, this present study is motivated by the need to evaluate the impact of workplace harmony on organizational productivity among banking sectors in Nigeria. This study will help to close the gap and add to the existing literature on the organizational productivity with unique reference to banking sector.

Methodology

This study adopted a correlation research design. A total of four hundred and thirty-five (435) employees were selected from three different banks (First Bank plc, United Bank of Africa (UBA), and Access Bank) located in Anambra State, Nigeria. The participants were drawn from the senior and junior staff of the selected banks using a multi-stage sampling technique. The ages of the participants ranged from 18 to 70 years, with a mean age of 37.05 and a standard deviation of 10.62. They comprised 123 males and 312 females. The sample size was determine using Taro Yamane formula (1964).The instrument employed for data collection is questionnaire constructed by the researchers. In order to ensure that the instrument measure what it was designed for, content and construct validity was used to validate the instrument. Cronbach alpha was used to test for the reliability ofthe instrument at a 5% level of significance. Pearson product-moment correlation coefficient was employed for data analysis.

Data Presentation and Analysis

Test of Hypothesis One

Mutual trust has no significant positive relationship with organizational productivity of selected deposit money banks in Anambra State

Table 1: Pearson r on Mutual trust and organizational productivity

Variables	N	Mutual Trust	Organizational Productivity	Remark
Mutual Trust	435	1.00	.141	Positive Relationship
Organizational Productivity	435	.141	1.00	

The result in Table 1 above showed that there is a significant positive relationship between mutual trust and organizational productivity at $r = .14$, $p < .05$. Thus, the first hypothesis of the study was hereby rejected. By implication, this means that as a positive mutual trust increases, employees productivity level also increases, hence, improving employees' job competence, commitment, and general organizational relationship.

Test of Hypothesis Two

H₀₂: Communication has no significant positive relationship with organizational productivity of selected deposit money banks in Anambra State.

Table 2: Pearson r on Students' Communication and organizational productivity of selected commercial Banks in Anambra State

Variables	N	Communication	Organizational Productivity	Remark
Communication	435	352	.322	High Positive Relationship
Organizational Productivity	435	.322	352	

The inspection from Table 2 above revealed that there is a significant positive correlation between channel of communication and organizational productivity of selected deposit money banks in Anambra State at $r = .32$, $p < .05$. for this reason, the second hypothesis of the study was rejected. This indicates that proper channels of communication between the management and employees will increase organizational productivity of deposit money banks in Anambra State. Similarly, the

stronger the communication in an organisation the higher the productivity level which may result to a remarkable success in a competitive working environment like banking sectors in Nigeria.

Summary of the findings

1. The findings revealed that mutual trust has a significant positive relationship with organizational productivity of selected deposit money Banks in Anambra State.
2. It was also found that communication has a significant positive relationship with organizational productivity of selected deposit money Banks in Anambra State.

Conclusion

The study in the light of the broad and specific objectives which determine the nature of the relationship between workplace harmony and organizational productivity of selected deposit money Banks in Anambra State; with the specific objectives to ascertain the extent to which mutual trust and communication have a significant positive relationship with organizational productivity of selected deposit money Banks in Anambra State. The research study concludes that the nature of workplace harmony adopted by banks significantly influences their productivity in various dimensions. The obvious conclusion is that conformity and compliance with the harmonious work practices will aid the bank competitiveness while involvement in disharmonious conduct may spell distress or lead to the bank's total collapse.

Based on the findings, the following recommendations were made:

1. The bank should adopt a harmonious workplace that enhances the employee's skills and make them feel belonged.
2. Constant training and development should be encouraged to enhance their knowledge and to still be in tune with the need of the environment.

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The Opportunities and Challenges of the Fourth Industrial Revolution in Management Science

By

Florence Egunor Omonzejele & Cyril Obiora Agu

Abstract

This study was set out to review, theoretically, the opportunities and challenges of the fourth (4th) industrial revolution in Management Science with particular reference to the Nigerian economy and how the implications of the disruptive technologies can be driven to enhance the economic situation in the country. They study revealed that while Nigeria has made considerable efforts to adapt the technologies of the 4th industrial revolution, she is still far behind in keeping pace with its transformations. The study concluded that the speed of the current technological breakthroughs, along with its transformations, in all aspects of human life certainly shows the emergence of a 4th industrial revolution. Therefore, a change in the structure of the Nigerian economy is needed to adapt to these transformations. The study recommended, among others, a complete review of the curricula of the different levels of education in Nigeria (from primary and secondary schools to all the various forms of tertiary institutions) to include skills in Management Science – skills that form the bedrock of the 4th industrial revolution.

Keywords: 4th Industrial Revolution, Disruptive Technologies, Management Science

Introduction

When Great Britain first brought about technological changes in the 1760s by converting her economy from an agrarian and artisanal to one characterized by industrialization and innovation, the stage was set for a series of industrial revolutions: the first industrial revolution between 1760 to 1840; the second industrial revolution between 1870 and 1914; the third industrial revolution between 1914 and 1950; and the fourth industrial revolution which began in 2014 (Schwab, 2016; Ajah & Chigozie-Okwu, 2019; and Iberdrola, 2022). The invention of each

industrial revolution was a hallmark. Every successive industrial revolution was a refinement of the previous one and unique in nature. However, the 4th industrial revolution struck every living being on earth with awe, as it turned the entire globe into the smallest bedroom that can be accessed at the speed of light.

Though, it is said to be built on the third (3rd) one, the 4th industrial revolution cannot be compared to any of the three previous ones. It has been described as “unprecedented”, and “fusion of technologies.” Its changes have been seen to “disrupt every sphere of human living - physical, digital or biological” (Schwab, 2016; and Xu, David & Hikim, 2018). The disruptive technologies of the 4th industrial revolution include Artificial Intelligence (AI), Internet of Things (IoT), Robotics, Nanotechnology, Three-Dimensional (3D) Printing, Bio-technology, Energy Storage, Material Science, and Quantum Computing (Change, 2017; and McGinnis, 2020). These technologies, on the one hand, come with the potential to increase the level of income globally and raise the standard of living for populations all over the earth (Schwab, 2016). On the other hand, they present challenges for developing economies like Nigeria, that find it difficult to work out the mechanism to key into the 4th industrial revolution .

Report shows that Nigeria has continued to face huge developmental challenges despite the significant improvements the country has made in recent times (World Bank, 2020). These developmental challenges ranging from unemployment, inequality in terms of income and opportunities, to lack of diversification of the economy and governance issues can only be solved by embracing the technologies of the 4th industrial revolution. It is the need for Nigeria to attain sustainable economy by harnessing the advantages of the 4th industrial revolution that this study was carried out.

No doubt, there are many studies, locally and international, on the opportunities and challenges of the 4th industrial revolution (Omoh, 2015,

Schwab, 2016; Scheel, 2016; Ajah & Chigozie-Okwu, 2019, Onyeizugbe, Nnadi & Enaimi, 2019; Trendov, Veras & Zeng, 2019, Groncharov, 2020; Ladimeji, 2020; Obijole, 2020, Zervoudi 2020, Bode-Harrison, 2021; Change, 2022 and Iberdrola, 2022), but very few known studies address the implications of the 4th industrial revolution in the field of Management Science, with particular reference to the Nigerian situation. Thus, the objective of this theoretical study was to carry out a critical examination of the implications of the disruptive technologies of the 4th industrial revolution in the field of Management Science, with a view to finding the way forward for the overall growth and development of the Nigerian economy.

Evolution of Industrial Revolution

The word 'revolution' carries the idea of a dramatic, sudden, radical or complete change. While "industrial" relates to the industry or "characterized by highly developed industries" (Merriam Webster Dictionary, 2022). Simply put, industrial revolution is a remarkable change characterized by highly developed industries brought about by significant technological innovations and advancements.

Vries (2008) defined industrial revolution as the "emergence, during the transition from pre-industrial to an industrial society of modern economic growth, that is a sustained and substantial increase of GDP per capital in real terms". It is a period of major innovation and industrialization resulting from technological changes that fundamentally transformed the society in terms of its economy, way of working and standard of living (Schwab, 2016). In pre-industrial times, man was content with subsistence farming, using crude farm instruments and manual labour in a communal setting. As time went by, man saw the need to expand in knowledge through critical thinking in order to achieve a better and improved method of doing things. This gave rise to innovation/invention and the birth of the first industrial revolution which became one of the major forces of change in the 19th century. As a result, western

civilization leading to the industrial era that shaped the modern world was actualized. No wonder Zeidan (2022) referred to industrial revolution as a process of economic transformation than as a period of time in a particular setting.

As noted by Obijole (2020), industrial revolution often heralded disruptions in the operations of markets and economies, which are deviations from the status quo and are not always negative. This was the case with the first industrial revolution which began in England in about 1750 – 1760 and lasted to sometime between 1820 and 1840, during which it spread to other parts of Europe (Mohajan, 2019). It was an era of significant innovation as notable inventions like the steam engine, the spinning jimmy and the telegraph brought about mechanized production and social change (Schwab, 2016). There was a transition from human/animal labour technology into machinery leading to among others, improved efficiency in raw material usage, labour and overhead expenses (Mohajan, 2019). Despite the breakthroughs of the first industrial revolution, it was said to lack scientific base, giving way to another revolution known as the technological revolution – the second industrial revolution (Mokyr, 1998).

The second industrial revolution began in American between 1870 and 1914, with the invention of combustible engine, electricity and light bulb which brought about social, cultural and economic changes (Mokyr, 1998; and Schwab, 2016). It was characterized by urbanization and rapid territorial expansion which transformed the United States and some other parts of the world including China (Engleman, 2022).

The third industrial revolution, known as “Digital Revolution”, began in the late 1900s and was characterized by the spread of high-level automation and digitalization through the use of electronics, computer/internet facilities, Programmable Logic Controllers (PLCS) and robots (Ajah & Chigozie-Okwu, 2019; and Ward, 2019). With the dawn of the 21st century, a more aggressive and far-reaching industrial

revolution appeared in the world scene which, in many ways, was quite different from the previous industrial revolutions – the 4th industrial revolution.

The Fourth Industrial Revolution

Klaus Schwab was the first to describe the kind of technological change of the 21st century as the fourth (4th) industrial revolution. Though Schwab (2016) acknowledged the 4th industrial revolution as deriving its foundation from the third, he explained beyond all reasonable doubt that it was distinct, and not a continuation of the third one. He noted that the 4th industrial revolution was occurring at an “unprecedented speed, evolving at an exponential rather than a linear pace, and disrupting almost every industry in every country of the world, with a fusion of technologies that is blurring the lines between the physical, digital and biological spheres”. With these characteristics of the 4th industrial revolution manifesting at the same time, it could rightly be said that it was indeed unlike any previous industrial revolution. The 4th industrial revolution has been referred to as “innovation based on combination of technologies” and characterized by what is known as “cyber-physical systems” (Change, 2017; Xu *et al*, 2018; and Ajah & Chigozie-Okwu, 2019). Schwab’s view about the emergence of the 4th industrial revolution has been supported by many scholars (Inwalomhe, 2018 in Ajah & Chigozie-Okwu, 2019; Xu *et al*, 2018; and Goncharov, 2021).

Despite the strong arguments made by advocates of the 4th industrial revolution, researchers like Moll (2021) posited that the 4th industrial revolution was yet to come. He argued that a long-term socio-economic, cultural and technological changes, at a fundamental or structural level, must characterize an industrial revolution. However, Iberdrola (2022) emphasized that with the appearance of smart factories and online production management, there is no better way to describe the rise of a new industrial revolution – the 4th one.

In view of the far-reaching effects of the disruptive technologies of the 4th industrial revolution, one cannot deny its emergence and existence. One can only think of fitting into the 4th industrial revolution by a complete understanding of the use of its evolving technologies. It is only then that one can make good use of the opportunities of the 4th industrial revolutions.

Technologies of the 4th Industrial Revolution

Schwab (2016) listed Artificial Intelligence (AI), Robotics, Internet of Thing (IoT), Three-Dimensional (3-D) Printing, Nanotechnology, Biotechnology, Materials Science, Energy Storage and Quantum Computing as major technologies of the 4th industrial revolution, bringing about unlimited breakthroughs, with no historical precedent. Some of these technologies are briefly discussed below:

Artificial Intelligence (AI): This is the ability of a computer to perform tasks required by human intelligence and discernment. Such intellectual tasks include decision making, problem solving, perception, understanding/translating human languages (Copeland, 1993; and Findler, 2007). AI can be applied in all fields of human endeavour. Though Moll (2021) argued that AI was a technology associated with the invention of the 3rd industrial revolution, Zvika Krieger in Schwabs (2016) asserted that as AI began to impact the workforce and automation replaced existing skills, there would be an increased need for emotional intelligence, creativity and critical thinking. Hence, AI forms part of the evolving technologies of the 4th industrial revolution.

Robotics: This is a specialized branch of automation and is closely associated with AI. Robotics technology has to do with the design, construction and use of machines known as robots to perform tasks that are traditionally carried out by human beings (Schreiber, 2022). Robotics is constantly evolving and robots have been specifically designed to interact physically with humans in collaborative environment (Iberdrola,

2022). Robots help in performing repetitive and dangerous tasks, thus saving the lives of workers in manufacturing industry.

Internet of Things/Internet of System: Change (2022) referred to Internet of Things (IoT) as a network of interconnected smart devices that allow each separate device to interact (send or receive data from other devices on the network). It is designed to establish a connection between the physical and digital worlds (Iberdrola, 2022). Internet of Systems (IoS) refers to business-owned systems that can collect data from IoT networks to make an independent business such as in marketing and sales. Schwab (2016) opined that IoT describes everyday items such as medical wearables that can monitor users' physical conditions. Examples include blood pressure, electrical activity of the heart, to cars and other tracking devices connected to the internet and identifiable by other devices. IoT calls for decentralization of basic leadership, empowering continuous reaction as an entire organization is interconnected and companies could be connected with one another (Islam, Hashin Jantan & Rehman, 2018). IoT has a wide range of uses, from agriculture and manufacturing to healthcare. All of these are leading humans towards a better-connected lifestyle. IoT and IoS make up the "Cyber Physical Systems" (Change, 2022).

Three Dimensional (3-D) Printing: This technology, according to Iberdrola (2022), helps to develop prototypes of products for sales, quickly, accurately and economically. It allows "manufacturing businesses to print their own parts, with less tooling, at a lower cost, and faster than via traditional processes" (Schwab, 2016). It is now widely used in architecture, engineering and other areas of design and production.

Opportunities and Challenges of the 4th Industrial Revolution in Management Science – The Nigerian Situation

Management Science is a field of study which refers to a "broad interdisciplinary study of problem solving and decision making in human organizations, with strong links to management, economics, business,

engineering and other fields. It uses various scientific research based principles, strategies and analytical methods including mathematical modeling, statistics, and numerical algorithms” in providing solutions to complex problems in organizations and for optimal decision-making (Wikipedia, 2022). Management Science embraces different fields of study (Luenendonk, 2019) applying the knowledge derived from these in solving complex management problems such as business uncertainty, tracking team productivity, shaping the culture of the organization, recruiting, on boarding the right employees, employee welfare, effective communication, time management, and regulation and compliance (Growth Engineering, 2021).

Management Science is a function of industrial revolution. Its birth was brought about by the first industrial revolution. In fact, traditional management theories both pre scientific and scientific were derived from the first and second industrial revolutions. The functions of management science revolve around the challenges and opportunities of the technologies of the current industrial revolution.

According to Luenendonk (2019), Management Science helps to notice the availability and proper use of resources, realize the future possibilities and needs of the organisation’s consumer base, boost employee motivation and productivity through safer work environment, achieve higher productivity through proper time management and efficient workforce.

The fourth industrial revolution has mouth-watering prospects for Management Science. Scheel (2016) specifically pointed to increased production capacity/flexibility by 70% improved working capital/cash flow management by 73%, improved competitive position by 79%, improved operational efficiency by 76% and basis for competitive pricing by 82% as the benefits of the 4th industrial revolution through the use of its disruptive technologies. For example, AI helps in production

optimization through improved efficiency and quality processes for companies that are able to apply it in their business practices.

In discussing the possible future improvements information technology can provide to Management Science, Andrew McAfee in Luenendonk (2019) stated that one of the biggest changes Management Science must face is an unbelievable amount of horse power and a mass of data to apply to it. Scientific approaches that are technology facilitated must be used. This means that any company not migrated in the direction of the 4th industrial revolution certainly will lose a huge opportunity, which in turn will affect its survival, growth and development, and of course with the adverse effects on the economy. In another business discussion, Philip Evans in Luenendonk (2019) showed how the IoT has transformed businesses by making traditional business strategies obsolete. He argued that modern technology has collapsed the traditional value chain through falling transactions, allowing fragmentation of scales where individuals, instead of organizations, have taken over businesses. He then recommended that Management Science must accommodate collaboration and competition simultaneously, stating that since information revolution had moved the structure of industries from vertical to horizontal, whether in the private or public sector, business structure must accommodate different ideas and motivations from individuals, organizations and governments.

Despite its benefits, the 4th industrial revolution presents a lot of challenges in Management Science. In general, while the availability and wide use of social media can create opportunities for cross-cultural understanding and cohesion, this can lead to exposure of business secrets in many companies, resulting in cyber theft (Schwab, 2016; and Mayor *et al*, 2021). Income inequality, cyber security risk, core industries disruptions and ethical issues have been listed as challenges of the 4th industrial revolution (Bode-Harrison, 2021).

Omoh (2015) stated that countries would “either take off or fall behind in the new dispensation, depending on whether or not” they are learning and coping with evolving technologies of the 4th industrial revolution. This view was supported by Onyeizugbe *et al* (2019) who opined that structural and institutional changes are needed to achieve industrial revolution. How much has Nigeria done in this regard?

Although Nigeria has made considerable efforts in meeting up with challenges of the 4th industrial technology as could be seen in the wide use of AI and Block chain in the financial sector of her economy, the e-commerce digital platforms (such as Jumia and Konga), social media platforms (in creating markets for entrepreneurs across the country for easy accessibility), marketing resources that were once out of their reach, and the revolution in the transportation sector (which is creating jobs for many via digital platforms like uber and taxity), she still depends so much on numerical labour force and is weak with respect to advancements in science and technology (Ndagi & Salihu, 2018; and Bode-Harrison, 2021). The level of utilization of technologies of the 4th industrial revolution is currently not wide spread across Nigeria, even though there could be potential applications of these technologies to various sectors of the economy, causing disruptions in industries across the country (Obijole, 2020).

Bode-Harrison (2021) identified two major hindrances to the successful utilization of technologies of the 4th industrial revolution in Nigeria as:

- Poor Digital Infrastructure: He stated that as at the end of 2020, Nigeria’s internet penetration stood at 43.3% with major lag in rural areas;
- A Greater Demand for High-Skill/High-Pay: He posited that due to automation and new technologies of the 4th industrial, there was an increasing demand of high-skill workers and a gradual phasing out of unskilled workers. He opined that the high rate of unemployment was due to Nigeria’s lack of understanding,

production and usage of the evolving technologies of the 4th industrial revolution.

In view of the above, Nigeria needs a complete “overhaul” of its economy. Adepetun (2018) in Ajah & Chigozie-Okwu (2019) emphasized the restructuring of the Nigerian educational system from the 9-3-4 system to one that can prepare successive generations for “technological tsunami” and application of theory to real life problems. Ajah & Chigozie-Okwu (2019) recommended a conducive business environment, politically and otherwise, to enable old and new businesses thrive. They appealed to the different stakeholders of the Nigerian economy especially governments at the different levels of governance, to adapt the disruptive technologies of the 4th industrial revolution as a way forward, by prioritizing local contents development.

Conclusion

This certainly is an era of the 4th industrial revolution, with its evolving technologies disrupting all aspects of human life and all fields of human endeavour. Management Science is especially affected by the 4th industrial revolution. This is because it emanated from industrial revolutions, its functions are based on the analytical tools of science and the effectiveness of its decisions shaped by the current existing technologies. With the 4th industrial revolution the traditional strategies of management science have become obsolete. The IoT, robotics and AI, among others, have transformed the structure of business organizations from vertical to horizontal, thus calling on all economies to key into this change for survival, growth and development.

The Nigerian economy is yet to transform the structure of its economy and the management of its institutions to fit into the 4th industrial revolution. Though, the economy has made changes in some areas, these changes are yet to cut across the entire country; hence, the massive developmental challenges still faced by the country (World Bank, 2021). As rightly pointed out by Omoh (2015), the issue of digital gap, resulting

from a low level of e-literacy and digital skills and weak technological infrastructure, continues to plague the country. Obviously, the Nigerian economy needs a transformation and an aggressive one at that, if it must survive the 4th industrial revolution. This calls for a repositioning of the economy. Therefore, as suggested by the World Bank (2021), Nigeria needs to reduce her dependency on oil and diversify her economy, address the issue of insufficient infrastructure, build strong and effective institutions, and address governance issues and public financial management systems. All these can only be achieved if adequate attention is given to the use of the disruptive technologies in management science, as advancements in science and technology can only add value to an economy when properly applied in management science.

Recommendations

- ❖ All stakeholders of the Nigerian economy, from individuals to organizations and governments, must conscientiously pay attention to the evolving technologies of the 4th industrial revolution with a view to acquiring the needed skills in adapting these technologies to the changing needs in their respective fields of endeavour. Here, the need of training and re-training on the use of these disruptive technologies of the 4th industrial revolution cannot be overemphasized.
- ❖ The Nigerian educational system – starting from the primary level – must be tailored to the needs of the society. To this end, a review of curricula at all levels of education is needed to include training in e-literacy and digital skills identified by Mayer *et al* (2021), as critical thinking, creativity, problem solving, flexibility, innovation and adaptability.
- ❖ The Polytechnic education is especially meant for the technological development of a nation, for self-reliance and self-sustainability. Sadly, Nigerian Polytechnics are yet to bring the Nation to the “promised land” in this regard. The Nigerian government is called upon to upgrade the Polytechnics in the federation through proper funding and sensitization. Other stakeholders of the Nigerian

Polytechnics are called upon to play their roles in helping to enhance the status of these Polytechnics to meet up with the advancements of the 4th industrial revolution.

- ❖ Experts in the field of Management Science in Nigeria should particular note that the extent to which they adapt the disruptive technologies of the 4th industrial revolution to the changing needs of organizations and industries will directly impact on the development of the Nigerian economy. Thus, they must work with the speed /velocity of the transformation of the 4th industrial revolution through continuous research, with the aim of moving Nigeria from a country developing retrospectively to a fully developed one.

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Towards Enhancing Reading Culture in an Era of Social Media and Get-Rich-Quick Syndrome Distraction: the Nigerian Perspective

By

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Abstract

The paper seeks ways to enhance the reading culture among Nigerian youths in an era of social media and get-rich-quick syndrome distraction. At this crucial point in the nation's history, there is need to enhance reading culture among Nigerian youths as this would translate to preparing them to take up leadership positions in the country. No doubt, the advent of social media has made deep inroads into the reading culture of Nigerian youths as they spend the largest chunk of their time glued to their various devices. In the same vein, the desire to make it early in life encroaches badly on the reading culture of Nigerian youths. Apart from discussing the effect of social media and the quest for materialism on the reading culture of Nigerian youths, the paper also looks at other factors, such as: poverty, poor value system, funding issues, corruption, poor parental upbringing, lack of incentives to outstanding scholars, poor remuneration of teachers, lack of libraries/poorly equipped libraries. In view of these identified challenges, the paper offers recommendations on how to enhance reading culture to wit: social media regulation, change of value system, adequate funding of the education sector and related agencies, tackling corruption in higher institutions, rewarding and celebrating outstanding scholars, provision of scholarship programmes, establishment of libraries, etc. The paper concludes that widespread reading culture among the youths would make a nation soar to greater heights in terms of quality of leadership, socio-economic development, among others.

Keywords: reading, reading culture, social media, get-rich-quick syndrome, Nigeria

Introduction

Reading is an indispensable aspect of human life. It makes one mentally alive at all times and keeps one abreast of the latest developments in and around the world. Furthermore, reading is particularly important in that it opens one's eyes to the magical world. Reading makes a man and that is why it is often said that a reader is a leader. In essence, a reader can stay in one spot and travel around the whole world. Reading motivates and inspires the reader to desire to attain lofty ambitions in life. Thus, a child who develops reading culture at an early age would probably go far in life as he may learn about famous personalities who influenced their world. Reading is a worthwhile venture and any person who makes reading a habit is likely to end up being a go-getter and an achiever. Olasehinde, Akanmode, Alaiyemola and Babatunde (2015) assert that reading is a basic building block of learning while the reading culture is the philosophy of developing a progressive reading attitude. They argue that reading hones the mind, making a person think logically and dispassionately.

It appears that reading culture is on a rapid nosedive in Nigeria, especially among youths. The reason could be attributed to the fact that social media have taken over the reading space. Furthermore, the fact that our youths now desire to acquire wealth at an early age is a contributory factor. According to the World Culture Score Index (2017), Nigeria is one of the countries in the world with the lowest reading culture. In its 2017 survey on hours of reading per week per person, India was leading in reading culture with a score of 10.42 hours per week followed by Thailand with 09.24 hours and China eight hours. In the survey, only two African countries, Egypt and South Africa, were listed. This situation paints a gloomy picture for the kind of leaders Nigeria produces.

Furthermore, Akinfenwa (2019) points out that available statistics from the National Commission for Mass Literacy, Adult and Non-Formal Education indicates that 38 per cent of Nigerians are non-literate as four in ten primary school children cannot read for comprehension. Apart from the fact that social media have blurred the minds of Nigerian youths, making them engage in all sorts of fake life, its counterpart which is the desire to get rich quick is even taking a heavier toll on reading culture. There is no gainsaying the fact that about 90 percent of Nigerian youths who should leverage their formative years for productive and useful ventures spend their time on social media and only think of how to get rich at an early age. This scenario has resulted in youths abandoning reading culture to engage in frivolous comparison and competition on

social media with severe and/or drastic consequences. They see reading as a waste of time and an unproductive venture.

This paper discusses the need to enhance reading culture in an era of social media and get-rich-quick syndrome distraction in Nigeria. The effect of social media on the reading culture of Nigerians is much more pronounced among the youths though the adults are also affected.

Reading culture and its role in national development

It is an indisputable fact that a society's reading culture is critical to its development. This is why it is important that reading culture should be inculcated in children from an early age. The National Library of Nigeria worries that the increasing drop in the interest of Nigerians to read and research is a big challenge that would affect the socio-economic development of the country. At an event to mark the 2022 Annual Readership Promotion Campaign with the theme "Reading as a panacea for societal problems," NLN solicited the support of Nigerians towards correcting what it described as an "anomaly" and return Nigeria to the "good old days" where people read, learn, get informed and lead. Reading is an important aspect of nation building but the reading culture of any society, according to Fagbemi (2018), depends on the level of literacy of the people. She argues that where illiteracy is on the high side among the people, the orientation of the people to reading would be negative and this explains why Nigerians have poor reading culture. Also, Okebukola (2004) harps on the generational value of knowledge, emphasizing that reading provides the tools for transmitting ideas to succeeding generations as well as the opportunity of partaking of the wisdom of the past generations.

Okpala (2019) avers that reading is to the mind what exercise is to the body in that it helps to stimulate the brain and improve its capacity and memory. She posits that apart from improving one's analytical skills, reading can also catapult one from one's immediate environment to a make-believe environment. In this way, it reduces stress and guarantees inner peace of mind. Moreso, she argues that through reading, an individual learns to empathize with fellow humans, which is an aspect of human intelligence. Reading helps one to become more understanding of other people's problems and, in this way, one becomes more tolerant and less judgmental. In this regard, one learns to identify with others and show more love to them irrespective of their social status, health challenges, religion, tribe or family background. She further emphasizes the therapeutic effect of reading whereby it helps one to deal with some

health, psychological or social issues otherwise referred to as bibliotherapy. Indeed, the problem-solving advantages of reading have also been stressed. According to UNESCO, “a well-read mind is assertive, articulate and seeks information to help to solve daily challenges.” This is as a result of the fact that people who read are more alert and empowered. Equally, good reading culture improves the academic performance of children and also helps their mental development outside the classroom environment.

Reading culture, literacy development and the role of the library

There is no gainsaying the fact that reading culture aids in literacy development. In fact, reading constitutes the bedrock of education and a child’s educational journey starts with reading. Literacy development is the process a child takes in learning letters, sounds, and comprehension of written language. The process starts from the preschool years of children and even when they are toddlers and goes into their teenage years. Thus a child navigates from being unable to connect sounds and letters to analyzing the plot and characters of a complex novel. Children who are confident readers see that the confidence translates to other subject areas and the learning process as a whole. Study.com states that children with strong literacy and reading skills who have undergone proper and successful literacy development are likely to succeed in many other areas of learning and life.

At this juncture, it is important to state that the library plays a pivotal role in promoting reading culture. There is no doubt that children who make the library their second home are likely to develop reading culture and this helps them to become life-long learners. The poor reading culture of Nigerian youths is largely due to the fact that there are no libraries in rural areas and even the few ones available are not functional. Nigeria is a country that places a very low premium on education. This accounts for the low budgetary allocation to the education sector. Owing to this, there is lack of funds to establish libraries and equip them with state of the art resources for the educational and recreational well-being of the citizenry.

On the role of the library in enhancing the reading culture of Nigerian youths, Alex-Nmecha and Horsfall (2019) opine that libraries offer us a depth and breadth of resources for us to read, learn, connect and play. In the same vein, Aina, Ogungbemi, Adigun, Akesode, & Ogundipe (2011) contend that libraries provide enabling environment and materials that offer more extensive and varied information than classroom study alone. Furthermore, Itsekor and Nwokeoma (2017) argue that libraries play

invaluable role in the educational set-up of any institution or country and could be seen as the national treasures where knowledge, both in print and non-print formats, is acquired, preserved and disseminated to the reading public. Citing Busayo (2011), Itsekor and Nwokeoma believe that the role libraries play cannot be over-emphasized in the provision of the much-needed facilities for the development of good reading habits and interest, as it caters for different reading interests at various stages of our intellectual development and for pleasurable reading. In their opinion, the library could be seen as an agent of educational and social change.

In the same breath, libraries contribute greatly to the enhancement of reading culture by supporting schools. In this regard, the National Policy on Education of the Federal Republic of Nigeria (2004) as cited by Aina, et al (2011) states that libraries especially school libraries are fundamental and basic to the design, implementation and attainment of educational excellence. It adds that libraries are an integral part of the educational development of school children and youth. The goals of education as contained in the National Policy on Education of the Federal Republic of Nigeria (2004) as cited by Aina, et al (2011) include the inculcation of national consciousness and national unity; the inculcation of the right type of values and attitudes of the individual and the Nigerian society; the training of the mind in the understanding of the world around; and the acquisition of appropriate skills and social abilities and competence as equipment for the individual to live and contribute to the development of the society. Aina, et al (2011) believe that without the support of efficient libraries, schools on their own cannot successfully achieve the afore-mentioned goals. They further argue that libraries provide access to enjoyable information-rich reading materials through which children and youths can gain and improve their skills.

Equally, libraries help introduce the use of reading for information, pleasure, passing examinations (learning in school) and personal growth through life-long learning. Libraries provide materials that offer more extensive and varied information than classroom study alone. Voluntary reading helps develop reading skills and mastery of language, extends students' knowledge and assists them in their academic work (Aina, et al., 2011). On their own, Odunewu and Odeyemi (2019) opine that libraries extend services beyond the physical walls of a building, by providing materials accessible by electronic means, and by assisting the librarians in navigating and analyzing very large amounts of information with a variety of digital tools.

Reading culture and social media incursion

Essentially, the advent of web 2.0 tools otherwise known as social media has done more harm than good to the reading culture of Nigerian youths. Social media platforms include Twitter, Facebook, WhatsApp, Instagram, YouTube, TikTok, etc. Youths are now so addicted to these platforms that they abandon reading and stay all day long on social media, doing all sorts of frivolities. On account of this, reading is relegated to the background as they only read to pass their exams. However, this does not mean that social media do not have positive uses. Kojo, Agyekum and Arthur (2018) have enumerated both the academic and non-academic uses of social media by students. According to them, the academic uses of social media by students include collaborating with classmates on assignments, accessing literature, discussing content with instructors, being up-to-date with current news and events while the non-academic reasons include keeping in touch with friends, sharing opinions, filling up spare time, entertainment, etc.

Still on the positive effect of social media, Daluba and Maxwell (2013) as cited by Kojo et al (2018) see social media as the latest technological explosion in the information world. They assert that it is an online platform that focuses on building and reflecting on social relation among people who share common interests or activities. They further point out that since the universalisation of the internet in the 1990s and the emergence of social networking sites in 1994 and beyond, there is abundant evidence that millions of people across the world use social media on a regular basis for various reasons. Also, Onuoha and Saheed (2011) as cited by Oji and Erubami (2020) argue that among many Nigerians using the web 2.0 based platforms it is not merely a fad but an integral aspect of daily life that pervades all age groups and social classes. They contend that the use of social media has become an integral part of daily routine of most Nigerian youths and this has made them the most technology-savvy group in the country. In their view, the need for social interaction, relationship building and sharing of multimedia/digital contents are the principal purposes for which the Nigerian youths deploy the social media whereas other reasons, as leisure reading, may only come as a second fiddle.

Ahmed (2018) emphasizes that despite the negative use of the internet by most students, it can be used positively to facilitate online learning: the use of social media has helped students to learn through various online learning platforms available to them. The use of YouTube to watch educational videos has helped students to gain wider knowledge. He also

enumerates several groups students can join through online platforms which are related to their course of study, peer group, school, environment, etc. Such online platforms include WhatsApp, Twitter, Facebook, and others which would help the students to have access to quality information when needed.

Nevertheless, it seems the negative effects of social media on the reading culture of youths outweigh the positive effects. Adesanya (2018) argues that the poor reading culture of youths could be attributed to the environment they find themselves in and the impact of social media on them. He further contends that the reading of relevant learning materials in most schools has been taken over by social media such that students prefer to spend more of their time on informal activities on the social media than on books. Similarly, Anyira and Udem (2020) carried out a study on the effect of social media addiction on the reading culture of Nigerian students in which it was established that social media have negative consequences on the reading culture of Nigerian students. In the same vein, Oji and Erubami (2020) conducted a study on social media use and reading culture of Nigerian youths in which it was found out that 94.3% of these youths use social media and that there is a general poor culture of reading among Nigerians.

Kabir and Jeromes (2022) posit that the rapid development of the internet is one of the most fascinating phenomena characterizing the information age and affecting the cultural, social and economic life of the modern world. However, they contend that young people who are termed “the digital generation” spend more time on surfing the internet, adding that this has become an addiction and that it causes many youths to view reading as an ordeal. According to them, children can only benefit largely from electronic technology when firmly established as readers. Also, Talaue, Alsaad, AlRushaidan, AlHugail and Altaha (2018) as cited in Ntakirutimana and Okoro (2021) believe that social media have a dual impact on student achievement and that it is necessary to approach adolescents’ use of social networks with utmost responsibility. In the same vein, Kojo et al (2018) argue that the advent of social media is a distraction to students because they are expected to read and keep abreast of the happenings around them but this is not the case. Ahmed (2019) opines that poor reading culture is one the most critical factors posing a threat to the development of education in Nigeria. This, he argues, could be attributed to a combination of many factors among which is the advent of social media. He cites a study conducted on “children’s reading habits and their use of media: suggestion on encouraging reading habits among children” which revealed that 40 per cent of Nigerian adults never finish

reading a fiction book from cover to cover after leaving school. The study also showed that about 30 million Nigerians have graduated from secondary schools with poor reading habits cultivated during their school days.

In like manner, Sotiloye and Bodunde (2018) conducted a study on assessment of reading culture of students of the Federal University of Agriculture, Abeokuta (FUNAAB) in which they concluded that most students read only to pass examinations as they scarcely engage in any reading outside school books owing to the influence of social media. Also, Kur and Olisah (2007) as cited by Kojo et al (2018) aver that social media encourage negative behavior among tertiary students as they are exposed to fraud, use of drugs, easy point of access to pornography and other obscenities which distract their reading culture. They are of the opinion that social media have become a vital component of daily life of tertiary students and is steadily taking over the consciousness of the youths thus affecting their reading culture. Adejumoh (2016) laments that reading which used to be widespread among Nigerian students, youths, and even adults, is fast eroding at a jet speed. He attributes this trend to the advent of the new media which he asserts has shifted the paradigm and discourages young men and even adults from reading for knowledge. According to him, people now devote more time to chatting, uploading photos and commenting on irrelevant posts on the social media than seeking for materials that would enhance their knowledge.

Reading culture and get-rich-quick syndrome

Strange as it may sound, the quest for materialism has made deep inroads into the reading culture of Nigerian youths. This situation cannot be divorced from the influence of social media on the youths. The youths are more interested in browsing online videos that teach them how to make it early in life. In the same vein, the competition over who would post better photos on social media is among the factors leading to the abandonment of reading by the youths in their quest for materialism. In this regard, Adejumoh (2016) argues that the pursuit of material fame and fortune among Nigerian youths and paying lip-service to education have contributed to the decline in reading culture. He maintains that our youths now attach undue importance to fame and wealth thereby relegating the place of reading. He further contends that youths now prefer to venture into the lucrative world of entertainment where their intelligence quotient would hardly be tested and parents are even encouraging them to toe the path because they want to be the parents of super stars or celebrities. In his words, people now celebrate mediocrity

in their quest for materialism. He decries that many Nigerians have abandoned their educational careers in pursuit of “quick money” which they believe could be faster through business, entertainment and politics.

Moreso, in an interview she granted to *Vanguard*, the Chief Executive Officer, National Library of Nigeria, Professor Chinwe Anunobi blames the poor reading culture in the country on a change of value system. She argues that people have shifted their emphasis from reading and acquisition of knowledge to materialism, maintaining that it is dangerous to the growth and development of Nigeria. She blames the society for the quest for materialism, arguing that people have no iota of respect for the learned “because they have no money and cannot call the shots.” Similarly, Akinfenwa (2019) contends that our socio-economic environment is not reading-friendly, noting that the struggle for economic survival provides little or no time for people to cultivate a good reading habit. Also, Esheu (2020) opines that many youths have the conviction that reading may not be of benefit to them. This accounts for why they go after ventures that would offer them immediate pecuniary benefits.

Akande (2017) is of the view that very few Nigerians read and those who read do so out of duty rather than desire. In her words, “young people in Nigeria prefer to watch movies, chat with their friends or play games. Older people prefer to chase money or worry about not having money rather than read. The few adults who read have a sense of duty to read for knowledge and continuous self-improvement.” According to her, younger people who read do so mostly out of compulsion such as the necessity to pass examinations and obtain certificates. She argues that very few students read out of genuine interest to know more. In the same vein, Madu (2017) contends that people are actually looking for books that would enhance their operations and earning capacity. That is, people read books that would enhance their capacity to earn across board.

Furthermore, Ehiosu (2017) asserts that instead of reading, youths are eager to make money at all costs in order to cover their knowledge deficiencies, adding that they (the youths) would rather engage in examination malpractices, cult and criminal activities. He says: “the number of people that read today is quite few; those who have the natural instinct to study and be successful. Others have a drive to crime and corruption; penchant to make it fast, thus turning a blind eye to books that can bring about mental rebirth.” He maintains that this explains why many people do not find reading fanciful because they see it as a waste of time and this attitude does not better the lot of those who read. In his

view, on account of the fact that people want the easy way out, there is a high incidence of cultism, kidnapping, armed robbery and terrorism in the land. In the same regard, he further argues that young people want to make it quick today to the neglect of reading where they can be fed intellectually. In his submission, this has affected the quality of leadership we are producing as it is often said that “a reader is a leader.” Similarly, Aina et al (2011) contend that the undue importance Nigerians attach to wealth is a major factor affecting reading culture. They maintain that people usually rush for material things, noting that many have abandoned their educational careers in pursuit of money.

Other factors affecting reading culture in the 21st century

Apart from the influence of social media and the quest for materialism on the reading culture of Nigerian youths, other factors which have been identified to hamper reading culture include: poverty, poor funding, corruption, poor parental upbringing, poor value system, lack of libraries, neglect of the educational sector, etc.

Poverty

Poverty is one of the major factors affecting the enhancement of reading culture among Nigerian youths. In this regard, Aina et al (2011) have pointed out that only a few people live above poverty line in sub-Saharan Africa. They argue that as a result of poverty, most Nigerian families cannot afford to send their children to school and they do not have money for tuition fees and textbooks. According to Chukwudera (2022), reading culture flourishes in countries where the people are prosperous and diminishes in countries where poverty seems to be on the increase. He notes that extra-curricular reading could be factored as one of the attributes and symptoms of a high standard of living, adding that wealthier people who spend a large chunk of their earnings on groceries and other basic amenities are as likely to spend money on buying books or visiting the library.

Funding issues/lack of funds

Lack of funds is one of the factors affecting reading culture in Nigeria. Budgetary allocation to the education sector is poor. In this case, there is dearth of fund to establish libraries and equip them with adequate relevant resources. Similarly, the readership promotion campaign sponsored by the National library of Nigeria has been seriously hampered by lack of funds. Aina et al (2011) argue that the readership promotion

campaign which is aimed at encouraging more Nigerians to read lacks national spread as it is restricted to Abuja, Lagos and few state capitals. According to them, the impact has not been felt in other parts of the country as the National Library has not been adequately funded to put the campaign in print or electronic media.

Corruption

Corruption is endemic in the Nigerian society such that it has permeated every facet of our life. Most Nigerian students, for instance, see reading as a waste of time because they believe they can “sort” themselves out after examinations. In the same vein, the high rate of immorality in tertiary institutions is such that students use sex to buy grades. Most students go after money because they believe that with it, they can even buy certificates. In this case, reading culture is relegated to the background.

Poor parental upbringing

The issue of poor parental upbringing is one of the problems hampering the promotion of reading culture among Nigerian youths. Nigerian parents do not inculcate reading culture in their children. This is as a result of the fact that they themselves have poor reading culture. They would rather push their children to go into trade or any other gainful venture that would yield quick money.

Lack of incentives to outstanding scholars

In Nigeria, outstanding scholars are not rewarded or honoured like their counterparts in entertainment, politics or sports. For instance, outstanding musicians and footballers are celebrated by the government and society while first-class students are often poorly rewarded or not rewarded at all. This has really hampered the promotion of reading culture in the country as youths see reading as a waste of time and/or something that is not worthwhile.

Poor remuneration of teachers

Teachers help a lot in promoting reading culture among youths. However, in Nigeria, they are poorly paid. As a result, they lack the inspiration to inculcate reading culture in the youths.

Lack of libraries/poorly equipped libraries

Lack of libraries or poorly equipped libraries is one of the factors hindering the enhancement of reading culture in Nigeria. Most schools do not have libraries and even those that have, the libraries are often poorly equipped. The situation is worse in rural areas which are often neglected by the government.

Poor value system

The value system we have in Nigeria today hampers reading culture. Youths and adults alike do not believe education is the right way to go. Wealthy people, politicians, entertainers and sports stars are highly celebrated while scholars are not even recognized. As a result of this, the youths place a low premium on reading, believing it is not worthwhile. This has led to a drastic decline in the reading culture of our youths.

Recommendations

The decline in reading culture among the youths is not without solution. In view of the identified challenges facing the enhancement of reading culture among Nigerian youths in an era of social media and get-rich-quick syndrome distraction, the following recommendations are made:

Social media regulation

There is need to regulate social media to tame the youths who have become addicted to it. Recently, the Nigerian government embarked on the regulation of the social media though it was based on hate speech. The government needs to take decisive steps to regulate the use of social media so as to tame the youths who are already addicted to it. Appropriate legislations should be put in place to regulate the use of social media. The government should not only observe those who are critical of their policies but should strive to have a holistic regulation of social media. Popular author, Chimamanda Ngozi Adichie opines that youths should give up social media and read books. According to her, the best ways to counter what seems to be an ugly tsunami of book banning going around the world is to read. She further notes that the only way to answer to censorship of books is to read.

Change of value system

The value system in the country should be geared towards inculcating reading habits in the youths. This should start with the parents and then the government. Scholars should be celebrated just like politicians, entertainers and sports stars.

Establishment of libraries

Libraries should be established across the length and breadth of the country. The libraries should also be adequately equipped with up-to-date information resources to meet the needs of the clientele. Both school and public libraries should be stocked with fiction materials, biographies and autobiographies. Also, Aina et al (2011) advocate the resuscitation of mobile library services. They are of the opinion that promotion of reading habits should not be confined to students in the classroom or physical library alone, noting that consideration and extension of library services should be given to children and youths who, for one reason or the other are out of the normal school or library environment. However, mobile library services require the establishment of public libraries as it is their sole responsibility to carry out this type of services.

Provision of scholarship programmes

The government should roll out scholarship programmes that do not require stringent procedures. This would address the issue of millions of out-of-school children in the country and in turn enhance reading culture among Nigerian youths.

Tackling corruption in tertiary institutions

The management of various tertiary institutions should take decisive steps to tackle corruption in their institutions. Students who engage in examination malpractices as well as staff who aid and abet same should be made to face the full weight of the law. In the same vein, the government should clamp down on the so-called “miracle centres” across the country. When these are done, reading culture would receive a big boost.

Adequate funding of the education sector and related agencies

The government should provide enough budgetary allocation to the education sector and other related agencies. The National Library of

Nigeria, for instance, should be adequately funded to enable it spread its readership promotion campaign which is aimed at promoting reading culture among youths to all the states of the federation. As has been pointed out before, the readership promotion campaign lacks national spread owing to dearth of funds.

Rewarding and celebration of outstanding scholars/teachers

Outstanding scholars and/or teachers should be adequately rewarded and celebrated. This would send a clear signal to the youths that reading is not a waste of time. In this way, they would see reading as a worthwhile venture. Similarly, teachers should be highly remunerated to enable them discharge their duties effectively. This would enhance reading culture as it would make the teaching profession an attractive and a noble one.

Conclusion

A nation that possesses reading culture can soar to greater heights in terms of leadership, socio-economic development and otherwise. In Nigeria as well as other developing nations, reading culture seems to be on a rapid decline. The advent of social media has largely contributed to this development as youths and adults have been overtaken by the frenzy or craze associated with it. Similarly, the get-rich-quick syndrome that is prevalent in the society today constitutes a big distraction to the youths as regards imbibing or developing reading culture. Everybody wants to make it by hook or by crook hence reading culture is relegated to the background. The youths see reading as a waste of time since they believe it is not a worthwhile venture. It is the hope of the authors that the reading culture of Nigerian youths can be enhanced through the various ways advocated in this paper. This would restore the lost glory of the nation and prepare the youths to take critical leadership roles which the country is in dire need of.

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Appraising Landscaping in Chukwuemeka Odumegwu Ojukwu University, Uli Campus, Anambra State, Nigeria

By

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ABSTRACT

Amid the growing benefits for proper landscaping design and planning, there is the need for man to be in a decent, well-organised and aesthetically pleasing environment. This could add value to concentration of staff and students in the campus as well as provide relaxation points within the campus. The landscaping quality of Uli campus of Chukwuemeka Odumegwu Ojukwu University deserves attention in view of its state. The objectives of this paper are to appraise the quality of the present status of landscaping in the campus and assess the perception of people on the quality of present landscape in the campus environment. This is with a view to providing a feedback for improved landscape management of the University campus environment. The methodology adopted for this research was survey design. The focus was on academic staff of the Faculty of Environmental Science of the university randomly selected from the research population. This selection was premised on their assumed knowledge of the subject matter. Data was collected from primary sources using questionnaires and observation schedules. Data analysis was done at the univariate level using Statistical Package for Social Sciences (SPSS). The outcomes show that the landscape environment within the campus is not in a good state. Some contributing factors to this were attributed to inadequate maintenance operations, inadequate provision of funds and inadequate equipment for maintenance operations, among others. The study recommends involving professionals in the built environment in the physical planning unit and works department of the institution to handle landscaping concerns within the campus, provision of enough funds for landscape improvement and maintenance operations, incorporating man-made features such as trash cans, street lights, sculpture, defined pedestrian walkways, paving and other road furnishings incorporated into the landscape. The university management may revive an existing landscape committee that would liaise with the horticulture unit of the faculty of Agriculture and have adequate as well as regular supply of new plants for possible replacement of dead plants and/or planting of new ones where they are desired. A redesign of the general landscape of the campus is desirable.

Keywords: assessment, campus, landscaping, maintenance, university

INTRODUCTION

Through designed landscapes, people can attain personal consciousness and responsibilities for the environment while letting go the pressures of everyday life. As such, landscaping plays a vital role in the quality of the environment as well as the physical and psychological wellbeing of the people. There have been tremendous changes in the building professions over time, as new advances brought new challenges that generate opportunities on the one hand, and present the probability of displacing those not prepared for it, on the other hand (Ogeye, Senibi & Akinboboye, 2019).

Landscaping refers to any activity that modifies the visible features of an area including the living elements, natural elements and man-made elements, while the landscape is everything one can see looking across an area of land. Landscape design can be seen as the art of designing and management of the components of landscape (i.e. Landforms, water bodies, vegetation and man-made features) to make good outdoor spaces for aesthetic purposes, useful, healthy and enjoyable purposes through application of cultural and scientific knowledge with concern for resources preservation (Adekunle & Basorun, 2016). Landscape practices comprise of the designing, installation and maintenance of the landscape design. Ayeni, Olotuah and Adedeji, (2013) noted that landscape design compliments architecture and provides the opportunity to contribute to the aesthetics of an area in order to improve the built environment. In addition, the principle of landscape design is to fuse the buildings with the environment, to achieve a well-planned environment.

Landscape design, as a separate discipline and business, is becoming conspicuous in the Architecture profession in Nigeria. Landscaping practices constitute a form of trade, which can be a veritable source of livelihood while serving the function of beautifying the physical environment. This prospect is yet to be fully realized in the country.

University campuses are expected to be distinguished in landscaping. A key way of achieving this is the use of well-defined landscapes, and these could be a means of attracting people to visit and to study. Good landscape design can, therefore, play a vital role in the enhancement of universities' environments and open spaces, by creating a nexus between aesthetics and open space management (Adekunle & Basorun, 2016). In pursuance of this, University campuses ought to denote landmarks as

spaces which indicate attractive spaces that represent campus identity, thus creating impressions of the campus environment as an exceptionally distinct institution. Unfortunately, poor attention has been given to the outdoor spaces around buildings in different university campuses in Nigeria. It can be shown that if considerable attention is given to the surroundings of the building structures, there will be an improvement in the environment.

Observations of the landscapes of university campus reveal such problems as the lack of outdoor landmark spaces, poor landscape design and poor landscape management. This situation naturally, negatively affects the associated academic and residential activities within the campus. For that reason, this study seeks to appraise the state of existing landscape in the campus, with a view to providing a framework/feedback for improving and sustaining the landscape management of the University campus environment. The objectives are to appraise the quality of the present landscaping in the campus and assess the perception of people on the quality of present landscape in the campus environment of Chukwuemeka Odumegwu Ojukwu University, Uli Campus Anambra State.

LITERATURE REVIEW

WiseGEEK (2012) as cited in Ayeni, Olotuah and Adedeji, (2013) stated that landscape architecture is a branch of architecture that deals with planning and design of land and its relation to the building around it. Wright, (2008) defined Landscape design as an art with the function of creating and preserving the beauty in the surroundings of human habitations as well as broader natural scenery of the country. Architecture ought to transcend the designing of buildings, and incorporate the transformation of the physical environment through proper design. This will improve the quality of the environment, as the combination of hard and soft landscape elements makes the environment ecofriendly.

The art of landscape practice pulls together elements to create an aesthetically pleasing extension of interior to outdoor living spaces (Asiedu, Buah, & Blankson, 2010). Hard landscape elements are non-living hard materials used by landscape designers to develop landscape designs. Examples of these are: rocks, stones, paving, gravel, steps, garden furniture and other man-made components of landscape. Soft landscape elements refer to living things brought into the landscape. Examples of these are plant materials such as: lawn, borders created with

trees, flowers and shrubs (Ogunsote, Adedeji, & Prucnal-Ogunsote, 2011).

Landscaping entails some of the following activities- growing/installation of plants, planning beautiful gardens, mow lawns, prune shrubs, erect fences (as enclosures), among others. Elf, (1996) as cited in Adekunle and Basorun, (2016) noted that a well-designed landscape helps to reduce erosion and global warming as well as prevent pollution of the environment. This is achieved since soft landscape elements used for landscape designs can improve air quality. Amongst several factors, landscaping, as an aspect of campus development and beautification needs to gradually gain acceptance and be transformed into a culture, which would gradually influence the university campus environment. Most of the plants that could be found on the University campus are native to the local environment, and could thus aid in the modification of the microclimate of the environment.

Good landscape management involves right plants selection, appropriate timing of plantings and plant maintenance techniques, maintenance of hardscapes when broken, among others. These are important towards realizing an attractive environment. Principally, the selections should be based on the functional roles the elements would play in the landscape (Ayeni & Adedeji, 2014). Maintenance involves the care and upkeep of the landscape after installation. Since landscapes change appearance and size over time, different types of maintenance works are required. These may include: weeding in lawns, replacement of dead plants, spraying of insecticides for insects and disease control, mowing of lawn, irrigation of lawn, repairing of paved surfaces, pruning of trees/shrubs, cleaning of fountains, repainting of outdoor furnishings and preventive maintenance on the equipment. Also of great importance is the quality of maintenance tools and equipment used in carrying out the exercise. Some of the tools/equipment used in the maintenance can be grouped into sophisticated and simple equipment. Examples include hand trowel, shears, shovel, crosscut saw, rake, wheel barrow, transplanting hoe, mower, sprinkler, hedge trimmer, shears, and cutlass.

STUDY AREA

Chukwuemeka Odumegwu Ojukwu University, Uli Campus, is situated in Uli, Ihiala Local Government Area of Anambra state. It is located on latitude 5°46'11"N and longitude 6°50'10"E. The University was established in year 2000 by the Anambra State Government with the name Anambra State University. The University was renamed to the

current name in the year 2014. Chukwuemeka Odumegwu Ojukwu University has three-campus arrangement – Igbariam (which is the seat of administration), Uli and Awka. There are six faculties in the Uli campus and they are: Engineering, Natural Sciences, Physical Sciences, Environmental Sciences, Basic Medical Sciences and Education. The Uli campus has lecture halls/classrooms, laboratories, library, offices, hostel, chaplaincy, banks and other businesses.

METHODOLOGY

The sources of data for this study were primary and secondary. The primary data were obtained through the administration of questionnaires and observation schedule. The secondary data were obtained from documents and research materials on staff strength and university campus master plan. The target population for this study are academic staff of the Faculty of Environmental Science of the university. This selection was premised on their assumed knowledge of the subject matter. Samples would be taken from each of the departments that make up the faculty. Owolabi, Ogunsajo, Bodunde and Olubode (2020) stated that landscaping is greatly valued by people with education of the environment based on their knowledge of elements used and the important roles they play in man’s environment.

Table 1 shows the numbers of academic staff of faculty of Environmental Science obtained from the university.

Table 1: Staff Population in Sampled Unit

Target Population:	Academic Staff of the Faculty of Environmental Science of Chukwuemeka Odumegwu Ojukwu University, Uli Campus
No. of Academic Staff:	41

Source: Authors field survey, 2023

30% of this research population was chosen as the sample size. In sampling ratio, St. Olaf College (2023) noted that for populations under 1,000, a minimum ratio of 30% is advisable to ensure representativeness of the sample. This gives a figure of 12, so 12 copies of questionnaire were randomly administered across the lecturers across the four (4) departments in the faculty.

FINDINGS AND DISCUSSION

Types of landscape elements dominant on campus

The results shown in Table 1 indicate that 41.7% of the respondents stated that softscape elements were dominant on campus, 25% stated that hardscape elements were dominant on campus while 33.3% stated that both hardscape and softscape elements are balanced on campus.

Table 1: Data on types of landscape elements dominant on campus

Value Label	Frequency	Valid Percent	Cumulative Percent
Softscape	5	41.7	41.7
Hardscape	3	25	66.7
Both hardscape and softscape	4	33.3	100.0
Total	12	100.0	

Source: Authors field survey, 2023

Quality of Landscaping Perception on Campus

The data obtained show that bulk of the respondents (58.3%) rated the quality of landscaping on campus as poor, 33.3% rated it as very poor. Also, a small percentage (8.3%) of the respondents rated it as good. These are illustrated in Table 2.

Table 2: Data on Quality of Landscaping Perception on Campus

Value Label	Frequency	Valid Percent	Cumulative Percent
Very poor	4	33.3	33.3
Poor	7	58.4	91.7
Neutral	-	0.0	0.0
Good	1	8.3	100.0
Very good	-	0.0	0.0
Total	12	100.0	

Source: Authors field survey, 2023

Factors Influencing the Quality of Landscaping on Campus

Data analysis on the factors influencing the quality of landscaping on campus and the perception of the respondents vary. Majority of them (58.3%) are of the opinion that inadequate provision of funds affects the quality, 25% attributed the quality to lack of capacity to carry out landscaping maintenance operations. 16.7% opined that the factor affecting the landscaping quality is poor maintenance culture as shown in

figure 1. Akin to this, 75% of the respondents noted that there are no landscape maintenance operations done on campus while 25% stated that landscape maintenance operations done as need arises. This finding is consistent with the opinions of Forbes and Kindle (2013) which stated that landscape should be properly maintained to sustain its quality.

Similarly, 83.3% suggested that both man-made elements and plant materials be incorporated into the landscaping to improve the beauty of the campus. 16.7% were of the view that only man-made elements are needed to improve the beauty of the campus.

The usage of softscape and hardscape elements can aid in regulating the microclimate around buildings and outdoor environment within the campus. The use of these softscape elements – trees and shrubs – is important in providing shades, wind breaking, improving air quality and adding to the beauty of the environment. The use of hardscape elements with less maintenance cost are important in order to prevent threats of floods and soil erosion as well as define car path within the campus.

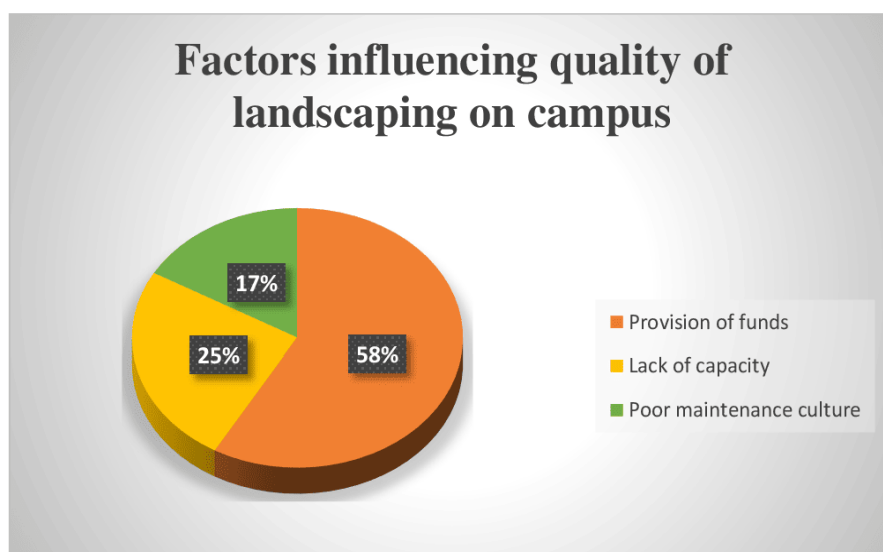


Figure1: Data on Factors Influencing the Quality of Landscaping on Campus

Source: Authors field survey, 2023

Type of equipment predominantly used in maintenance operations on Campus

The results from the analysis on type of equipment predominantly used in maintenance operations on campus show that majority (91.7%) of the respondents stated that simple equipment are used in the maintenance operations. 8.3% of the respondents stated that sophisticated equipment are used in the maintenance operations as shown in Figure 2. The simple

equipment identified are machete/cutlass, hand shears and hoe are used in maintenance operations. The sophisticated equipment identified normally used is the riding mower.

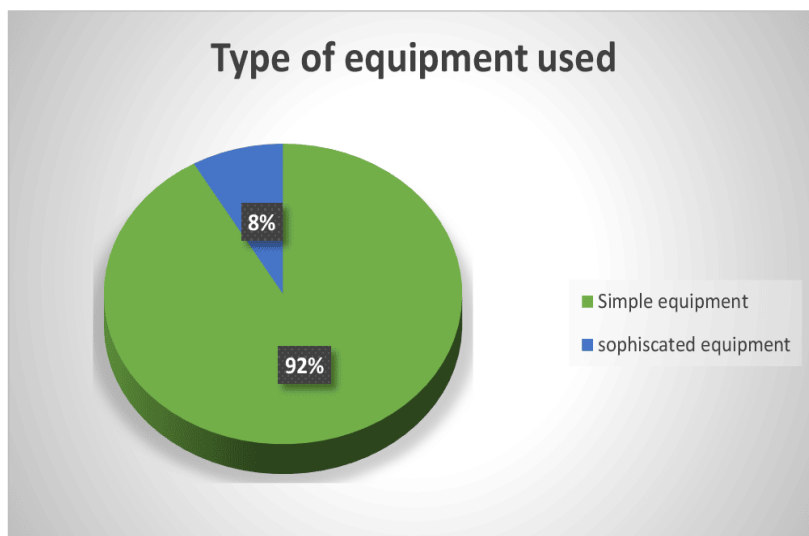


Figure 3: Data on type of equipment predominantly used in maintenance operations on campus

Source: (Authors' field survey, 2023)

CONCLUSION AND RECOMMENDATION

Proper landscaping practices have great potentials to uplift aesthetic status of campuses. There is the general acknowledgement of good landscaping as a suitable tool for improving environmental value of Uli campus, COOU. This can be achieved by devising a feasible idea to change the existing campus environment by the introduction of landscape features for good microclimate within the campus, neatness of the environment and for aesthetic purposes. Spaces that are not built up within the campus need to be designed and planned; structured management will entail proper maintenance practices.

The maintenance routine practices should be reviewed so there could be improvement in the state of the landscape within the campus. This can be achieved by involving professionals in the built environment in the physical planning unit and works department of the institution to handle landscaping concerns within the campus. The professionals should draft a programme chart of landscaping features for the improvement and sustenance of the beauty of the campus. The university administration may need to allocate more resources (human and funds) towards improvement of the campus. They can plan the release of funds in tranches based on the planned chart.

The equipment such as bush cutter, pruning shear, sprinkler, and hedge trimmer can be incorporated to the existing equipment in use for better output. Man-made features such as trash cans, street lights, road benches for sit-out, sculpture, defined pedestrian walkways, controls/ barriers created to direct flow of movement, paving, road signs, etc can be incorporated into the landscape. Similarly, plant materials such as trees of diverse species, flowers of different colours, lawns should be improved upon to advance the aesthetic appeal of the campus. From the environmental point of view, these elements can serve as wind breakers; inhibit soil erosion and control ponding during the rainy season; as well as help to regulate the effect of global warming by maintaining in the atmosphere in the campus.

Since landscaping practices constitute a form of trade, which can be a source of income, the university management may consider opening horticulture unit where plants can be grown in the nursery and sold to members of the public.

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