

Innovations

Environmental Variables and Heads of Departments' Accountability in Public Universities in South-South, Nigeria

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Abstract

The study determined the extent to which environmental variables predict heads of departments' accountability in public universities in South-South, Nigeria. Seven research questions were raised and seven null hypotheses were also postulated to guide the study. The correlation design was used for the study. The population for the study consisted of all the 374 Heads of Departments in six public universities in south – south, Nigeria during the 2019/2020 academic year. The sample of the study consisted of 306 Heads of Departments representing 90% of the Heads of Departments population. Multi - stage sampling technique was used to select sample from the six federal universities in South-South Geo-Political Zone of Nigeria. The instruments for data collection was the researcher – made instruments titled “Environmental Variables questionnaire (EVQ) and Heads of Department Accountability Questionnaire (HDAQ)” which were validated by experts in the Educational Foundation, Guidance and Counselling, Curriculum Studies, Educational Management and Planning respectively. The Cronbach’s Alpha Analysis was used to determine the reliability of the instruments which yielded reliability co-efficients of .76 for EVQ and .80 for HDAQ which were quite appropriate and usable. Linear Regression Statistics, R and R² were used to answer the three research questions while F- value was used to test the null hypotheses. The findings of the study revealed that: change of leadership, social, economic, academic practices and joint variables are significant predictors of Heads of Department accountability in public universities in south – south, Nigeria. It was concluded based on the findings that joint environmental variables are significant predictors of Heads of Department accountability in public universities in South – South, Nigeria. Based on the findings, it was recommended among others that institution management should develop a safe work environment that will encourage Heads of Department to acquire skills on the utilization of ICT facilities in order to improve their administrative accountability.

Keywords: Environmental Variables, Heads of Department, Accountability, University, Educational Institutions

Introduction

Education is a very vital tool for every nation that strives to go beyond its status quo in social, economic, change of leadership, cultural, academic, and technological developments. It is the engine room of all developments in any nation. Given its indispensability in the development of the citizenry and society, education has gained prominence in the world. The role of relevant stakeholders including the government has been identified to exert a decisive influence on its educational organisations and pace of goal attainment (FRN, 2013). Environmental variables are crucial in that, they affect the internal structures and processes of an institution since it is pertinent for an individual to take a look at both inside and outside the institution to elucidate behaviour within educational institutions. "The environmental variables consist of those relevant physical and social variables within and outside the boundaries of the institution that are taken into consideration in the decision-making behaviour of individuals in that system" (Heryanto 2015). But in this study, environmental variables are apparatus and ingredients of which institutions are up of.

Notwithstanding, the well-built technological drifts, change of leadership, social, cultural, economic, and academic variables, all influence the internal operations of educational institutions. Environmental variable simply describes those variables that exist within the educational institution boundary. Educational institutions are productive systems which must exchange and interact with its environment for survival and well-being. No matter how the institution controls its internal processes, environmental variables also influence its performance, profitability, growth and development. The progress of an institution is influenced by a wider range of events and situations that are out of its control.

Environmental variables of institutions are supposed to be viewed as goals oriented, effectiveness and efficiency in all its administrations, guarded by other institutions of society and its administrators guarded by broader institutions for emulation. According to Mie and David (2016), to understand environmental variables is the institutional perspective which its formulation, little emphasis is placed on task goals, effectiveness and efficiency. Instead, the basic premise is that the chances of organizational survival are highest when school structures and processes reflect the norms, values, and ideologies that are of a standard to the society. It is pertinent that the special environment through which emerges social group and institutions have a direct relationship with the members of the community in which such institution is situated. Environmental variables impact relative influence on the survival of an institution. It gives rise to the administrators' guaranteed performance and accountability.

Accountability in the context of this study simply means the Heads of Departments being responsible and answerable to stakeholders of their universities as regards to their roles. Heads of departments can succeed in such an environment where friendly interactions between staffs, (academic and non – academic) and students are maintained and adapted. Oleforo and Ukoette, (2018) ascertained that if the Heads of departments have the values of accountability to treat people well there will be synergy in contributing reasonable decision by the lecturers and students.

Educational institutions, however, cannot exist in an island or isolated environment without challenges that evolve through the people that control it. An organisation such as school has fewer or lesser control over its environment but there is need for the administrator to supervise all the variables that make up these environmental changes in a manner that will guard against proactive or reactive outcome that will occur. These can be possible when heads of departments appropriately utilize the brainpower behind these variables to ascertain the unpredictability that will arise to take charge of the maintenance of the institution as their physical and mental activities will demand. It is of interest to note that the Federal Republic of

Nigeria, (FRN), (2013), in its National Policy on Education has identified university education as a key to national development as follows:

- a. To develop and inculcate proper values for the survival of individual and society.
- b. To contribute to national development through high-level relevant manpower training.
- c. To develop the intellectual capability of an individual to understand and appreciate their local and external environments.
- d. To acquire both physical and intellectual skills which will enable individual to be self-reliance and be useful members of the society.
- e. To promote and encourage scholarship and community service
- f. To forge and cement national unity and
- g. To promote national and international understanding and interaction. p. 50-51.

However, so that these educational goals may be realized, the effort of the Heads of departments' accountability could not be overlooked; there must be a positive collaboration between all the stakeholders that may contribute directly or indirectly to the institutional environment.

In the administrative cadre, the Heads of departments are involved in the operational management of the department. Heads of Departments are responsible for the overall academic and staff support, departmental administration, student support, teaching-learning, the students' experience, internal and external communications, directing, guiding, managing, allocating, planning, developing, and upholding academic standards. They work within the institution's health and safety policy to ensure a safe working environment for staff, students and visitors (Gmelch, 2015). Their role in accountability for the overall academic activities cannot be overemphasized. Their absence in an institution means that there is no administration or organized activities in such a department. Some of the environmental variables that will be considered in this study are: Information Communication Technology innovation, Change of leadership and Social variables among others. These variables may play a significant role in the behaviour of the HODs administration which can also influence how the role and performance of academic staff portray (Idiong, 2014).

The environmental factor in the information communication technology utilization view represents that source of information that those in decision making roles utilize to change the internal structures and processes of educational institutions. Information Communication Technology innovation is one of the key sub-variables to heads of departments' accountability. Educational institutions are not an island of its kind, but self-sufficient and must enter into collaboration with the relevant stakeholders in their universities to achieve the necessary information and resources for its survival. Information communication technology (ICT) utilization is vital and crucial for planning, making policy and taking decisions. ICT describes the way the heads of departments' process and share information to different groups using all kinds of technologies for communication. That is to say that heads of departments provide cognitive platforms for the members of the department which will make them spur the concepts emanating from information gathered. Similarly, there are innovations in instructional techniques or delivery system using new technologies in the classroom for teachers' recruitment, lesson preparation and compensation (US departments of Education, 2004). Alismail and McGuire, (2015) reported that allowing lecturers and students to be creative and use the power of technology to support necessary skills and teaching-learning uniquely, is critical in such an education explosion in which standardized test determines the success of our schools. It is government's good intention and efforts to see that equal and quality educational opportunity is granted to its citizens.

Change of leadership in the context of this study, can be described as a term used to explain renewed and turnover of Departmental Heads, how their change will bring about structural change and stability of the department, how they interact and their pattern of leadership. Change of leadership is very crucial and relevant in the administrative processes within institutions (Jeffrey and William, 2008). It is noted as a way of adaptation in a formal organisation such as school. If there is no change of leadership, when the uncertainty appears in the environment due to change in the institutionalization of control, it will hamper the administrator turnover and make the institution and decisions no longer suitable to the environment. It is used to establish the coming together and interest groups within that department and analyze their interactions. When the tenure system, regulations, laws and norms do not suit the departmental pattern, heads of departments will not have good accountability of the members in their jurisdiction. Frequent policy changes influence curriculum and instruction and affect heads of departments' accountability. Changes in Management policy can have a huge effect on the institutional environment.

The level of heads of departments' accountability may be proportional and congruent to the level of social practices of the environment. The term social practices describe how relationships between individuals and groups of individual endure. This describes how individual members relate and how the relationship endures, how institutions and their norms become embedded into the social system to shape the behaviour of the different groups within the system. Therefore, heads of departments should see that institutions and their norms become embedded into the social system in such a way that they help to shape the behaviour of members within the social system. For good accountability from the heads of departments to be feasible or achievable, these variables as the environment, changing values or morality, equal rights, crime and violence, lack of purpose and meaning, and global interdependence, etc, should be taken into consideration. How the environment relates to the individual members as contrasted with the natural environment should be considered by the heads of departments for proper accountability. Ensuring adequate accountability from the heads of departments, the environment of the institution must enjoy good social practices. To ensure adequate social practices and heads of departments' accountability creditably, the institutional environment and the conditions surrounding it must be socially structured and stratified. The academic success or failure of a learner largely depends on this factor (social distinctions) such as race, class, disability, gender. Wikibooks (2010) concluded that social structures can be understood as related to their background. Therefore heads of departments should imbibe the institutions' norms that will shape the actions of the individuals within the social system and see that they are guided.

Statement of the problem

Accountability by the Heads of Department in the higher institutions of learning is not only important to the stability of the employees and students, but necessary for excellent interaction with the organization, and its groups that exist within and outside the institutional boundaries. It is believed that good accountability of environmental variables has a significant influence on the growth and survival of such institution.

In the past one decade, it has observed that administrative accountability in some public organizations including universities has been a problem. Furthermore, some people complained of ineffectiveness of Heads of Department style of administration, getting some of them to give account of their stewardship as regards to their staffs (academic, non – academic), students, facilities, funds and management of these resources have become a difficult task. Often times, issues of hoarding of vital information, loss of records and flawed in administrative procedure has been noticed about some of the heads of department. However, the researcher alleged that some factors could be responsible for non- accountability of heads of department, of which environmental variables, such as ICT utilization, Change of Leadership, and Social could be the possible

caused. This has contributed and or affected the institution adversely in the long run and at the same time resulted in unaccountability of the Heads of Department over the institution environmental variables. The question arising is whether the Heads of Departments have demonstrated their capabilities in giving an account of their responsibilities irrespective of their institutions' environmental variables. This constitutes a problem that the study is out to find, for which many researchers might have sought for a solution to it, yet the problem still evolves. This creates a gap that needs to be filled in the study to contribute to knowledge. It is against this background that this research was conducted to determine the extent to which environmental variables predict Heads of Department Accountability in Public Universities in South-South, Nigeria.

Research questions

To guide the study, the following research questions were posed:

1. To what extent does information technology utilization predict heads of departments' accountability in public universities in South-South, Nigeria?
2. To what extent does change of leadership predict heads of departments' accountability in public universities in South-South, Nigeria?
3. To what extent does social practice predict heads of departments' accountability in public universities in South-South, Nigeria?

Research hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance to guide the study:

Ho1. The extent to which information technology utilization predict heads of department accountability in public universities in South-South, Nigeria is not significant.

Ho2. The extent to which change of leadership predict heads of department accountability in public universities in South-South, Nigeria is not significant.

Ho3. The extent to which social practices predict heads of department accountability in public universities in South-South, Nigeria is not significant.

The findings of this study would be of immense benefit to several existing bodies. It would be useful to the educational planners, policy formulators, decision-makers, school administrators, heads of departments, lecturers, parents, students and even future researchers. Its findings would be beneficial to the Educational Planners, Policy Formulators, decision-makers, School Administrators as they would be able to identify the different challenges and groups that obstruct heads of departments' accountability in different educational institutions. They would be able to make policies and managerial decisions that would ensure and encourage appropriate heads of departments' accountability in Universities. They would also be able to device a means of strategizing, designing and improving environment of each institution boundaries and provide a good scenario that will motivate the heads of departments to improve their accountabilities.

The findings of this study would also be useful to heads of departments and would-be heads of departments as they would be able to identify different variables that could improve their accountability, job fulfillment, increased self-worth and value for their professions.

When heads of departments' accountability improve with good results, they would put in their best while lecturers would give their best to students to enable them to achieve their best academically thereby prompting parents to have interest in providing for their academic needs, knowing that their effort will not be in vain. Finally, the outcome of this research would be beneficial to researchers at different levels as it would contribute to knowledge and serve as reference material for future researchers.

Literature review

The study based its theory on behavioural theory propounded by John B. Watson in 1958. The proponent was interested in the specific behaviours and actions of leaders rather than their traits or characteristics. The theory stresses that effective leadership is the result of many learned skills. Watson (1958) states that individuals need three primary skills to lead their followers – technical, human and conceptual skills.

Technical skills refer to a leader's knowledge of the process or techniques. Human skills mean that one can interact with other individuals and Conceptual skills enable the leader to come up with ideas for running the organisation smoothly. They observed that applying it at the workplace will help form and shape the kind of leadership that will exist and will help to improve leadership skills.

The relevance of the theory to the study is that heads of departments in tertiary institutions may apply this theory in workplace or leadership strategies to help in shaping the kind of governance that might exist in the department in order to be accountable to the stakeholders that make up the educational system. The theory implies that heads of departments in an institution cannot succeed in such an environment that does not beef their good behaviour/character to have good interaction among employees, students and other stakeholders. If the heads of the department do not exhibit the behaviour of learning ways and skills that will help them to lead the subordinate, the need for them to devoted time without number to monitor all the factors that consist the institutional environmental variables for changes in a proactive manner will not occur effectively.

HODs need to have the prerequisite leadership knowledge of the different processes such as technical, human and conceptual skills so that they can appropriately utilize their brainpower behind the environment, to address unpredictable occurrences that will arise. When HODs are conversant with the technical know-how of the department techniques, it will help them to strategize ideas that will result in organisational productivity, effectiveness and efficiency and also will enhance their accountability. This means that HODs level of behaviour and good character in the department is a function of their unaccountability of environmental variable. In other words, the HODs effectiveness in leadership behaviour in institutions environmental variables would determine the level of accountability in terms of ICT utilization, change of leadership, and social practices.

Concept of Environmental variables

Educational institutions cannot survive in isolation of the environment in which the institution is situated. As society is dynamic, so the interest of the people (members) to institutions' activities needs to be renewed. For an educational institution to develop its potentials there must be a cooperation between the citizens of the community and the institution having synergy with institution's personnel in initiating supervisory activities that will boost the strength of the institutions. It is very vital to maintain cordial relationship between the environment and the institutions. It is of note that educational institutions are the mirror of their environment variables. The institution's curriculum can also be affected by what the citizens of such environment desire for their children (students).

Ashim (2009) noted that for any organization to survive and prosper there is a need for such organization (educational institution) to familiarize itself with the environmental organisms that are around it (that is the people and the institution). The source noted that it is important to manage the right stuff of the environment to identify the unexpected occurrence and works towards bridging the gap for the growth of the institution. The environmental variables evolved by the researcher are shown in fig.1 as a model guiding the principles of environmental variables.

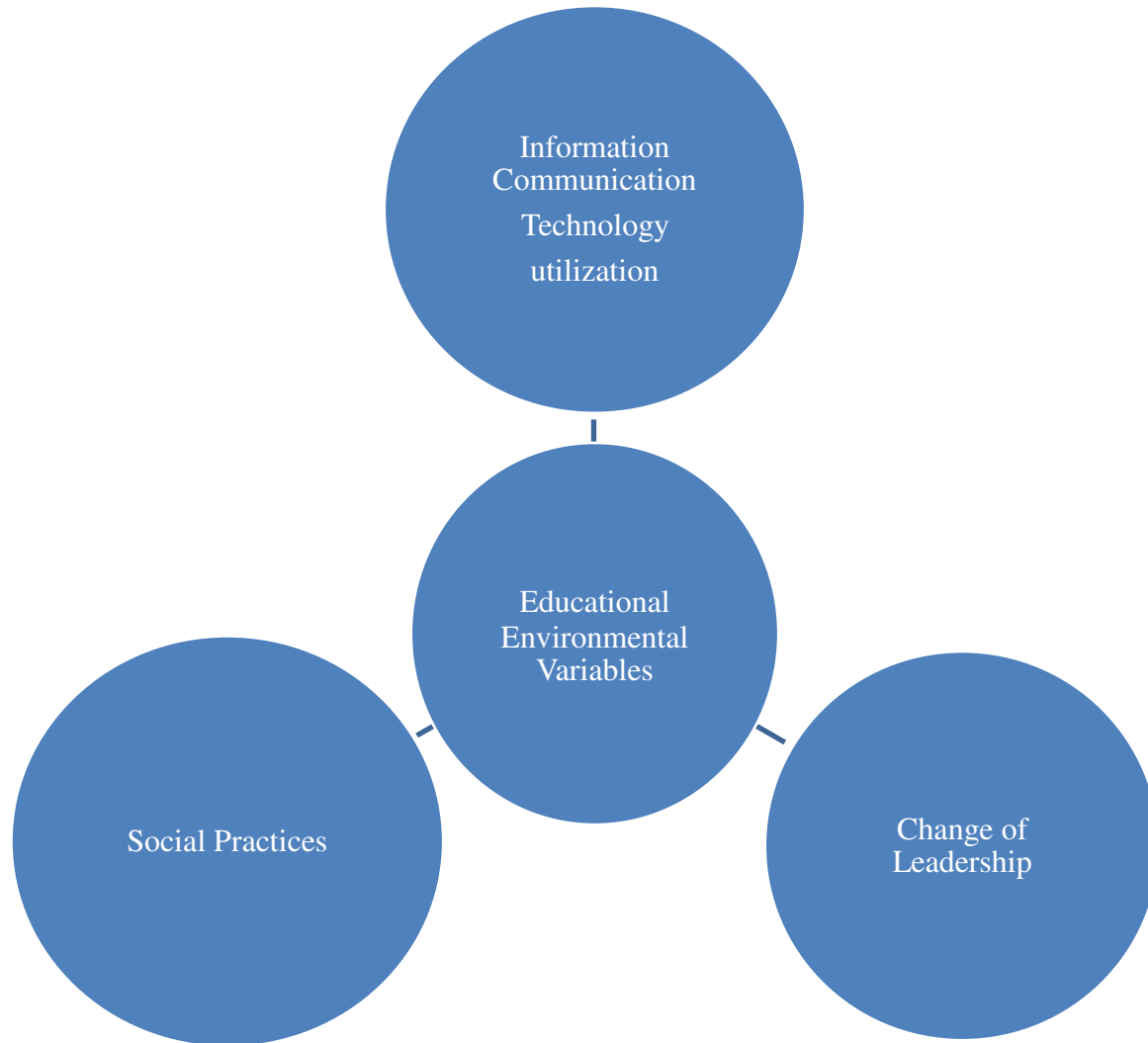


Figure 1. Researcher developed Environmental Variables Model.

Adapted from Hoy, (2013)

The researcher believes that constant monitoring of these environmental variables of educational institutions will gear up a high level of accountability from the heads of departments thereby producing expected outcomes and facilitating good information, leadership, social and educational advancement.

Research method

The correlation design was used for the study. The population for the study consisted of all the 374 Heads of Departments in six public universities in south – south, Nigeria during the 2019/2020 academic year. The sample of the study consisted of 306 Heads of Departments representing 90% of the Heads of Departments population. Multi - stage sampling technique was used to select sample from the six federal universities in South-South Geo-Political Zone of Nigeria. The instruments for data collection was the researcher – made instruments titled “Environmental Variables questionnaire (EVQ) and Heads of Department Accountability Questionnaire (HDAQ)” which were validated by experts in the Educational Foundation, Guidance and Counselling, Curriculum Studies, Educational Management and Planning respectively. The questionnaire utilized a four-point rating scale in which the respondents presented with four alternative response options: Strongly Agree (SA), Agree (A), Disagree (D), Strongly Disagree (SD). The Cronbach’s Alpha Analysis was used to determine the reliability of the instruments which yielded reliability co-efficients of .76 for EVQ and .80 for HDAQ which were quite appropriate and usable. Linear Regression Statistics, R and R² were used to answer the three research questions while F- value was used to test the null hypotheses at 0.05 level of significance.

Data Analysis

Research Question 1

To what extent does information communication technology utilization predicts heads of departments’ accountability in Public Universities in South – South, Nigeria.

Table 1. Result of Simple Linear Regression for the extent to which ICT Utilization predicts HODs accountability in Public Universities in South-South, Nigeria

R	R ²	% of contribution		Remarks	Variables
ICT Utilization					
		.026	.001	0.1%	Very low extent
HODs Accountability					

Source: Field Survey, 2020

The result in Table 1 shows R for the strength of relationship and R² for the determination of the extent to which ICT utilization predicts HODs accountability in Public Universities in South-South, Nigeria. The R-value of .026 indicates a very low relationship between the two variables while the prediction is shown by the value of coefficient R² (.001). This implies that ICT utilization accounts for 0.1% of HODs accountability. Therefore, ICT utilization, to a very low extent, predicts HODs accountability in Public Universities in South-South, Nigeria. The result means that ICT utilization negligibly predicts HODs accountability.

Research Question 2

To what extent does change of leadership predicts heads of departments' accountability in Public Universities in South – South, Nigeria.

Table 2. Result of Simple Linear Regression for the extent to which Change of leadership predicts HODs accountability in Public Universities in South-South, Nigeria

R	R ²	% of contribution		Remarks	Variables
Change of leadership		.306	.093	9.3%	Low extent
HODs Accountability					

Source: Field Survey, 2020

The result in Table 2 shows R for the strength of relationship and R² for the determination of the extent to which Change of Leadership predicts HODs accountability in Public Universities in South-South, Nigeria. The R-value of .306 indicates a low relationship between the two variables while the prediction is shown by the value of coefficient R² (.093). This implies that Change of Leadership accounts for 9.3% of HODs accountability. Therefore, Change of leadership, to a low extent, predicts HODs accountability in Public Universities in South-South, Nigeria. The result means that Change of leadership to a low extent predict HODs accountability.

Research Question 3

To what extent does Social Practices predicts heads of departments' accountability in Public Universities in South – South, Nigeria.

Table 3. Result of Simple Linear Regression for the extent to which Social Practices predicts HODs accountability in Public Universities in South-South, Nigeria

R	R ²	% of contribution		Remarks	Variables
Social Practices		.323	.105	10.5%	Low extent
HODs Accountability					

Source: Field Survey, 2020

The result in Table 3 shows R for the strength of relationship and R² for the determination of the extent to which Social Practices predicts HODs accountability in Public Universities in South-South, Nigeria. The R-value of .323 indicates a low relationship between the two variables while the prediction is shown by the value of coefficient R² (.105). This implies that Social Practices accounts for 10.5% of HODs accountability. Therefore, Social Practices, to a low extent, predicts HODs accountability in Public Universities in South-South, Nigeria. The result means that Social Practices could, to a low extent predicts HODs accountability.

Discussion of Findings

The findings based on hypothesis one revealed that the extent to which ICT Utilization predicts HODs accountability is not significant. This finding could imply that ICT Utilization is not a significant determinant of HODs Accountability. This implies that ICT Utilization to a very low extent determines the successful accountability of HODs. Therefore, HODs utilization of ICT among other variables for efficient and effective accountability in Public Universities in South-South, Nigeria is very low. This finding could be attributed to the fact that ICT is an innovation that makes for transparency and proper accountability. All things being equal, the use of it has been widely agitated for globally. The result of the findings however depicts that some of the HODs are not ICT enlightened. Some are not computer literate and do not have the requisite training on the operations of ICT facilities. These could be attributed to many administrative responsibilities which take much of their attention and or general lack of interest in ICT. It could also be attributed to the fact that many are not competent in handling ICT facilities or that they are computer freak. Findings from this result revealed that many HODs only occupy the seat of HOD and have not been exposed to training on the use of ICT with its relevance in the advanced society. Some of them do not have ICT gadgets like computer, laptops, android phones, etc in their offices, while those who have them in their possession do not have data to browse. One possible explanation that could be given to these setbacks to the use of ICT by HODs is the lack of stable power supply of electricity. Perhaps, this is one of the reasons why most HODs are not involved in ICT utilization. The findings could also be implied that some Lecturers possess a high capacity of intelligent quotient than their HODs and as such HODs find it difficult to fault their lecturers on the utilization of ICT. It could also mean that some HODs are not accommodating and that deprives them of adopting or tapping knowledge and ideas from workers under them.

Suffice it to say again that ICT encourages articulacy and therefore its usage will expose many HODs and land them in ICPC (Independent Corrupt Practices Commission) and EFCC (Economic and Financial Crimes Commission). The findings of this study disclose that majority of HODs are not using ICT and therefore, accountability based on the establishment of ICT is a mirage. This finding is in support of the finding of Agboola and Ukoette, (2018) who conducted a study on "utilization of creativity and innovation on the effective administration of a Nigerian university education" and concluded that HODs utilization of innovation and creativity impact on their administrative effectiveness could be as a result of challenges that pose from risk-taking, phobia for computer usage, lack of ICT facilities and interest. These findings support the findings of Archibong et al, (2010) who carried out a study on ICT competence among academic staff in universities in Cross River State, Nigeria and concluded that majority of the academic staff funded their ICT training; a high number of them have laptops; access to the internet was mainly at the public cyber cafe; the majority (53.3%) rated their ICT competence as low. Inadequate ICT facilities, excess workload and funding were identified as major challenges to ICT usage among academic staff.

The outcome of this result could also be attributed to the fact that HODs in the public universities in South-South, Nigeria were not encourage in the acquisition of ICT skills for utilization which hinder them from developing new approaches to their work regards to effective disseminating of information and so on. The findings of the study also negate the result of findings of Ukoette, (2018) who carried out a study on the role of the school personnel in innovative quality management of ICT facilities in secondary schools in Uyo Urban of Akwa Ibom State, Nigeria and found that for set goals and objectives of the educational sector to aspire to a greater height, it needs effective and efficient utilization of ICT for easy accountability by HODs.

The finding based on hypothesis two revealed that the extent to which Change of Leadership predicts HODs Accountability is significant. This finding could imply that Change of Leadership is a significant determinant of HODs Accountability. This implies that Change of Leadership to a low extent determines the successful

accountability of HODs. It could be attributed to the fact that HODs accounts for good purposes and intentions of the general department which result in structural change and stability by the way they interact and their leadership pattern. Change of leadership explains renewal and turnover of HODs for the structural change of a given polity. The need for change to align a system cannot be overemphasized. The findings from the result of the extent to which change of leadership predicts HODs revealed significance. This could be that there is no disruption of justice in the handling of leadership change. This depicts the level of noticeable co-operation, commitment and maintenance of trust between the HODs and other members of staff. Policies are carried out without bias and prejudices. There is no coercive use of power to enforce compliance. Lecturers do not work through the use of threats. There is HOD/lecturer job satisfaction resulting in high employee turnover. The implications of the findings indicate that HODs accomplish good task accountability in their departmental administrative policies. This could be attributed to good purposes and intentions meted in structural changes without personal interests. There is a succession of policies by successors and transparent decision making

The findings concerning significant influence in the change of leadership prediction on HODs Accountability is in support of the findings of Gerring et al (2012) "Democracy and human development"; Miller, (2015) "Electoral authoritarianism and human development", who opined that human development is expected to improve as a leader becomes more accountable. The findings are also in agreement with the opinion of Norris, (2012) who concluded that vertical accountability gives leaders incentives to promote policies that are in the interest of a wider group of stakeholders to excel at next outing. Moreso, Skaaning (2015) work on 'Lexical index of electoral democracy' supports the findings as he noted that establishment of mechanisms that induces accountability that supports incentives for leaders who would want to aspire for leadership and have interest in meeting the masses demands.

Furthermore, Adesera et al (2013) on their study, "Are you being served? Political accountability and quality government." supported the findings of the study as he echoed that holding the leaders accountable for their actions is relatively receiving reliable and favourable information about their performance. This finding also disagrees with the findings of Mohammed et al (2011) on "Teacher's competencies and factors affecting the performance of female teachers in Bahawalpur" who noted that leadership instability and undue interference are associated with school environment factors problem.

The finding based on hypothesis three revealed that the extent to which Social Practices predicts HODs Accountability is significant. This finding could imply that Social Practices is a significant determinant of HODs Accountability. This result indicates that Social Practices to a low extent determines the successful accountability of HOD's. The University environment is a complex social institution whose social practices: organization, discipline, leadership, and working standards are deeply contested. The implication of this result could be that most HODs in South-South Public Universities exhibit a high level of individual and group relationship which also account in shaping the behaviour of members of the school community system. There are good rapport and response to the needs and welfare of staff by the HODs. Staffs are also taken into consideration and discussion before vital decisions are reached by HODs. The result also depicts that contacts of most of the staff are properly kept concerning encouragement, promotion and practice of super-ordinate interaction between the staff and the HOD. The finding from the result of the extent to which Social Practices predict HODs is significant. This indicates that Heads of department in South-South, Nigeria Public Universities accounts for individual and group relationship and also account in shaping the members' behaviour to be embedded in the social system. The findings negate the findings of Joshi and Houtzagers (2012) 'Widgets or watchdogs?' who viewed that it is important to disaggregate social accountability by examining the different actions and activities that stakeholders usually engage in to attract administrators' responsiveness to their demands.

The implication of the result could infer that the HODs never under-estimate individual lecturers in the department in terms of race, class, disability, gender, workload and background. These findings correlate with Sparkes, (2007) on 'Embodiment, academics, and the audit culture: a story seeking consideration' who noted that administrators should include a substantial increase in workloads and stress-related illness. When the social environment is supportive and accounted for by the HODs, it will reduce stress and depression. The implication of the result of the finding could also mean that HODs support both the lecturers and students by allowing them to interact with each other and engage on social responsibilities that give freedom of socialization among peers. These findings correlate with Jose, et al, (2018) on their work on Social responsibility among university students: who concluded that the social responsibility module has a significant impact on students with the effect varying depending on the degree being studied.

Conclusion

The objective of the study was to determine the extent to which environmental variables predicts heads of departments' accountability in public universities in south-south, Nigeria. Based on the findings of the study, the following conclusions were drawn. ICT Utilization is not a significant predictor of HODs accountability, Change of Leadership is significant predictor of HODs accountability and Social Practices is significant predictor of HODs accountability.

Educational Implications of Findings

(i) The implication of the findings could be that administrators do not assist in training and re-training of leaders and lecturers to promote ICT literacy. Leadership should see the need of HODs to utilize ICT facilities among other variables to account efficiently and effectively for the tendency of achieving better administrative task responsibility in terms of technological development/advancement hence, the realm of changing the educational system to be abreast of changing needs of the societies and individuals will not be defeated.

(ii) Leadership should prioritize the goals/objectives, knowing that all cannot be actualized at the same time. It is best to allow the operational terms to provide a social basis for defining practical programmes of action which include research and training among staff.

iii) There is the need for the co-operation and increased help of the social facets that will require research and training which will ginger interchange of experiences and knowledge among stakeholders so that each benefits from and contribute to the progress of one another.

Contribution to Knowledge

This study on Environmental variable and HODs accountability in public universities in South-South, Nigeria has contributed to knowledge in the following ways:

- (i) The study provides data and information on Environmental variable and HODs accountability in Public Universities. Educational consultants, management consultants, scholars, practitioners, psychologists, employers of labour, industrialist and employees will now get a fair knowledge of the types of Environmental variable in their place of primary assignments, how they should

improve upon them and the pros and cons, how to enhance accountability, responsibility or answerability, commitment or no commitment, among others.

- (ii) Subsequently, most studies in the South-South concentrated on three (3) federal universities (UNIUYO, UNICAL and UNIPORT) while the present study included UNIBEN. Furthermore, the result of this study, when made available through publication could assist most universities and other tertiary institutions across the federation. The internet will capture the research as soon as it is approved and worldwide via (www) for public consumption. All this will take place after such approval by the appropriate authority of the university where the study was originally carried out.
- (iii) The findings from most studies previously carried out as reviewed show that environmental factors play a preponderant role noticeably, social conditions influence on HODs' work.

Recommendation

It is recommended based on the findings and conclusions in this study that:

- (i) Institution management should develop a safe work environment that will encourage HODs to acquire skills on the utilization of ICT facilities to improve their administrative accountability.
- (ii) Educational institution management should encourage HODs to develop more skills by inculcating their subordinate in decision making for proper action to be taken especially when it concerns the staff members matter.
- (iii) Educational institution management should ensure that cordial relationship exists between HOD and their staff for the easy realization of departmental goals/objectives.

Suggestions for Further Studies

- (i) The present work was delimited to six public universities in South-South Nigeria. Similar studies should be conducted in other zones which will be used to compare the findings of the present study.
- (ii) Similar research can also be conducted to investigate the influence of Environmental variable on learning or an organization in different industries, not merely on educational institutions of higher learning.
- (iii) A study to investigate the relationship between Environmental variable and HODs accountability should be conducted in State Universities in South-South Nigeria.

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Appendix 1

Population Distribution of Institutions, Faculties, Departments, & Number of HODs Selected (90%)

Institution	Faculty	Departments	HODs
University of Uyo, Uyo, Akwa Ibom State	Basic Medical Science	3	3
	Clinical Science	10	9
	Agriculture	11	10
	Arts	11	10
	Business Administration	5	5
	Education	8	7
	Engineering	8	7
	Environmental Studies	11	10
	Law	3	3
	Pharmacy	5	4
	Sciences	11	10
	Social Sciences	6	5
Sub Total	12	92	83
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Source: (University of Uyo Convocation Brochure, 2019)

Institution	Faculty	Departments	HODs
University of Calabar, Calabar, Cross River State	Basic Medical Science	4	4
	Allied Medical Science	4	4
	Agriculture & Wild Life		
	Forestry	9	8
	Arts	9	8
	Management Sciences	4	4
	Education	7	6
	Engineering	1	1
	Administration	5	4
	Law	2	2
	Dentistry	5	5
	Medicine	5	4
	Sciences	13	12
	Social Sciences	6	5
Sub Total	13	74	67
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Source: www.uncial.edu.ng;

Institution	Faculty	Departments	HODs
University of Benin, Benin-City, Edo State	Basic Medical Science	5	5
	Administration	5	5
	Agriculture	6	5
	Arts	6	5
	Management Sciences	7	6
	Education	7	6
	Engineering	7	6
	Environmental Studies	4	4
	Law	4	4
	Medicine/Dentistry	6	5
	Life Science	4	4
	Pharmacy	6	5
	Physical Sciences	5	5
	Social Sciences	6	5
Sub Total	14	78	70

Source: www.schoolcontents.info>uniben

Institution	Faculty	Departments	HODs
University of Port Harcourt, River State	Basic Medical Science	8	7
	Clinical Science	12	11
	Agricultural Science	6	5
	Arts	8	7
	Management Sciences	5	5
	Education	8	7
	Engineering	7	6
	Environmental Sciences	1	1
	Law	4	4
	Humanities	9	8
	Dentistry	5	5
	Sciences	10	9
	Pharmaceutical Sciences	8	7
	Social Sciences	4	4
Sub Total	14	95	86

Source: www.uniport.edu.ng

Institution	Faculty	Departments	HODs
Federal University of Petroleum Resources, Effurun, Delta State	Science	8	-
	Technology	5	-
Sub Total	2	13	-
=====			

Source: www.fupre.edu.ng

Institution	Faculty	Departments	HODs
Federal University, Otuoke, Bayelsa State	Science	5	-
	Engineering & Technology	2	
	Humanities & Social Science	8	-
	Business Studies/ Management Sciences	3	
	Education	4	
Sub Total	5	22	-
Grand Total	60	374	306
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Source: www.fuotuke.edu.ng

Appendix 11

Sample Distribution of Institutions, Departments, & Number of HODs in Federal Universities in South-South Nigeria

S/N	Names of Federal Universities	Faculty	Department	Sample of HODs (90%) prop. from each dept.	Lecturers Raters (3 persons)
1	University of Uyo, Uyo, Akwa Ibom State	11	83	83	249
2	University of Calabar, Calabar, Cross River State	12	67	67	201
3	University of Benin, Benin, Edo State	13	70	70	210

4	University of Port Harcourt, Port Harcourt, Rivers State	13	86	86	258
TOTAL		49	306	306	918

Source: Academic units of each university

Appendix

Environmental variables and heads of departments accountability questionnaire (EVHDAQ)

Part 1: Demographic Information

Please fill in the needed information

Name of Institution.....

Department.....

Part 11: Environmental variables Questionnaire (EVQ)

Instruction: Please tick ☒ indicate your level of agreement or disagreement to each of the following statements based on environmental work behaviour of lecturers.

Strongly Agree (SA)

Agree (A)

Disagree (D)

Strongly Disagree (SD)

s/n	Item: Information and communication technology utilization	SA	A	D	SD
1	Motivation of teaching staff affect the acquisition of ICT skills for utilization				
2	Encouragement over the adoption of ICT does not give rise to lecturers' usage				
3	Having personal computers affect the interest of workers on ICT utilization				
4	Poor funding affect lecturers in the acquisition of ICT skills				
5	Administrators do not assist in training and retraining of leaders through in-service courses to promote ICT literacy				
6	Administrators are stereotype in circulating information				
7	Information regarding to staff are disseminated urgently with text messages				
8	Good communication skills are maintained in the department				
	Change of leadership				
9	There is maintenance of departmental commitment by the leaders				
10	There is authoritative rule over the change of leadership				

11	Transparent decisions are not always taken in the departments				
12	Coercive powers is used to delegate responsibilities				
13	There is maintenance of trust in the departments				
14	Policies are carried out without leadership bias				
15	Task accomplishment is being given priority in the department				
16	Policy developed by one head of department is carried out by the successor				
	Social practices				
17	There is good response to staffs' invitation to occasions				
18	Staff needs are not always given attention				
19	Super-ordinate interaction with subordinate is always encouraged in the departments				
20	Staff complaints are not always given listening ear by the leaders				
21	Contacts of most of the staff in the departments are properly kept				
22	Company of colleagues are not always enjoyed during official hours				
23	There is good rapport among staff whenever they gather formally				
24	Staff are involved in vital issues before decisions are being taken				

Appendix

Heads of departments' accountability questionnaire (HDAQ)

Instruction: Please tick ☐ to indicate your level of agreement or disagreement to each of the following statements based on your heads of departments accountability in environmental factor work behaviour.

Strongly Agree (SA)

Agree (A)

Disagree (D)

Strongly Disagree (SD)

S/N	Item: Accountability My HoD	SA	A	D	SD
1	Take responsibility for the support of overall academic activities				
2	accounts for the overall staffs' administration				
3	answers to overall psychological needs of staff				
4	does not encourage teaching – learning experiences				
5	does not encourage internal /external communications				
6	works within the institutions safety policy to ensure safe working environment for staff				
7	does not account for his/her responsibility				
8	demonstrates disciplinary action on lecturers				
9	does not account for good decision making among colleagues in the department				
10	guides the individuals to make reasonable decision responsibly				
11	maintains up-to-date registration of assets in the department				

12	is answerable to health management of the staff				
13	ensures that staff development programmes are valued				
14	does not encourage the involvement of lecturers in planning process				
15	ensures accountability of performance at all levels				
16	does not display the spirit of transparency in her/her administration				
17	relates to issues that are inevitable expectations on the part of the lecturers				
18	does not answer to trivial issues that does not build co-operation among lecturers				
19	does not incorporate adjunct lecturers in the department				
20	does not encourage public relation in the department.				
21	do publishes staff work schedules regularly				
22	Does not care if lecturers attend lectures on time				
23	ensures that staff perform their task properly				
24	accounts that staff work in harmony by listening to their complaints				
25	does not encourage high quality of teaching				
26	Accounts for established code of conduct of the department				
27	does not account for indiscipline				
28	does not provide important resource to aid implementation of departmental programmes				
29	Take responsibility for self- development by staff				
30	accounts for mentoring of subordinates				

Appendix

Cronbach's Alpha Analysis of Educational Institutions' Environmental Variables and Heads of Department Accountability

S/N	Variables	Number of Items	Size N	Sample Mean Deviation x	Standard Alpha SD	Cronbach
1.	ICT Utilization	8	30	33.10	3.54	0.71
2.	Change of Leadership	8	30	32.95	3.63	0.72
3.	Social Practices	8	30	29.15	6.42	0.75
4.	HODs accountability	30	30	90.10	9.89	0.80