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Cooperative and Task-based Learning Strategies and students' academic performance in Reading Comprehension in Obio-Akpor Local Government Area of Rivers State

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Abstract

The study adopted quasi- experimental design which involved pretest, treatment, posttest, control and experimental groups. The population of the study was thirteen thousand, eight hundred and thirty-five senior secondary two students in twenty-four public senior secondary schools in Obio-Akpor Local Government Area of Rivers State that were enrolled in 2021/2022 academic session. The sample size was two hundred and three senior secondary two students from four selected public senior secondary schools. A Researcher Made Structured Instruments titled Reading Comprehension Performance Test was used for data collection. The reliability of the instrument was determined using test retest method and the result obtained was analysed using Kuder-Richardson Formula 21. The reliability index of 0.86 was obtained which was high enough to consider the instrument reliable. The study was guided by three objectives, three research questions and three hypotheses. Mean standard deviation were used to analyse the research questions while paired t-test was used to test the null hypotheses at 0.05 level of significance. The study found out that the combination of cooperative and task-based learning strategies improved students' performance and had significant high mean scores on students in Reading Comprehension. The study concluded that those taught with the combination of cooperative and task-based learning strategies outperformed those taught with either cooperative or task-based learning strategy. The study established the combination of Cooperative and Task-based Learning Strategies as learning strategies that improved Senior Secondary Two students' academic performance in Reading Comprehension.

Introduction

A major goal of education is to ensure that every student has the opportunity to excel in school and life. This goal of life constantly presents the students with new challenges as they pass through different endeavours in life. The students' performances in school therefore, depend on the students' mental and physical abilities which are influenced by a number of factors. Among these important factors that affect students' learning are critical thinking skill and learning styles which have a great influence on the students' overall academic achievement especially in English Language. The English language is a medium of communication that can manifest through its use in speech, reading, writing and listening to achieve and gain competencies and proficiencies in meeting the diverse needs of the society.

In Nigeria today, it is the researcher's view that most of the problems that students encounter while going through the learning process result from a kind of natural desire to avoid confusion and frustration and their inability to understand other peoples' points of view. Most of them often see the world exclusively within their own egocentric (self-centred) point of view. This invariably results in poor academic achievement, low grades, low self-esteem, which ultimately culminates into inefficient use of the English language for the purpose of communication and social interaction, especially during reading comprehension. The English language is an important language in the world. About a tenth of the world's population use English as a mother tongue and about a fourth of the world's population use English as a

second or foreign language. It is a language used by most people in the world because no other language is as widely used as the English language. Reading is a means of language acquisition, communication, and of sharing information and ideas. Reading according to (Ojikutu, 2011) is a mental activity that involves the combination of the activities of the eyes and the mind to perceive and explore written symbols. It is a complex process that involves many factors like prior knowledge, reading habits, reading context, teachers' teaching methods and others that affect comprehension (Wilkinson and Son, 2011; Gurses and Bouvet, 2016). Reading is a complex interaction between the text and the reader which is shaped by the reader's prior knowledge, experiences, attitude, and language community which is culturally and socially situated. The reading process requires continuous practice, development, and refinement. In addition, reading requires creativity and critical analysis.

Therefore, reading comprehension is a direct by-product of reading fluency (Ness, 2016). Expected levels of reading comprehension are not the same for different levels of education. A child first learns how to read with the emphasis on understanding the meaning of words and how they become sentences to form basic ideas. As the child becomes adult, his/her reading comprehension level advances to include semantic and inferential understanding of the text. According to researchers, the most basic part of comprehension is word identification (Cunningham et al, 2004). Reading Comprehension is the construction of meaning from printed material. It is an interactive process that requires the use of background knowledge, which the reader brings, in combination with the material that is found on the printed page. Readers connect what they already know with information in the text (Hornby, 2013). Reading comprehension depends on many factors: the students' knowledge and experiences, word recognition strategies, thinking abilities, perceptual and sensory abilities, as well as their purpose for reading and familiarity with various comprehension (learning) strategies. Reading does not consist of a single ability as most people think. It includes: recognizing individual words, group words into thought units and relating the thought units into a meaningful sentence, paragraph, chapter or book. Considering the historical role of English Language and the importance of reading comprehension in the learning of the language, a competent English language teacher should be aware of the different methods, techniques and strategies for teaching reading comprehension and should know children vary in their responses to different types of instruction. Therefore, it is the duty of the teachers to find the methods that would serve the reading needs of their students. It is generally believed that the methods used in teaching reading comprehension have lasting effects on the students' performance. Cooperative learning strategy is a type of strategy that has evolved over the last thirty (30) years and is still evolving. It encourages an educational approach to learning that involves groups of students working together to solve a problem, complete a task, or create a product. According to Gerlach (1994), "Cooperative learning strategy is based on the idea that learning is a natural social act in which the participants talk among themselves and it is through the talk that learning occurs". Social learning or learning as part of a group is an important way to help students gain experience in collaboration and develop important skills in critical thinking, self-reflection and co-construction of knowledge. On the other hand, Tekena (2014) opined that task-based language teaching is a branch of communicative language teaching (CLT) in that it focuses on the use of authentic language and making students to do meaningful task using the target language. These tasks may include visiting a farm, doctor or conducting an interview. The students are assessed primarily on the task outcome. Task Based Language Teaching (TBLT) makes the performance of meaningful tasks central learning process instead of a language structure of function to be learnt, students are presented with a task they must solve.

In addition, performance is the measurement of students' success in academics. It is done to find out how well the students meet the standards set for them by the teacher, local government and institution itself. In the past, academic performance was often determined

more by hearing it than today and teachers' observation alone was used to ascertain the assessment of the students. According to Madden (2014), the summation or numerical way of finding out how well a student has performed is the recent discovery that is used along with teachers' assessment of the students. Today, irrespective of the criticism, determination of students' performance is on-going because it fulfils a good number of purposes.

Statement of the Problem

The problem of inefficient and ineffective learning of English Language among secondary school students has been of utmost concern in the education sector. This problem has adversely affected students' reading comprehension and academic lives. Therefore, it is pertinent to find out if Cooperative and Task-based Learning Strategies affect students' academic performance in Reading Comprehension in the Obio-Akpor Local Government Area of Rivers State.

Aim and Objectives of the Study

The aim of this study is to investigate learning strategies and students' academic performance in Reading Comprehension in the Obio-Akpor L.G.A of Rivers State. In specific terms, the objectives of this study are to;

1. determine the effect of cooperative learning strategy on the mean performance scores of students in reading comprehension;
2. examine the effect of task-based learning strategy on the mean performance scores of students in reading comprehension;
3. ascertain the effect of cooperative and task-based learning strategies on the mean performance scores of students in reading comprehension.

The following research questions are answered to guide this study:

1. What is the effect of cooperative learning strategy on the mean performance scores of students in reading comprehension?
2. What effect does task-based learning strategy have on the mean performance scores of students in reading comprehension?
3. What difference exists on the mean performance scores of students in reading comprehension using cooperative and task-based learning strategies?

Hypotheses

Three null hypotheses were formulated and tested at 0.05 level of significance guided the study:

1. There is no significant effect of cooperative learning strategy on the mean performance scores of students in reading comprehension.
2. Task-based learning strategy does not significantly affect students' mean performance scores in reading comprehension.
3. There is no significant difference on the mean performance scores of the students taught reading comprehension using cooperative and task-based learning strategies.

Methodology

The study adopted non-equivalent quasi experimental design. The study area was carried out in Obio/Akpor Local Government Area of Rivers State The population of the study consists of all the students in Senior Secondary Schools (SSII) in Obio/Akpor, Rivers State. There are 24 public senior secondary schools in Obio/Akpor which comprised thirteen thousand, eight hundred and thirty-five Senior Secondary School two (SSII) students admitted 2021/2022 academic session. The sample size for the study was two hundred and three senior secondary school two students from three selected public senior secondary schools using the multistage sampling technique.

Results and Discussion

The result of the study was presented according to the research questions asked and hypotheses raised.

Research Question 1: What is the effect of cooperative learning strategy on the mean performance scores of students in reading comprehension? To answer this research question, mean and standard deviation were employed and later the gained mean value from the pretest to post-test level was determined to give in site on the effect of cooperative learning strategy. The result of the analysis is presented in table 1.

Table 1: Mean and standard deviation on the effect of cooperative learning strategy on students' performance in reading comprehension

Test stage	N	Mean	SD	Gained mean
Post test	64	79.92	11.00	54.06
Pretest		25.86	11.50	

In table 1, it is shown that the students in cooperative learning strategy group had the mean scores of 25.86 (SD = 11.00) and 79.92 (SD = 11.50) respectively at the pretest and post-test stages. Hence it is affirmed that from the pretest to the post test stage they gained a mean value/score of 54.06. So cooperative learning strategy has a positive effect on the academic performance of students in reading comprehension.

Research Question 2: What effect does task-based learning strategy have on the mean performance scores of students in reading comprehension?

This research question was answered using mean and standard deviation, which were computed separately for the pretest and post-test. Later the difference between the mean scores at the post and pre-test stages was determined to serve as the gained mean. The results obtained from the analysis are as displayed in table 2.

Table 2: Mean and standard deviations on the pretest and post-test academic performance of the student taught with the task-based in reading comprehension.

Test stage	N	Mean	SD	Gained mean
Post test	70	69.14	12.16	40.47
Pretest		28.67	12.07	

In table 2, it is shown that the students in task-based learning strategy group had the mean scores of 28.67 (SD = 12.07) and 69.14 (SD = 12.16) respectively at pre and posttest stages. These mean scores yielded a gained mean score of 40.47 from the pretest to the post test stage. Hence, task-based learning strategy has a positive effect on the academic performance of students in reading comprehension.

Research Question 3: What difference exists on the mean performance scores of students in reading comprehension using cooperative and task-based learning strategies?

To answer this research question, mean and standard deviation were employed. These were computed separately at pretest and posttest stages, later difference between the mean scores at the pretest and posttest stages was obtained to serve as the gained mean score. The results of the analysis are as presented in table 3.

Table 3: Mean and standard deviation on the effect of task-based and cooperative combined learning strategies on academic performance of students in reading comprehension.

Test stage	No	Mean	SD	Gained mean
Post test	69	85.22	9.21	57.75
Pretest		24.46	11.20	

In table 3, it is shown that students in task-based and cooperative combined learning strategy had the mean scores of 27.46 (SD = 11.20) and 85.22 (SD = 9.21) respectively at their pretest and posttest stages, these yielded a mean difference of 57.75, which is representing the gained mean score from the pretest to the post test stage. Hence the combination of task-based and cooperative learning strategies has a positive effect on the academic performance of students in reading comprehension.

Hypothesis 1: There is no significant effect of cooperative learning strategy on the mean performance scores of students in reading comprehension.

To test this hypothesis, a paired t-test statistics was employed. After the analysis the results obtained are displayed on table 4.

Table 4: Paired t-test analysis on the effect of cooperative learning strategies on students' performance in reading comprehension.

Test stage	N	Mean	SD	Gained mean	df	t-cal	p-value
Post test	64	79.92	11.00	54.06	63	24.71	0.0005
Pretest		25.86	11.50				

Table 4. showed that the students taught reading comprehension using cooperative learning strategy had the mean scores of 25.86 (SD = 11.50) and 79.92 (SD = 11.00) at pretest and posttest respectively which yielded a gained mean score of 54.06. Then when this gained mean score was subjected to paired t-test statistical analysis a calculated t-value of 24.71 was obtained at df of 63 at 0.0005 level of significance ($p < 0.05$), which is less than 0.05 the chosen alpha level. Thus the null hypothesis was rejected indicating that cooperative learning strategy has a significant effect on the performance of students in reading comprehension.

Hypothesis 2: Task-based learning strategy does not significantly affect students' mean performance scores in reading comprehension.

This null hypothesis 2 was tested using paired t-test statistical analysis which was computed using their pretest and posttest mean scores alongside their standard deviation. The results obtained are presented in table 5.

Table 5: Paired t-test analysis on the effect of task-based learning strategy on the performance of students in reading comprehension.

Test stage	N	Mean	SD	Gained mean	df	t-cal	p-value
Post test	70	69.14	12.16	40.47	69	19.19	0.0005
Pretest		28.67	12.07				

In table 5, it is shown that the students exposed to reading comprehension using task-based learning strategy had the mean scores of 28.67 (SD = 12.07) and 69.14 (SD = 12.16) at pretest and posttest stages respectively. These yielded a gained means score of 40.47. When this gained mean score was subjected to paired, t-test statistic a t-calculated value of 19.19 was obtained at df of 69 at 0.0005 level of significance ($P < 0.05$) which is less than 0.05, the

chosen alpha level. Thus the null hypothesis was rejected, indicating that task-based learning strategy had a significant effect on the performance of students in reading comprehension.

Hypothesis 3: There is no significant difference on the mean performance scores of the students taught reading comprehension using cooperative and task-based learning strategies.

In order to test this null hypothesis 3, paired t-test statistical analysis was employed. To execute this, the mean and standard deviation of the students' scores in their pretest and posttest stages were used. The results obtained are presented in table 6.

Table 6: Paired t-test analysis on the effect of the combination of task-based and cooperative learning strategies on the performance of students in reading comprehension.

Test stage	N	Mean	SD	Gained mean	df	t-cal	p-value
Post test	69	85.22	9.21	57.75	68	32.27	0.0005
Pretest		27.46	11.20				

Information in table 6 revealed that the students taught reading comprehension using the combination of task-based and cooperative learning strategies had the mean scores of 27.46 (SD = 11.20) and 85.22 (SD = 9.21) at pretest and posttest stages respectively. These yielded a gained mean score of 57.75, which when subjected to a paired t-test analysis yielded a calculated t-value of 32.27 at df of 69 at 0.0005 level of significance ($P < 0.05$), which is less than 0.05, the chosen alpha level. Thus, the null hypothesis 3 was rejected indicating that the combination of task-based and cooperative learning strategies had significant effect on the performance of students in reading comprehension.

Discussion of Findings

Based on data analysis, the major findings of the study are:

1. Cooperative learning strategy had significant effect on the performance mean scores of students in reading comprehension.
2. Task-based learning strategy had a significant effect on the performance of students in reading comprehension.
3. The combination of task-based and cooperative learning strategies had significant effect on the performance of students in reading comprehension.

The finding in table 1 showed that the students in cooperative learning strategy group had significant difference at the pretest and post-test stages. So cooperative learning strategy had a positive effect on the academic performance of students in Reading Comprehension.

When subjected to statistical in table 4, the students taught reading comprehension using cooperative learning strategy had the mean scores of 25.86 (SD = 11.50) and 79.92 (SD = 11.00) at pretest and posttest respectively which yielded a gained mean score of 54.06. Then when this gained mean score was subjected to paired t-test statistical analysis a calculated t-value of 24.71 was obtained at df of 63 at 0.0005 level of significance ($p < 0.05$), which is less than 0.05 the chosen alpha level. Thus the null hypothesis was rejected indicating that cooperative learning strategy has a significant effect on the performance of students in reading comprehension. The findings above are in agreement with those of Anyanele (2014), Dabaghmanesh, Zamanian and Bagheri (2013), Nittaya and Nutrapha (2016) which found that there was significant difference in pretest and posttest in performance of students taught Reading Comprehension using cooperative learning strategy. This result is in consonance with the findings of Chisunum (2014) which affirmed that cooperative method showed significant different on the students' performance mean scores when compared to conventional method.

In table 2, it is shown that the students in task-based learning strategy group had the mean scores of 28.67 (SD = 12.07) and 69.14 (SD = 12.16) respectively at pre and posttest stages.

These mean scores yielded a gained mean score of 40.47 from the pretest to the post test stage. Hence, task-based learning strategy has a positive effect on the academic performance of students in reading comprehension. When subjected to statistical test, table 5, showed that the students exposed to reading comprehension using task-based learning strategy had the mean scores of 28.67 (SD = 12.07) and 69.14 (SD = 12.16) at pretest and posttest stages respectively. These yielded a gained means score of 40.47. When this gained mean score was subjected to paired, t-test statistic a t-calculated value of 19.19 was obtained at df of 69 at 0.0005 level of significance ($P < 0.05$) which is less than 0.05, the chosen alpha level. Thus the null hypothesis was rejected, indicating that task-based learning strategy had a significant effect on the performance of students in reading comprehension. This is in agreement with the research findings of Murray (2007) which showed that there was significantly higher performance mean of students in task-based than in the competitive condition. The findings of the study carried out by Abdollah (2015) showed that cooperative learning method had a higher effect on L2 reading comprehension skills when compared with the effects of traditional teaching methods which is in agreement with the findings of the present study.

In table 3, it is shown that students in task-based and cooperative combined learning strategy had the mean scores of 27.46 (SD = 11.20) and 85.22 (SD = 9.21) respectively at their pretest and posttest stages, these yielded a mean difference of 57.75, which is representing the gained mean score from the pretest to the post test stage. Hence the combination of task-based and cooperative learning strategies has a positive effect on the academic performance of students in reading comprehension. This was in line with the findings of Isiaka, and Mudasiru (2014). They found out that there was significant difference in the performance of the groups. Again, their findings suggested that combined learning strategies should be encouraged for effective learning outcome.

When subjected to statistical test as revealed in table 6, the students taught reading comprehension using the combination of task-based and cooperative learning strategies had the mean scores of 27.46 (SD = 11.20) and 85.22 (SD = 9.21) at pretest and posttest stages respectively. Thus, the null hypothesis 3 was rejected indicating that the combination of task-based and cooperative learning strategies had significant effect on the performance of students in reading comprehension. This is in consonance with the findings of Bukunola and Idowu (2012). Their findings revealed that there were significant interaction effects of treatment and anxiety on the academic achievement of students at the posttest and delayed-posttest levels. This study revealed that students in the two cooperative learning strategy groups had higher immediate and delayed academic achievement mean scores than the students in the conventional lecture group. In support of the above assertion, Azizeh (2015) found in another study that students' performance is improved when learning strategies are student-centered.

Conclusions

The study concluded that those taught Reading Comprehension using the combination of task-based and cooperative learning strategies outperformed those taught using either of the two strategies. However, the extent students' performance could be enhanced depends on how involved the students are during the learning process. It has been stated in this study that interactive learning strategies like Cooperative and Task-based Learning Strategies make learning student-centred therefore the combination of the two should be encouraged.

Recommendations

From the findings, these following recommendations were made:

1. The English Language teachers should make concerted effort to adopt learning strategies that can encourage students' active participation in reading comprehension.
2. The English teachers should endeavor to incorporate the combination of task-based and cooperative learning strategies in teaching students reading comprehension since the

combination of Cooperative and Task-based learning strategies improved performance in Reading Comprehension.

3. The English teachers should avoid using only one particular learning strategy always while teaching reading in order to improve performance.

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MANAGEMENT OF SCHOOL HEALTH PROGRAMMES AND ENVIRONMENTAL SUSTAINABILITY IN PUBLIC SECONDARY SCHOOLS IN RIVERS STATE.

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Abstract

The study examined the relationship between the management of school health programmes and environmental sustainability in public secondary schools in Rivers State. Two (2) research questions and two (2) hypotheses were answered, and tested in the study respectively. The study adopted the correlational design just as the population was the 258 public senior secondary schools in Rivers State with 258 principals from the schools as the participants in the study. The samples of the study were 168 principals. The purpose of the study with a reliability coefficient of 0.73 and 0.87. Pearson Product correlation co-efficient statistics were used in answering the research questions while r. values in the Pearson results were converted to z. values and used in testing the hypotheses at a 0.05 level of significance. The result of the study shows that there is a significant relationship between variables of health programmes management and environmental sustainability in schools. Consequently, it is recommended among others that school administrators should continue to establish enlightening programs on health problems for school members as there is need for continuous rational management of school health care facilities.

Keywords: School Health, Environmental, Sustainability

INTRODUCTION

It is a known fact that health is one of the most important basic needs in the life of every individual. This is so because it determines to a large extent, the level at which one functions in the society. Hence health is that the quality of life that enables and to live most and serve his community best. It remains a fact that health is a major determinant of success in a man's life. It guarantees hope and progress for individuals in any society. It is notable that preventive health is based on the principle of health promotion and recognizes that individuals can control many factors that affect personal health. Health care as a matter of fact includes all services rendered to help someone with problems to return to or maintain normal health which includes services like safety measures, proper nutrition, exercises, rest, sleep and, medical care.

Ebirim, Ochai and Obasi (2014) saw health as a state of wellness, complete physical, mental, social, and emotional well-being. Nevertheless, the quality of one element affects the state of the other. Health is a complex state determined by ongoing interactions between biological materials inherited at conception and environmental factors. For example, a baby's immediate and long-term health is affected by the mother's health practices and personal state of health; diet, avoidance of substances such as alcohol, tobacco, and certain medications; regular medical supervision and exposure to communicable illnesses during pregnancy.

The need for health care services in secondary schools cannot be overemphasized due to the complex nature of the various physiological and sociological health problems common among adolescents of secondary school age. At this stage, healthcare services play an important role in addressing these health problems. That is, when individuals are struck by sickness, effective use of health care services plays a large role in their recovery. In the place of health, heredity is also a factor that determines the state of health of an individual. Heredity is perceived as characteristics transmitted from parents to their children at the time of conception that determine all of the genetic traits of a new, unique individual. It sets the limit of growth, development health potential. In Nigerian society, just like any other place in the world, the youths and school age children constitute a significant portion of the country's population (Castro, 2021).

The role and contributions of these youths to national growth and development cannot be overemphasized. The youths serve as the bedrock for economic, political, technological, agricultural, and educational developments in the nation. The focal point in the development of every human society is its youths. The healthier the youths, the more accurate they can think and act, and the more productive they become. This is the more reason why quality attention should be focused on the health of the Nigerian secondary school students who constitute an important segment of Nigerian society.

Educational institutions such as secondary schools are in a unique and powerful position to improve the health status of youths who attend such schools. Schools provide a setting that can mould the health behaviours of children and youths positively. The teachers and schools generally are academically prepared to organize developmentally appropriate learning experiences that can empower students to embrace safer and healthier lifestyles (McTighe, 2000). To protect, preserve, maintain and promote the health of children, it is absolutely necessary to provide them with comprehensive health care services. This research work acknowledges the fact that, in Nigerian secondary schools, students go to school with varied health problems since they come from different backgrounds with different health statuses and needs. Many of the students have health challenges which that may go unnoticed by their parents.

These health problems can constitute obstacles to learning and academic progress except if they are detected and corrected early enough. The only measure that the school can adopt to detect such hidden health challenges in school children is through effective and well implemented school health services. In developing countries where the literacy rate is low and childhood mortality high and for secondary education to succeed, a good and properly organized school health program is essential. Furthermore, in the year 2001 through the use of the Rapid Assessment and Action Planning Process (RAAPP), partnered by the World Health Organization and Education Development Centre, Nigeria developed an action plan that will serve as a foundation for infrastructure development for school health in Nigeria.

School health service has been defined by the joint committee on health problems in education of the American Medical Association (1970) as that part of the school health programme provided by physicians, nurses, dentists, health educators, other allied health personnel, social workers, teachers and others, to appraise, protect and promote the health of students and the school personnel. Therefore, a school health program should include at least eight components: parent/community involvement, healthful school environment, health services, health education, physical education, nutrition services, counseling/psychological and social services; and health promotion for school staff respectively. Despite the importance of this subject matter, previous studies indicated secondary schools in Nigeria are still lacking or are still in poor state of quality healthcare programmes.

Aim and Objectives of the Study

The aim of this work was to examine the relationship between the management of school health programmes and environmental sustainability in secondary schools in Rivers State, it specifically examines;

1. The relationship between school health programmes enlightenment and environmental sustainability in public secondary schools in Rivers state.
2. The relationship between school health programmes staff capacity building and environmental sustainability in public secondary schools in Rivers state.

Research Questions

The following research questions were answered in the study;

1. What is the relationship between school health programmes enlightenment and environmental sustainability in public secondary schools in Rivers State?
2. What is the relationship between school health programmes staff capacity building and environmental sustainability in public secondary schools in Rivers State?

Hypotheses

The following hypotheses were tested in the study at a 0.05 level of significance:

- H₀₁: H₀₂: There is no significant relationship between school health programmes enlightenment and environmental sustainability in public secondary schools in Rivers State.
- H₀₃: There is no significant relationship between school health programmes staff capacity building and environmental sustainability in public secondary schools in Rivers State.

LITERATURE REVIEW

Healthcare Enlightenment and Environmental Sustainability

Enlightenment is the state of having knowledge or understanding. It can also be said to mean the act of giving someone knowledge or understanding. In the same vein school healthcare enlightenment programme is the act of creating awareness or giving people knowledge of the existence, and of school healthcare programmes and the need for them to key into the ideal. There is no doubt that the level of school healthcare awareness in our society is low.

Health care issues have been a major talk among researchers as a school and programmes does not exist well without people who are healthily running the school affairs and the students being in good health to be able to stay to be taught and learn effectively. On this account, for teachers and other school administrators to perfect school health programmes, sound enlightenment programmes must be to them so that they will know the best ways they can engage in routine inspection of the pupils as one of the commonest forms of health appraisal done to satisfy the health conditions of individual teaching and learning within and outside the school environment (Ofovwe & Ofili, 2017). In about 95 % of the schools, the teacher carried out routine inspections of the pupils.

Healthcare Capacity Building and Environmental Sustainability

The concept of capacity building has been defined by several scholars in varying ways. According to Uwakwe (2017), capacity building refers to the efforts, strategies and methodologies taken towards improving the level of knowledge, skills and attitudes possessed by the school principals for proficiency in their responsibilities of taking charge of all that happens in the school. These capacity-building programmes usually take the form of conferences, workshops, seminars, refresher courses, symposium, and orientations among others.

School health service began with physicians and nurses collaborating in the pre-antibiotic era to keep children healthy and in school as much as possible. The physician, the school teacher and the head teacher are key personnel in the efficient delivery of school health programme and should be developed constantly through training programmes. The physician plays a central role as he coordinates and ensures the maintenance of collaboration between the various sectors. Beyond this he develops policies, delivers health services, prescribes standards, motivates the teacher and serves as the advocate for the health of the community (Bisi, 2013).

The expected outcome of capacity building programmes is that it will empower more stakeholders like the teachers, students, volunteers, parents, community members and so on and give them the necessary skills and technical knowhow to participate actively in environmental sustainability. According to MDG (2012), inadequate human capacity is the major problem hindering the achievement of the MDG goals on environmental sustainability (Oragwu& Nwabueze, 2016).

METHODOLOGY

The design for the study was correlational. The population of the study comprised the 258 public secondary schools in Rivers State. The sample of the study comprised one hundred and fifty-five (155) principals, representing 60% of the population who were used as participants of the study. The instrument for data collection were two. School Health Programmes Management Scale (SHPMS) and Environmental Sustainability Scale (ESS) in the modified 4-point Likert scale of Strongly Agreed (SA) = 4 points; Agreed (A) = 3 points; Disagree (D) = 2 points; and Strongly Disagree (SA) = 1 point. The instrument was validated and reliability coefficient of 0.73 and 0.87. The research questions were answered using the Pearson Product Moment Correlation Co-efficient. The hypotheses were tested at 0.05 Alpha level of significant.

RESULTS

Research Question 1: What is the relationship between school health programme enlightenment and environmental sustainability in public secondary schools in Rivers State?

Table 1: Pearson Product Moment Correlation Analysis on the Relationship between the school Health Programmes enlightenment and environmental sustainability in Secondary Schools in Rivers State.

Variables	N	r	Remarks
School Health Enlightenment Programmes	155	0.847	High Positive Association
Environmental Sustainability			

Currently knowledge of the association links the school's health education programmes and Environmental Suitability. The number of respondents was 155, although the rate of repetition equated to 0.847, which represents a very positive relationship between school health programmes enlightenment and environmental sustainability in secondary schools in Rivers state the two changes. Based on this result, there is a high positive.

Research Question 2: What is the relationship between school health programme staff capacity building and environmental sustainability in public secondary schools in Rivers State?

Table 2 Pearson Product Moment Correlation Analysis on the Relationship between school health programme staff capacity building and environmental sustainability in secondary school in Rivers State.

Variables	N	r	Remarks
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School Health Programme Staff Capacity Building	155	0.737	High Positive Association
Environmental Sustainability			

Table 2 showed that 155 were principal and the credential value of 0.737, which shows a high and positive association linking the two changes. Based on this result, there is a high and positive relationship between school health programmes capacity development of the school health personnel environmental sustainability in public secondary schools in Rivers State.

Hypothesis One: There is no significant relationship between school health programme enlightenment and environmental sustainability in public secondary schools in Rivers State.

Table 4: Pearson Product Moment Correlation (PPMC) on the relationship between school health programme enlightenment and environmental sustainability in public secondary schools in Rivers State.

Variables	n	Df	R	z-ratio	z-crit	Results
School Health Enlightenment Programmes	155	153	0.847	10.457	1.96	Significant (Reject)
Environmental Sustainability						

Table 4. summaries of topics show, Pearson's value and conversion in z-ratio to test the association linking school health education programs and ES in public secondary schools in the Riverside state. The number of respondents was 155, the calculated value of 0.83 was the value of z-ratio 10.457, and the value of z. The 1.96 criterion, using 153 df at 0.05, was an important level At 0.05 important levels and 153 df, the z-ratio value derived from 10.457 is greater than the z-critical value of 1.96. This showed a significant association linking the two changes. Based on these comments, the researcher rejected the informal hypothesis in favor of the alternative in terms of having significant association linking school health programme enlightenment and environmental sustainability in public secondary schools in Rivers State.

Hypothesis Two: There is no significant relationship between school health programme staff capacity building and environmental sustainability in public secondary schools in Rivers State.

Table 4: Pearson Product Moment Correlation (PPMC) on the relationship between school health programmes staff capacity building enlightenment and environmental sustainability in public secondary schools in Rivers State.

Variables	n	df	R	z-ratio	z-crit	Results
Health Programme Staff Capacity Building	155	153	0.737	9.099	1.96	Significant (Reject)
Environmental Sustainability						

It shows abstracts on topics, the value calculated by Pearson and the change of Pearson to the value of z-ratio to test the association linking the development of the health personnel capacity in school programs and ES in public secondary schools in the Rivers state. The number of respondents was 155 principal, with a calculation value of 0.737, the value of z-ratio 9.099 and the z-critical 1.96 value, using 153 df at 0.05 level of significance. At 0.05 important levels and 153 df, the z-ratio value of 9.099 is greater than the z-critical value of 1.96. This showed a significant association linking the two changes. As a result, the

researcher rejected the informal hypothesis in favor of the alternative in terms of having a significant association linking the school health programme staff capacity building and environmental sustainability in public secondary schools in Rivers State.

DISCUSSION

Difference between school health programme enlightenment and environmental sustainability in public secondary schools in Rivers State

There is a high and positive association linking school health program enlightenment and ES in public secondary schools in Rivers State. In addition, a corresponding hypothesis test result found a significant association linking school health lighting programs and ES in public secondary schools in the Rivers State. These results confirm Onyenze (2014) and Anijah-Obi (1995). In the case of these scholars and researchers, well-planned lighting programs offer health issues to create a sustainable environment. The tendency of these results may not be related to the fact that many lighting programs on health problems have been an important part of the school system recently.

The result of Hanife and Cigdem (2017) also supported this in the sense that, the findings revealed that teachers should be informed about socio-emotional learning and that efforts should be made to implement the emotional and social development programmes to help revive social emotional challenges of students and teachers. The study also found that, teachers who are trained on social and emotional competence encourages students to take part in solving conflicts among themselves, help students to collaborate and establish positive communication in their classrooms to ease their emotions no the trauma associated the COVID-19 pandemic.

Difference between school health programme staff capacity building and environmental sustainability in public secondary schools in Rivers State

There is a high and positive association linking building the capacity of school staff and ES in public secondary schools in the State of the Rivers. Similarly, another hypothesis test result was also established that there was a significant association linking the school's capacity building program development programs and ES in public secondary schools in Rivers State. These results are in addition to Onyenze (2014) and the Millennium Development Goals (2012). With regard to these researchers and agencies, building a capability for those who participate in school programs has a positive outcome. These results may have an impact on the fact that the staff of the school is involved in a variety of resource-building programs recently, which can provide them with essential environmental education.

These results mean that school members who are exposed will build capacity-building programs towards a sustainable environment. The result of Enwezora (2021) also supported this in the sense that, the findings revealed that teachers should be informed about socio-emotional learning and that efforts should be made to implement the emotional and social development programmes to help revive social-emotional challenges of students and teachers. The study also found that, teachers who are trained on social and emotional competence encourages students to take part in solving conflicts among themselves, help students to collaborate and establish positive communication in their classrooms to ease their emotions no matter trauma associated with COVID-19 pandemic (Uwakwe, 2017).

Conclusions

Based on the results of the study, it is concluded that there is a link between management variables, financing, enlightenment, capacity building and facilities management, and environmental sustainability in public secondary schools.

Recommendations

Based on the results of this study, the discussion of the results and the implications and conclusions is suggested as follows:

1. School administrators should continue to establish lighting programs on health problems for school members.
2. Resource-building programs for school members should remain unchanged as new areas should be considered.

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CONSTITUTIONAL PROVISIONS ON STUDENT RIGHTS AND ENFORCEMENT IN SECONDARY SCHOOL ADMINISTRATION IN RIVERS STATE

BY

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Abstract

This study examined the constitutional provisions on student rights and enforcement in secondary school administration in Rivers State. Two research questions and two corresponding null hypotheses were posed to guide the study. This study adopted a descriptive survey design with a population of 8452 students and 7425 teachers of public secondary schools in Rivers State. Stratified random sampling technique was used to draw a sample size of 600, representing 7.4% of the study's population. A self-constructed questionnaire tagged "Constitutional Provisions on Students' Rights and Enforcement in Secondary Schools Administration Questionnaire (CSEQ)" was used for data collection. Test-retest technique was used to determine the reliability of the study. Reliability index of 0.73 was computed using Pearson Product Moment Correlation Coefficient which is high, reliable and adequate for the study and the validity was ensured. The mean and rank order were used in answering the research questions while z-test statistics was used in testing the hypotheses. The findings revealed amongst others that students' rights to life and dignity of human personality are enforced to a high extent in secondary schools administration in Rivers State. The study therefore recommended amongst others that government and other stakeholders in education should continue to enlighten school administrators and teachers through in-service training such as seminars and conferences as this will help them to be more committed to the students' rights enforcement in secondary schools in Rivers State. The study further recommended that students should familiarize themselves with their rights by reading copies of the constitution as a guide to them as well as abide by the rules and regulations set out by their schools.

Key Words: Constitutional Provisions, Student Rights, Secondary School Administration.

Introduction

Nigeria is a creation of the constitution and the 1999 constitution of the Federal Republic of Nigeria as amended is the supreme law of the land. Therefore, it is important to draw fundamental inspiration from the constitution as it affects fundamental human rights, educational objectives and its enforcement in school administration. The provisions of the 1999 constitution substitute the Universal Declaration of Human Rights which embodies fundamental values in democratic institutions around the world. Alapiki (2010) defines constitution as the body of laws, agreed principles and rules, which determines how a state is governed. It makes provisions for the structure and powers of the organs of government, regulates the mechanism and functions of government, and defines the rights and duties of the citizens. Legally speaking, a constitution is the fundamental set of rules to which all administrative actions are expected to conform.

The General Assembly of the United Nations proclaims the Universal Declaration of Human Rights as a common standard of achievement for all people and nations to the end that every individual and organ of society, keeping the declaration regularly in mind, should study by teaching and educating its people to promote respect for the rights and freedom of others. Fundamental human rights in many countries are now a common feature in constitutions that they hardly need to be explained. Oluyede (2011) reported a one-time Chief Justice of Japan to have described fundamental human rights as rights that were not created by the state but are external and universal institutions, common to all mankind and antedating the state and founded upon natural law.

The constitution of the Federal Republic of Nigeria (1999) referred to human rights as the bundle of rights man acquires by reasons of his human nature and protected by the 1999 constitution of the Federal Republic of Nigeria. Chapter (I), Sections 32 – 42 of the 1999 constitution of the Federal Republic of Nigeria provides the following Fundamental Human Rights: (1) Rights to life, (2) Right to dignity of human personality, (3) Right to personal liberty, (4) Right to fair hearing, (5) Right to freedom of movement.

Section 32: Rights to life stated that every person has a right to life, and no one shall be deprived intentionally of his life, save in the execution of sentence of a court in respect of a criminal offence of which he has been found guilty in Nigeria.

Section 33: Right to Dignity of Human persons' stated that every individual is entitled to respect for the dignity of his person, and accordingly, no person shall be subjected to any form of torture or to inhuman or degrading treatment.

Administration generally referred to the activities of group cooperating to accomplish common goals. The group cooperation is for the effective management of the organization for a better productive result. The achievement of the organizational goals is central to the concept of administration because if there was no goal, the group would not come together and cooperate with each other (Nnabuo, 2014). Administration is concerned with applying rules, procedures and policies in a way that shows the accomplishment of defined common objectives within an organizational setting.

Education is the greatest tool for individual and national development. In Nigeria, formal education is made up of secondary and tertiary level. The Fundamental Human Rights is also the Fundamental Rights of Students enshrined in the 1999 Constitution of the Federal Republic of Nigeria and Child Right Act of 2003. The teachers and school principals should act in a reasonable way to ensure that behavioral patterns exhibited are in line with rules and regulations by not using excessive force to control the students which might result in assault or battery. In case of any of such, teachers and school principals will be liable.

Rights are natural demand and claims individuals make in the society. Elvin in Igwe, (2015) sees Right as a principle in virtue which claim is made in a society on behalf of individual, group of person or/ society as a whole with strong sense of moral compulsion behind it and justified on the ground that unless it is recognized and acted upon, a perfectly well-being will be attained. It is a moral entitlement of individuals to have or do something. The rights of students have to do with their liberty to exercise their power to get what belongs to them and enjoy self-preservation. Students as citizens of this country have their Constitutional Rights written, documented in the 1999 Constitution of the Federal Republic of Nigeria, 4th Chapter, Sections 33 to 42. Any law formed and written down in the constitution becomes legal and binding on citizens.

In our secondary schools today, the enforcement of the students' rights as stipulated by our own constitution seem to be impossible by the teachers and school administrators because it is seen as a modern development that has not been accepted by everyone especially in the local context due to religious and cultural reasons. Teachers and School administrators feel they have the interest of students at heart and see no justification for them to be accorded personal rights and protection. Some schools do not have regard for student's rights let alone the legal implications.

It is important to note that Human Rights is a universal concept which was first emphasized in 1948 and reiterated in many international Human Rights Conventions. For example, the Vienna World Conference on Human Rights held in 1993 by the United Nations where it was decided that "it is the responsibility of the State to promote and protect Human Rights irrespective of the economic, cultural and political system".

Student's rights appeared to have been violated in Nigerian Secondary Schools by teachers and the School administrators. Some of these crimes are; aggression, torturing, violation of due process, sexual abuse, etc. The fact here is that these students know little or nothing about their fundamental rights, how much more how to go about it when violated. Their rights must be respected and enforced as stipulated by the 1999 Constitution and Child Rights Act of 2003. The enforcement of their fundamental rights as enshrined in the 1999 Constitution will guide teachers, school administrators, secondary education providers and students as well to know their limits in discipline and reprimanding students when necessary. Normally, the act of punishing a student with a view to correcting undesirable behavior is necessary for continued peaceful and harmonious existence of disciplined schools. However, the manner some teachers inflict injuries and harm on students disproportionately calls for concern. This has evidently become necessary to consider in view of some reports concerning how some secondary school students are abused, violated and intimidated. It is equally worrisome to ponder on how these abuses are perpetrated by school officials. These raise questions on whether the school teachers and principals, the society gave its children to care for, are properly educated on the rights and privileges of the child as well as the limits of in-loco parenting. The rights of students however, do not exonerate

the students if they break the laid down rules and regulations. In the light of the above, this research investigates the students' rights and administration of public secondary schools in Rivers State. The human rights include:

- a. The Right to Life
- b. The Right to Dignity of Human Personality.

Secondary school administration is an organization with a peculiar administrative structure. The administration of secondary school is a process of making use of the available resources towards the achievement of education goals of the secondary education level. As noted by Anuna (2014), secondary school administration is a process primarily concerned with creating, maintaining and coordinating the resources and energy within educational institutions for the purpose of achieving predefined goals. However, it is the observation of the researcher that the secondary school administrator can be shaken and tested by incidents' that require their knowledge of the constitutional provisions and the extent of its enforcement that gave impetus to this study.

Statement of the Problem

With regards to the ever increasing concern of the United Nations and other global communities in ensuring that human rights are enjoyed by all human beings everywhere, people are therefore becoming conscious, aware and enlightened of their rights under the law. As such, claims can be made when it is recognized that their rights have been abused. The secondary school administrators in Nigeria are more vulnerable to legal cases as a result of contravention or non-enforcement of their students' rights.

Based on the researcher's observation, secondary school administrators seem not to possess adequate knowledge of the basic provisions on students' rights which has led to its poor culture of enforcement in the area of commission or omission. It is in the light of the above stated observation that the researcher is bothered about the extent students' rights as enshrined in the constitution are enforced by secondary school administrators in Rivers State. The elements of the problem focus on the extent of enforcement of students right to life, right to dignity of human personality, right to personal liberty, right to fair hearing and the right to freedom of movement. Hence, the gap in knowledge which this study intends to fill up is on the extent of students' rights enforcement.

Aim and Objectives of the Study

The aim of this study is to examine the extent student rights as enshrined in the constitution are enforced by the school administrators in secondary school in Rivers State. The specific objectives of this study were to:

1. determine the extent student's right to life is enforced in secondary schools in Rivers State.
2. find the extent student's right to dignity of human personality is enforced in secondary schools in Rivers State.

Research Questions

The study was guided by the following research questions:

3. To what extent is student's right to life enforced in secondary schools in Rivers State?

4. To what extent is student's right to dignity of human personality enforced in secondary schools in Rivers State?

Hypotheses

The study tested the following hypotheses:

1. There is no significant difference between the mean scores of opinions of students and teachers on the extent students' right to life is enforced in secondary schools in Rivers State.
2. There is no significant difference between the mean scores of opinions of students and teachers on the extent student's right to dignity of human personality is enforced in secondary schools in Rivers State.

Literature Review

Conceptual Review

The Right to Life

The Right to Life contained in the 1999 Constitution of the Federal Republic of Nigeria, 4th Chapter, Section 33, (Nwangwu, 2013). It says that "Every individual has a right to life and nobody should be intentionally deprived of his life except in the execution of sentence given by the court in respect to criminal offence which the person has been found guilty of Nigeria" (Esex, 2009). Reisoglu, (2014) says that guaranteeing the right to life is the main aim of Human Rights because, it is only when someone is alive that he can benefit from various rights and liberties in the constitution. In the European Convention for Human Rights and other international documents are strong emphases on the protection of rights to life especially those that framed the Universal Declaration of Human Rights in 1948. In the article 2 of the European Convention for Human Rights, it states that the law, the state, public institutions and those representing them must protect everyone's right to life. States should be responsible in protecting and liable to take protective measures on human lives against unlawful assaults by third parties, (Reisoglu, 2014). Aduba (2011) says that the protection of human life through the law should be the ultimate aim and goal of the state and organization Nigeria seems to be in a dream that we are never awake. We are possessed by our loves and hates, good, bad, beautiful and awful ideas incapable of knowing beyond our ideas and feelings. With all happening around us, we are just concerned of our self-preservation and perpetuation. Many deaths that would have been prevented from plane crashes and road accident, killing of civilians and soldiers, pre-employment deaths, post-employment deaths, deaths from communal crashes, acts of carelessness, etc with the use of constitutional provisions relating to life in Nigeria.

Human Rights Handbook (2006) states that, it is the responsibility of the state through the law to protect individual's life. No individual should be intentionally deprived of his life except for sentence by the court. We cannot say that individual is deprived of his life when he is shot in defense of any person from unlawful violence or when he tries to escape arrest and is shot or in prevention of someone trying to escape arrest while lawfully detained or is lawfully taken action to quell an insurrection. Universal Human Rights (1948) says that the essence of Protection of right to life of individuals is to limit human violence and exploitation, to eradicate racism,

discrimination and inequality between people. It was stated in the Universal Declaration of Human Rights, in Sudre (2006) that:

- a. All human beings are free born, equal in dignity and rights
- b. Every individual irrespective of the race, color, sex, language, religion, political opinion, any other opinion or circumstance is entitled to all proclaimed rights and liberties.
- c. Every human being is entitled to right to life, security of human person and liberty.
- d. No human should be kept into slavery or basement slavery or slavery of any form is forbidden.
- e. No one should be subjected to torture, inhuman, cruel degrading treatment or punishment.

The above declarations are indispensable and inalienable rights that warrant all human rights and fundamental liberties the supreme value in the international hierarchy of human rights (p.213). Following the constitutional provisions, Child Rights Act of 2003 and United Nations decision on the Universal Declaration of the Human Fundamental Rights which Nigeria is a member, any action of the schoolteachers or principals that leads to loss of students" life or cause any permanent Form of injury in the course of disciplinary action amounts to a threat to the life of the student. Peretomode (2012) cited a teacher in Duke Town, Calabar, Cross River State, who flogged a 12 year old child in form. Her name was Grace Okon Akpan in a class of 40 students. She was the only one making noise in the class, on the process of the flogging, she collapsed and became unconscious and later died in the hospital.

Another situation that poses a threat to life of the students is where the Principal allows attractive nuisance such as unsafe playground that may lead to death of severe injuries. A look at Public Secondary Schools buildings in the rural and urban areas of the state will convince one because one will see a good number of dilapidated Public School buildings with classrooms that need renovation and maintenance. The government is not making any effort towards the renovation and maintenance of these school buildings hence students study under these classrooms with poor conditions and learning facilities which are a threat to their life. With reference to 12:00pm news of broadcasting Corporation of Rivers State on the 23th May, 2017, the governor promised to look into a request submitted by the Secondary Education Board on construction, renovation and maintenance of school buildings and other facilities in Rivers State. Visit to Secondary Science Laboratories and Workshops especially in rural areas will confirm the use of obsolete materials and instruments being used for science and other practicals. This is unsafe for students. Some desks meant for students to sit down for study are not in good shape for the students to sit comfortably and conveniently to learn. These desks are hazards. Most times some students mistakenly step on the nails that are exposed and are injured deeply. Should any injury that will threaten the life of these students come up, the teachers, principals and educational board will be responsible hence, they are threat to the life of these students and environment at large. If parents of these students sue the school on negligence, the court will take a decision to justify the student and let the Principal and school authorities pay for damage or compensation with reference to what the constitution stipulates on such violations.

Right to Dignity of Human Personality

Dignity is one value according to Section 8 of the National Policy on Education (FRN, 2013) that must be inculcated at all levels of education. Dignity stands for respect, honour, a sense of importance and value. The constitution by right rules out torture. The issue of torture is covered by several instruments applicable in Nigeria. It is also prohibited under the African Charter on Human and People Rights Act 1990. According to the committee on the right of the child parties should:

3. Take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or negligent treatment, maltreatment or exploitation including sexual abuse, while in care of parents, legal guardians or any person who has the care of the child

Section 33 of the 1999 constitution guaranteed the right to dignity of human persons where it states that every individual is entitled to respect for the dignity of his person, and accordingly:

- a) No person shall be subjected to any form of torture or to inhuman or degrading treatment;
 - b) No person shall be held in slavery or servitude; and
 - c) No person shall be required to perform force or compulsory labour.
4. For the purpose of sub-section (1) (c) of this section, “forced or compulsory labour” does not include:
 - a) Any labour required in consequence of the sentence or order of a court;
 - b) Any labour required of members of the Armed Forces of the Federation, the Nigerian Police Force or other government security services established by law in pursuance of their duties as such or, in the case of person who have conscientious objections to service in the Armed Force of the federation, any labour required instead of such services;
 - c) Any labour required which is reasonably necessary in the event of any emergency or calamity threatening the life of well-being of the community or
 - d) Any labour or service that forms part of
 - (i) Normal communal or other civil obligations for the wellbeing of the community;
 - (ii) Such compulsory national service in the Armed Forces of the federation as may be prescribed by Act of the National Assembly, or
 - (iii) Such compulsory national services which formed part of the education and training of citizens of Nigeria as may be prescribed by Act of National Assembly.

This fundamental human right says that every person is entitled for the dignity of that person and so:

- a. No person shall be subjected to inhuman, degrading treatment or torture.
- b. No person shall be held in slavery or servitude
- c. No person shall be expected or compelled to perform forced or compulsory labour (Ese, 2012).

The basis of dignity can be traced from autonomy of self and self-worth that is reflected in human’s right to individual self-determination (Columbia Human Rights Review, 2011). This self-autonomy and self-worth is universal and unfringeable by private parties or state. The above definition suggests that there is an agreement to what it may mean at its core especially within the legal sphere. In a democratic society, the centrality of dignity cannot be underestimated. The expression of basic value accepted a broad sense by all people is known as

dignity and it comprise of the first cornerstone in the edifice of human rights (Columbia Review, 2011).

Theoretical Framework

The Right Theory

Jeremy Bentham was an English Law Reformer who made the most influential and outstanding effort in the Right Theory. He lived towards the end of the 18th Century. He developed a Right Theory known as “the Principle of Utility” in the year 1789. This theory states that, “the aim and goal of the society should be to increase the sum total of human happiness”. He used two factors; Pleasure and Pain as parameters of measurement. He affirmed that by increasing the amount of pleasure and decreasing the amount of pain, happiness evolves and the needs of the society would be achieved. Sobermann (2012) posits that Utility is all about increasing human happiness, the sum of which was to be assessed by calculating the stock of pleasure and pain which resulted from a particular course of action. For this reason, numerous standards were adopted, each man’s happiness being considered the equal in value of that of another man, so that the test of utility was what served the happiness of largest possible number. Bentham’s Principle is aimed at “maximizing” happiness according to the slogan “the greatest happiness of the greatest number”. Gerald support Bentham’s Principle where he states that while the concept of rights imposes some limits on the range of objects of rights, it also assumes that the objects are linked to certain interests or bring some good to the bearer”. In this regard, Gerald (2017) also states thus:

Rights assertions necessarily presupposes that securing the object to the bearer is good because or in so far, as the object answers to the interest of the bearer, that is in so far as its component of or means is of good to the bearer (p-10).

You can see that Bentham and Gerald view rights as that which brings happiness for the good of the bearer. Furthermore, John another Human Rights Activist sees the concept of right from a slightly different perspective. Benkowski (2017) shifts Bentham’s Theory of Rights when he opines that, a person has rights implies that he has a valid claim upon society to protect him/her in the possession of it either by force of law or by that of education and opinion. If he has that, we consider a sufficient claim on whatever account, to have something guaranteed him by the society, we say, he has a right to it. To have a right, then I conceive is to have something that the society ought to defend me in possession of.

Considering the above explanations and analysis, it is very clear that secondary school students ought to be aware of their Fundamental Human Rights as legally enforceable obligation already in place for their protection by the government and as well enjoy the benefits the protection of these rights bring to them within their educational institutions.

Methodology

This study adopted a descriptive survey design, to enable the researcher describe the characteristics of the population and determine the extent of association between the variables. Descriptive survey design enables a researcher to collect data from a sample selected from a given population. In order to describe their features as they are at that particular time. In

descriptive design, the result from the data collected and analyzed, is generalized to the entire population from which the sample is drawn. In view of the foregoing, the researcher sees this design as the most appropriate to collect, describe and analyze the phenomenon under investigation. The population of the study comprised all the 8452 students and 7425 teachers in 290 public secondary schools in Rivers State. (Source: State Ministry of Education Port Harcourt, Rivers State 2022). A sample size of 600 students and teachers representing 7.4% of the population was drawn using the stratified random sampling technique. The strata comprised 400 students and 200 teachers in secondary schools in Rivers State. Twenty (20) students were selected from 20 schools in the 3 senatorial districts of Rivers State totaling 400 students in all which represent 4.7% of the total population of 8452 students in Rivers State and 10 teachers from each of the 20 selected secondary schools in the 3 senatorial district which represent 2.7% of the total number of 7425 teachers in Rivers State. The study used questionnaire as the instrument for data collection. The instrument is titled “Constitutional Provisions on Students’ Rights and Enforcement in Secondary School Administration Questionnaire (CSEQ). The structured questionnaire was divided into two (2) sections. Section A was designed to elicit responses on personal data, while Section B contained 30 questionnaire items structured in line with the 2 research questions of this study. The instrument was coded along a modified 4 points Likert type scale of Very High Extent (VHE), High Extent (HE), Low Extent (LE) and Very Low Extent (VLE) scale of responses. The instrument for this study was validated for face and content validity using the supervisors and three (3) experts in the measurement and evaluation of the Department of Psychology, Guidance and Counseling from Faculty of Education, University of Port Harcourt. This enabled the researcher to obtain a critical assessment of the instrument in terms of appropriateness and adequacy. The suggestions from these experts was used to improve the content of the instrument before administration. The test-retest method was used to ensure the reliability of the instrument. The researcher administered 20 copies of the instrument to 20 respondents outside the sample size twice in a space of two weeks. The 2 sets of the result derived were correlated using Pearson Product Moment Correlation Coefficient and a reliability index of 0.73 was established which is high, reliable and adequate for the study. The researcher with the help of three trained research assistants visited the public secondary schools in Rivers State to administer the instrument. A total of 600 copies of questionnaires was distributed. All the copies of the questionnaires were collected on the spot. Research questions were analysed using mean and standard deviation. A criterion mean of 2.50 was generated using the modified 4 points rating scale of Very High Extent (VHE) = 4 points, High Extent (HE) = 3 points, Low Extent (LE) = 2 points and Very Low Extent (VLE) = 1 point. Thus $4+3+2+1=10 \div 4 = 2.50$. Any item whose mean fell from 2.50 and above was agreed while below 2.50. The null hypotheses were tested using z test at 0.05 levels of significance.

Results

Research Question One: To what extent is students’ right to life enforced in secondary schools in Rivers State?

Table 1: Mean (\bar{x}) and Rank Order Scores of students and teachers on the extent students’ right to life is enforced in secondary schools in Rivers State

S/No	Item	n = 400			n = 200			Mean Set	Remarks
		Students	SD ₁	Remarks	Teachers	SD ₂	Remarks		
		\bar{x}_1			\bar{x}_2		$\bar{x}\bar{x}_2$		
1.	Students’ right to life is sustained through strict adherence to rules	3.31	1.81	VHE	3.07	1.75	VHE	3.19	Very high extent
2.	Regular sensitization as	3.25	1.80	HE	3.10	1.76	HE	3.18	High extent

	well as awareness campaign in schools								
3.	Putting adequate security measures in the schools	3.19	1.79	HE	2.95	1.72	HE	3.07	High extent
4.	Discouraging bullying as well as intimidation among the students	3.29	1.81	HE	2.85	1.69	HE	3.07	High extent
5.	Encouraging moral discussion among the students	2.29	1.81	VLE	2.85	1.69	VLE	3.07	High extent
6.	Promoting healthy competition among the students through debates, quiz as well as social activities	3.19	1.79	HE	3.01	1.73	HE	3.10	High extent
	Grand mean (\bar{x})	19.52	10.82	HE	17.85	1.72	HE	3.11	High extent
		3.26	1.80		2.97				

Table 1 revealed the responses of the students and teachers on the question raised. The mean responses of item 1 – 5 by the students were 3.31, 3.25, 3.19, 3.29 and 3.19. The mean items 1, 2, 3, 4, 5, and 6 were agreed for being above the criterion mean of 2.50. On the part of the teachers, 1 – 5 with a mean of 3.07, 3.10, 2.95, 2.85, 2.85 and 3.01 were agreed as they are above the criterion mean of 2.50.

Research Question 2: To what extent is students’ right to dignity of human personality enforced in secondary schools in Rivers State?

Table 2: Mean (\bar{x}) and Rank Order Scores of students and teachers on the extent students’ right to dignity of human personality is enforced in secondary schools in Rivers State.

S/N	Item	n = 400			n = 200			Mean Set \bar{x}_2	Remarks
		Students \bar{x}_1	SD ₁	Remarks	Teachers \bar{x}_2	SD ₂	Remarks		
7.	Avoidance of inhuman torture among the students	3.17	1.78	VHE	3.05	1.75	VHE	3.11	Very high extent
8.	Enhancing effective communication channel among the students so as to voice out their grievances	3.24	1.79	HE	2.84	1.69	HE	3.04	High extent
9.	Protecting students’ from excessive bullying	3.03	1.74	HE	2.83	1.68	HE	2.93	High extent
10.	Encouraging effective rewards system as well as punishment among the erring students	3.14	1.77	HE	2.97	1.72	HE	3.05	High extent
11.	Creating avenues for environmental sanity among the students	3.19	1.79	HE	2.79	1.67	HE	2.99	High extent
12.	Encouraging corporal punishment among the students	2.25	1.50	VLE	2.40	1.55	VLE	2.32	Very low extent
	Grand mean (\bar{x})	18.02	10.37	HE	16.88	10.06	HE	2.90	High extent
		3.01	1.72		2.81	1.68			

Table 2 revealed the responses of students and teachers for items 7, 8, 9, 10, 11 and 12. The responses of students had the mean scores of 3.17, 3.24, 3.03, 3.14, 3.19 and 2.25 respectively. Item 7, 8, 9, 10 and 11 were all agreed for being above the criterion mean of 2.50 while item 12 was disagreed for falling below the criterion mean. Similarly, the responses of teachers to the items produced mean scores of 3.05, 2.84, 2.83, 2.97, 2.79 and 2.40. Item 7, 8, 9, 10 and 11 were also agreed for being above the criterion mean of 2.50 while item 12 was disagreed in the final analysis.

Test of Hypotheses

Ho₁: There is no significant difference between the mean scores of opinions of students and teachers on the extent students' right to life is enforced in secondary schools in Rivers State.

Table 3: Summary of z-test analysis on the mean scores of opinions of students and teachers on the extent students' right to life is enforced in secondary schools in Rivers State

Subjects	n	\bar{x}	SD	Level sig	Df	z-cal	z-crit	Decision
Students	400	3.26	1.80					
Teachers	200	2.97	1.72	0.05	588	1.92	+1.96	Not significant
	600							

In table 3, the z-calculated was 1.92 which was less than the z-critical of +1.96 at 588 degree of freedom and 0.05 level of significance. Therefore the hypothesis was accepted. This indicated that there was no significant difference between the mean scores of opinions of students and teachers on the extent students rights to life is enforced in senior secondary schools in Rivers State.

Ho₂: There is no significant difference between the mean scores of opinions of students and teachers on the extent students' right to dignity of human personality is enforced in secondary schools' in Rivers State.

Table 4: Summary of z-test analysis on the mean scores of opinions of students and teachers on the extent the students' right to dignity of human personality is enforced in secondary schools' in Rivers State

Subjects	n	\bar{x}	SD	Level of sig	Df	z-cal	z-crit	Decision
Students	400	3.01	1.72					
Teachers	200	2.81	1.68	0.05	588	1.36	+1.96	Not significant
	600							

In table 4, the z- calculated was 1.36 which was less than +1.96 at 588 degree of freedom and 0.05 level of significance. Therefore the null hypothesis was accepted. This indicated that there was no significant difference between the mean scores of opinions of students and teachers on the on the extent students rights to dignity of human personality is enforced in secondary schools in Rivers State.

Discussion of Findings

The Extent Students' Right to Life is Enforced in Secondary Schools' in Rivers State.

It was generally accepted that strict adherence to rules and regulations, regular sensitization campaign, putting adequate security measures in the schools, encouraging moral discussion among the students, uniting the students in schools are the extent students' right to life

is enforced in secondary school administration in Rivers State. The above findings are in line with Wagbara (2015), who investigated the child rights enforcement in the administration of secondary schools in Rivers State. Based on her study, she recommended that a common disciplinary method should be designed for the school system to enable principals adopt a common approach in the discipline of students. She believed that this would avoid the infringement of the rights of the students. She also noted the importance of education programme course and declared that a better understanding of the role of the principal will minimize the incidents of violation of the fundamental rights of members of an educational institution. The findings from hypothesis one showed that the degree of freedom is 588, the z- calculated is 1.92 while the z- critical is +1.96 at 0.05 levels of significance. Therefore, the null hypothesis which says that there is no significant difference between the mean scores of students and teachers on the extent the students' right to life is enforced in secondary schools in Rivers State was not rejected in the final analysis. It was not rejected because the calculated z value of 1.92 is less than the critical z value of +1.96.

The Extent Students' Rights to Dignity of Human Personality is Enforced in Secondary Schools' Administration in Rivers State

Based on the findings, the extent the students' right to dignity of human personality is enforced in secondary schools in Rivers State include among others; avoidance of inhuman torture, exhibition of democratic leadership quality, protecting students from excessive bullying, reduction of false labour among the students, creating avenues for environmental sanity among the students. This finding is in line with Mebradu (2018), who conducted empirical study on students' rights and legal implication in the administration of secondary school education in Rivers State. Using a student Right Legal for Implication for School Administration Questionnaire which has a reliability of 0.6 alpha values, she used random sampling size from a population of 1,150 students. She noted that both rural and urban secondary students' are aware of their right to dignity of human personality and the institutionally documented rules and regulations. She recommended that human rights education should be integral part of school curriculum and government should produce documented school rules and regulations. In the same vein, the findings from hypothesis two indicated that the degree of freedom is 588, the z- calculated is 1.36 while the z- critical is +1.96 at 0.05 levels of significance. Therefore, the null hypothesis which says that there is no significant difference between the mean scores of opinions of students and teachers on the extent the students' right to dignity of human personality is enforced in secondary schools in Rivers State was not rejected in the final analysis. It was not rejected because the calculated z value of 1.36 is less than the critical z value of +1.96.

Conclusion

Based on the findings, it was concluded that students' rights to life, dignity of human personality, are enforced to a great extent in public secondary schools in Rivers State.

Recommendations

Based on the findings of this study, the researcher offered the following recommendations for implementation.

1. Government and other stakeholders in education should through in-service training such as seminars, workshops, conferences enlighten school administrators more as this will

- help them to be more committed in enforcement of students' rights to life, dignity of human personality, right to personal liberty, fair hearing and freedom of movement.
2. School administrators should state clearly the procedures teachers should follow for handling students' delinquency and misbehavior in classrooms.
 3. School administrators should always encourage teachers to read copies of the 1999 Constitution of Nigeria to know more the rights accorded to students by the constitution.

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MANAGING “EDUCATION THAT WORKS” USING INNOVATIVE SKILLS FOR THE ATTAINMENT OF SUSTAINABLE DEVELOPMENT GOAL 1 AMONG PRIVATE SECONDARY SCHOOLS IN RIVERS STATE, NIGERIA

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Abstract

This study examined managing “education that works” using innovative skills for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria. Two research questions and two corresponding null hypotheses guided the study. The theories that guided this study are the Innovation theory by Schumpeter (1911). The study adopted a descriptive research design. The population comprised 912 principals in the 912 Government approved private secondary schools in Rivers State. A sample of 278 principals was drawn using Taro Yamane formular. The instrument used for data collection was a well-structured questionnaire titled: Managing “Education that Works” using Innovative Skills for the attainment of Sustainable Development Goal 1 Questionnaire (MEWISSDGQ) developed by the researcher. The research questions were answered using Mean scores and standard deviation, while z-test was used to test the hypotheses at 0.05 level of significance. The findings revealed that managing “education that works” using innovative skills involve managing students’ adaptability skills and students’ self- direction skill for the attainment of sustainable development goal 1 among private secondary schools in Rivers State. Based on the findings of the study, the researcher recommended that administrators should strengthen their effort in managing the adaptability skills of students by ensuring they endure new tasks given in the classroom.

Keywords: Managing, Innovative Skills, Sustainable Development Goal 1

Introduction

The Sustainable Development Goals (SDGs) launched by United Nation General Assembly on 25 September 2015, consist of 17 long items decided as targeted goals. These goals describe major development challenges for humanity and recommend possible ways to secure a sustainable, peaceful, prosperous and equitable life on earth for everyone now and in the future. The goals cover global challenges that are crucial for the survival of humanity. It made clear that education is essential to achieving all these goals. However, Sustainable Development Goal 1 aims to “end poverty in all its forms everywhere”. This goal can be achieved by providing quality education that will prepare the students to have career and to hold jobs that will make them more self-reliant.

Education is the process through which individuals acquire knowledge, skills, abilities and attitudes leading to a relatively permanent change in behaviour that is necessary for effective and functional living in the society. It has remained the veritable tool for economic growth, development and sustainability of any nation. The desire for education to meet the changing needs of the society requires management of educational institutions to look inward and outward, and then respond accordingly. The phrase “education that works” refers to the education process

that develops the whole person to function effectively in whatever environment they find themselves. It involves production of highly self-reliant, confident, and competent individuals that can adapt to new situations, and respond to change and uncertainty continuously. The inability of educational administrators to identify new skills, for life and work, often makes the graduates of secondary schools unable to engage in productive activities after graduation. These situations intensify the need for a more holistic approach to completely transform the learning experiences of students by making best use of available human and material resources. Hence, the concept 'education that works'.

In view of the forgoing, school administrators must seek innovative strategies for "managing education that works". Innovation refers to the process of introducing new ideas, knowledge and practices into an organization. Skill is the ability or talent needed in order to perform specific task. In the view of Wordu and Akor (2019), innovation is the presentation of new things, ideas, concepts or a thought, an ideology on how a process or something is carried out. It is the introduction of new ideas, methods, strategies and techniques for doing things in the school system for the purpose of improving both internal and external efficiency of the system. Innovative skills refer to the ability or talent of introducing new ideas, methods and practices in order to adapt to change. Soh, Osman and Arsad (2012) identified six innovative thinking skills as adaptability skills, self-direction skills, curiosity skills, creativity skills, risk taking skills and higher order thinking skills.

Adaptability is the capability to adjust to changing, new situations and uncertainty in one's environment. It is the ability to respond to changing, new and uncertain conditions by adjusting one's thoughts, behaviours and emotions. Adaptability is essential for students' survival in the school and after graduation. This is because they are confronted with change and new situations on a regular basis, at school and in their environment. Managing adaptability will enable students to recognize and understand that change is constant, and at the same time deal with change positively by modifying their thinking, attitude or behaviour to accommodate and handle new environment. School administrators, therefore, need to develop adaptability skill in students, so that they can employ different strategies to manage changing, novelty and uncertainty. Students' ability to deal with change and uncertain conditions may help them to learn and engage effectively in improving their learning outcomes.

Self-direction skills refer to the individual's ability to set clear goals related to their learning, plan for the achievement of those set goals, independently manage time and effort, and assess the quality of learning that results from the learning experience. Students who have acquired self-directed skills are open to learning, set clear goals, motivated and take initiative by themselves. Developing self-directed skills in students is an important way of turning them into lifelong learners. That is, they are developed with skills and competencies that enable them to learn by themselves. These skills will enable the students take initiative, set their own goals, define their own needs and make choices on appropriate strategies to solve problem themselves after graduation. School administrators need to provide teachers with necessary training and resources for developing self-directed skills on students.

Innovative skills are vital for coping with today's economic realities. Therefore, adapting new approaches to teaching and learning in the secondary schools that highlights core skills necessary for self-reliant and job creation. Hence, managing 'education that works' using innovative skills

may enhance the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers state, Nigeria.

Statement of the Problem

The goals of education in Nigeria are aimed at ensuring that citizens within the country have the skills and knowledge needed to transform the society. These aims include building a free and democratic society, a just and egalitarian society, a united, strong and self-reliant nation, a great and dynamic economy and a land full of opportunities for all citizens. Education in Nigeria today is not as strong and viable as the type of education we have in developed countries all over the world. It is yet to make full implementation and use of modern innovative skills in carrying out its activities. It appears many schools do not make use of technological tools and facilities. The various levels of education which are the primary, secondary and tertiary levels all exist to provide knowledge to students. The government on its own part tends to have provided needed quality at all levels and this has been in existence before the emergence of private schools. Looking at the various goals of education in the country, the education provided the government has not been able to achieve the stated goals. Apparently, it seems there is no complete and adequate democratic society, the country is not united, the economy is experiencing constant inflation and citizens are facing hardship. Also, it appears opportunities are not equal for all citizens owing to the huge gap between the rich and the poor. In general, the purpose of education in Nigeria has not been attained because the government probably has virtually exhausted all her prowess and what she has to offer.

Many have opined that the society today suffers from various concerns including overpopulation, illiteracy, unemployment, under-employment, lack of technology, and corruption, all to the detriment of the citizens, which gives rise to poverty. The inability of secondary school leavers in Nigeria in recent time to function effectively in the society due to the absence of relevant knowledge and skills has also given rise to poverty. Students do not possess the requisite skills needed to make a change in the society and country at large. They do not possess skills that are needed to cause change and transform the nation. They lack adaptability skills, adequate curiosity skills, self-direction skills, risk taking skills etc.

Several poverty alleviation programmes such as Operation Feed the Nation, Green Revolution, and Better Life for Rural Women, Family Economic Advancement Programme, N-power Programmes and so on, put in place by successive governments in Nigeria seem not have achieved their set goals and objectives. This places a big question mark on the type of education received by the Nigerian citizenry, hence the need for management of ‘education that works’. Therefore, the researcher seeks to identify the application of innovative skills such as adaptability, self-direction, curiosity, creativity, risk-taking and higher order skills to achieve education that works in Private senior secondary schools for Sustainable Development Goal 1 in Rivers State.

Aim and Objectives of the Study

1. find out ways school administrators develop students’ adaptability skills in managing “education that works” for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

- ascertain ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Research Questions

- In what ways do school administrators develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria?
- In what ways do school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

H0₁: There is no significant difference between the mean ratings of male and female school administrators on the ways they develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

H0₂: There is no significant difference between the mean ratings of school administrators in urban and rural areas on the ways they develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Literature Review

Conceptual Framework

Students' Adaptability Skills for the attainment of Sustainable Development Goal 1

Adaptability is the ability to respond to changes and modifications in any given situation. It refers to the process where an individual adapts to changes that occur at any time and the ability to manage crises well. People's lives are characterized by change, novelty, and uncertainty as they develop physically, cognitively, and emotionally across the lifespan (Liem, 2013). This constant flux can involve major life events such as starting school, getting married, or having children (Martin, 2013). Certain changes happen and occur to individuals at any point in time, and in most cases, they have no control over it. When these issues and changes arise, the ability to handle and manage it known as adaptability. The ability to effectively react and respond in constructive ways to these situations is known as adaptability. More precisely, Martin, Nejad, Colmar, and Liem (2012) define adaptability as an individual's capacity to "constructively regulate psycho-behavioral functions in response to new, changing, and/or uncertain circumstances, conditions and situations" (p. 66). Importantly, Martin et al.'s (2012) model of adaptability is a tripartite one involving cognitive, behavioral and emotional adaptability, and refers to modifying one's thinking, behavior, or emotions (respectively) to deal with changing, new, or uncertain situations.

A person's capacity to be adaptable is important because it enables successful adjustment to life's inherent changing circumstances. Indeed, emerging research has shown that adaptability is associated with important academic and non-academic outcomes among adolescents and employees. Martin et al. (2012) examined adaptability among high school students and showed that it was positively associated with academic achievement, school enjoyment, satisfaction with life, meaning and purpose in life, and academic buoyancy.

Adaptability is also highly relevant to teachers given that teaching work involves responding to and managing constant change (Collie & Martin, 2016). The capacity to adapt in order to effectively manage these changes is crucial for teachers' work in the classroom, staff room, and beyond. Collie and Martin listed a few examples:

- Teachers must respond to the different and changing needs of students by adjusting the lesson pace, adapting activities for different students, or seeking out different resources to better explain or illustrate key points.
- Teachers must adapt in order to cope with unexpected situations in classroom management by regulating emotions that might arise such as frustration, anger or mirth and conveying patience, or thinking of alternative ways to solve problems.
- Teachers must also effectively interact with colleagues under shifting conditions, such as when there is a change in job role, they require resources to teach a new part of the curriculum, or they require help to deal with a new or challenging student.
- As they move into new roles or new schools, teachers must also interact effectively with new colleagues, adjust to the different priorities of a new principal or colleague, or calibrate to the style of a new teaching aide in the classroom.
- Common change in most schools is experienced with the changes in timetabling that occur on a regular basis and sometimes at the last minute.
- Teachers must also be prepared to stop a lesson midway, reschedule their teaching, or condense content into less time when time is pressing.
- Finally, teachers are regularly involved in professional learning and are expected to continually integrate new knowledge into their teaching practice. In addition, curriculum or policy changes may require further adaptability from teachers.

Thus, being able to effectively respond to the inherent novelty, change, and uncertainty that characterizes teaching work is a highly important capacity for teachers.

Students' Self-Direction Skills for the attainment of Sustainable Development Goal 1

The educational system is one that is structured to assist individuals become independent and self-reliant at any given time. It enables students to discover things for themselves and also to manage actions without the help of external forces. Education can allow individuals to transcend boundaries of space, identity, and culture by empowering learners with the ability to pursue self-directed, lifelong learning. Valuable new meanings and understandings can be created by the interaction between self-motivated, self-directed learners, communities, and a wide range of organizations (Rogers, 2004). A shift away from traditional, teacher-centered power relations towards learner-centered approaches can significantly enhance learning and create the intrinsic motivation necessary to enable effective, dynamic, lifelong learning

processes. Self-direction skills refer to the ability to manage situations and actions independent of others and to make decisions on what to do at any given time.

Self-directed learners are skilled at teaching others and at overcoming barriers to communication and mutual understanding. Self-motivated learners understand the viewpoints of other learners and are skillful at sharing experiences and knowledge (Kalantzis, 2003). Mentors play a useful role as guides and advisors in self-directed learning. Self-directed learning is becoming increasingly important in the global economy and international society and is associated with adult learners that exhibit common characteristics. Self-reflection is a key aspect of lifelong learning and leads to a better understanding of one's own strengths and weaknesses. Self-directed learners are engaged emotionally in the learning process and can monitor and adjust their own learning. Learner-centered learning strategies can be employed to enhance and promote the traits of self-directed learners and lifelong learning for the benefit of individuals and society. Self-directed learning and lifelong learning are closely related concepts. Self-reflection is an intrinsic element of lifelong learning and leads to a better understanding of one's own strengths and weaknesses, abilities and limits.

People learn more about themselves as they learn more about the world and other people during a lifetime of formal and informal study and daily learning. Self-directed learning is becoming increasingly important in the workplace and is associated with adult learners that exhibit common characteristics. Learner-centered learning strategies can be employed to enhance the traits of self-directed learners (Butcher & Sumner, 2011). The educational philosophies of humanism and connectivism may serve as useful theoretical frameworks for examining and developing self-directed learning. Numerous barriers as well as opportunities exist in lifelong learning. Independent learners possess high levels of determination, perseverance, and self-motivation. Motivation is a common characteristic of self-directed learners. Proactive, extroverted personality types may naturally tend to engage in independent, self-directed learning, and ambitious entrepreneurs and high-level managers and leaders of organizations are often highly self-motivated and self-directed in their personal learning objectives and goals (Raemdonck, Rien van, Valcke, Segers, &Thijssen, 2012). Although some learners may naturally tend enthusiastically towards self-directed learning as a result of their personality type, all learners may be guided towards effective independent learning strategies.

Theoretical Framework

Innovative Theory

The concepts of innovation and entrepreneurship are probably Schumpeter's most distinctive contributions to economics. One of the most common themes in Schumpeter's writings was the role of innovation (new combinations) and entrepreneurship in economic growth. Schumpeter argued that anyone seeking profits must innovate. That will cause the different employment of economic system's existing supplies of productive means. Schumpeter believed that innovation is considered as an essential driver of competitiveness and economic dynamics. He also believed that innovation is the center of economic change causing gales of "creative destruction", a term created by Schumpeter in *Capitalism, Socialism and Democracy*. According to Schumpeter innovation is a "process of industrial mutation that incessantly

revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one".

Schumpeter believed that innovative skills are important for the growth and sustenance of any activity and action. He opined that for individuals and organizations to progress in all spheres of life, they must be able to acquire and input certain innovative skills that are very essential in goal attainment. This theory is related to this study in the sense that the use of innovative skills can be used to manage "education that works" to enhance the eradication of poverty among private secondary schools in Rivers State. Innovation is very essential in tackling poverty and ending hunger in countries all over the world. It has to do with being creative and sourcing for avenues to solve problems. Innovative skills which include adaptability skills, self-direction skills, high order skills, curiosity skills, creativity skills and risk-taking skills can be used in enhancing the attainment of poverty eradication in schools.

Schumpeter (1911) is of the opinion that innovation is the most strategic and important tool to actualize any goal and solve impending problems. The eradication of poverty, being the Sustainable Development Goal 1, is very important in enhancing education, because where there is poverty, children will not be able to go to school and become responsible citizens. Education is very essential, and therefore, is the right of any child to acquire. Because of the presence of poverty and the inability to eradicate it completely, education that works will not be easily managed and enhanced. Therefore, the need to embrace innovation and all that it has to offer. Here, innovative skills according to Schumpeter (1911) are very pertinent to achieve set out goals and aspirations. Individuals and organizations can achieve their goals and make progress if they apply innovative skills in their activities.

Methodology

The study adopted the descriptive survey research design. The design will be appropriate for this study, because it will seek to collect data from a representative sample of the population on managing "education that works" using innovative skills for the attainment of Sustainable Development Goal 1 in private senior secondary schools in Rivers State. Using this design, the researcher will not manipulate the variables but will systematically describe and interpret the variables of interest. The population of the study comprised 912 principals in the 912 Government approved private secondary schools in Rivers State. (Source: THISDAY Newspaper Ltd: MONDAY NOVEMBER 25, 2021, Approved Private Secondary Schools in Rivers State). The sample for the study was 278 principals from the 912 principals distributed over the 912 approved private secondary schools in Rivers State. The sample size was obtained using the Taro Yamane Formula. The instrument for data collection was a self-structured questionnaire titled: Managing "Education that Works" using Innovative Skills for the attainment of Sustainable Development Goal 1 Questionnaire (MEWISSDGQ). The instrument consisted of 48 items and were constructed in such a manner that responses to the item followed the modified 4-point Likert scale of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD) with values of 4, 3, 2 and 1. The face and content validity were established by subjecting the MEWISSDGQ to critical assessment by the researcher's supervisors and two other experts from each Departments of Educational Management and Educational Psychology, Guidance and Counselling, University of Port Harcourt. They were requested to assess the suitability of the language, the comprehensiveness, adequacy and relevance of the items in addressing the research

questions, bearing in mind the purpose of the study. Their comments, suggestions and corrections were and was used in the modification of the final draft of the instrument before administration. A sample of 30 Principals which was not part of the sample was randomly drawn for the reliability test from secondary schools in Rivers State. The data generated from the responses of Principals for trial testing was used to estimate the reliability of the instrument. The reliability coefficient was determined using Cronbach statistics method, which established the internal consistency of the test items. The reliability coefficients obtained for each of the variables were 0.81, 0.71, 0.79, 0.76, 0.78 and 0.81. But the general coefficient that was obtained was 0.81. The instrument was administered and retrieved by the researcher and two research assistants trained by the researcher. Two hundred and seventy-eight (278) copies of questionnaire will be administered, correctly filled and collected on the spot for data analysis. 270copies were retrieved which represented 96.4% return rate. Mean scores and standard deviation were used in answering the research questions, while z-test was used to test the null hypotheses at 0.05 level of significance. The criterion mean was determined by adding the weights 4,3,2,1 and divided by 4 which gave the criterion mean of 2.50. Any mean below the 2.50 was disagreed upon while those from 2.50 and above were agreed upon. SPSS was used in analysing the data.

Results

Research Question 1: In what ways do school administrators develop students’ adaptability skills in managing “education that works” for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria?

Table 1: Mean and standard deviation scores of ways school administrators develop students’ adaptability skills in managing “education that works” for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria

S/N	Items	Male Principals 170			Female Principals 100		
		Mean	Sd	Decision	Mean	Sd	Decision
1	Making them endure to new changes in the school curriculum	3.06	.47	Agree	3.01	.56	Agree
2	Advising them to embrace changes that occur within the school	3.08	.45	Agree	2.98	.68	Agree
3	Proper assessment of students’ academic performance regularly	2.43	.65	Disagree	2.29	.47	Disagree
4	Giving them herculean tasks to see how they adapt	3.09	.46	Agree	3.05	.51	Agree
5	Creating study groups for students within the classrooms	3.12	.38	Agree	3.12	.38	Agree
6	Adopting the individual discovery learning method	3.14	.49	Agree	3.06	.54	Agree
7	Reducing them assess to finance within the school premises	3.14	.66	Agree	3.02	.82	Agree
8	Inculcating strong reading abilities among students	3.16	.71	Agree	3.02	.88	Agree
Aggregate mean and standard deviation		3.03	0.53	Agree	2.94	0.61	Agree

Table 1 revealed that items with serial numbers 1, 2, 4, 5, 6, 7 and 8 have their various mean values above the criterion mean value of 2.50 and were agreed by the respondents as ways school administrators develop students’ adaptability skills in managing “education that works”

for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria. The aggregate mean values of male and female principals 3.03 and 2.94 respectively were above the criterion mean value of 2.50, and this suggests that the items are ways school administrators develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria. The standard deviation scores of 0.53 and 0.61 showed that the respondents were not dispersed in their responses.

Research Question 2: In what ways do school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria?

Table 2: Mean and standard deviation scores of ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria

S/N	Items	Principals in Urban170			Principals in Rural 100		
		Mean	Sd	Decision	Mean	Sd	Decision
9	Guiding students on how to focus on their academic activities	3.32	.56	Agree	3.17	.77	Agree
10	Promoting a leadership quality that students emulate	3.10	.52	Agree	2.94	.70	Agree
11	Giving students individual tasks	2.39	.53	Disagree	2.31	.63	Disagree
12	Directing students on what to do at any given moment	2.46	.65	Disagree	2.44	.65	Disagree
13	Reducing group activities among students in private schools	2.43	.81	Disagree	2.32	.83	Disagree
14	Adopting the individual discovery learning method	2.92	.27	Agree	2.92	.27	Agree
15	Bringing resource persons to speak to them on self-direction	3.25	.53	Agree	3.24	.53	Agree
16	Promoting a conducive environment for self-direction to be enhanced	2.85	.52	Agree	3.01	.62	Agree
Aggregate mean and standard deviation		2.84	.55	Agree	2.76	.63	Agree

Table 2 revealed that items with serial numbers 9, 10, 14, 15 and 16 have their various mean values above the criterion mean value of 2.50 and were agreed by the respondents as ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria while serial number 11, 12, and 13 were below mean criterion of 2.50. The aggregate mean values of principals in urban and rural areas were 2.84 and 2.76 and is above the criterion mean value of 2.50 and they suggest that these are ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria. The standard deviation scores of 0.55 and 0.63 showed that the respondents were not dispersed in their responses.

Test of Hypotheses

Hypothesis 1: There is no significant difference between the mean ratings of male and female administrators on the ways school administrators develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Table 3: z-test analysis of the mean ratings between male and female administrators on the ways school administrators develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Gender	N	Mean	SD	Df	z-cal.	z-crit.	Sig.	Decision
Male principals	174	3.03	.53					Hypothesis is rejected
Female principals	100	2.94	.61	268	2.40	+1.96	.01	

Table 3 showed that male principals have mean and standard deviation scores of 3.03 and 0.53 while female principals have mean and standard deviation scores of 2.94 and 0.61 respectively. With degree of freedom of 268, the calculated z-value of 2.40 is greater than the critical value of +1.96 at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implied that there is a significant difference between the mean scores of male and female administrators on the ways school administrators develop students' adaptability skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Hypothesis 2: There is no significant difference between the mean ratings of administrators in urban and rural areas on the ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Table 4: z-test analysis of the mean ratings between administrators in urban and rural areas on the ways school administrators develop students' self-direction skills in managing "education that works" for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Location	N	Mean	SD	df	z-cal.	z-crit.	Sig.	Decision
Principals in Urban Areas	274	2.84	.55					Hypothesis is rejected
Principals in Rural Areas	100	2.76	.63	268	2.26	+1.96	.03	

Table 4 showed that principals in urban areas have mean and standard deviation scores of 2.84 and .55 while principals in rural areas have mean and standard deviation scores of 2.76 and .63 respectively. With degree of freedom of 268, the calculated z-value of 2.26 is greater than the critical value of +1.96 at 0.05 level of significance. Therefore, the null hypothesis is rejected. This implied that there is a significant difference between mean ratings of principals in urban and rural areas on the ways school administrators develop students' self-direction skills in managing

“education that works” for the attainment of Sustainable Development Goal 1 among private secondary schools in Rivers State, Nigeria.

Discussion of Findings

Students’ adaptability skills in managing “education that works” for the attainment of Sustainable Development Goal 1

The study had shown that the ways administrators develop Students’ adaptability skills in managing “education that works” for the attainment of Sustainable Development Goal 1 is by making them endure to new changes in the school curriculum, advising them to embrace changes that occur within the school, proper assessment of students’ academic performance regularly, giving them herculean tasks to see how they adapt, creating study groups, adopting the individual discovery learning method, reducing the access to finance and inculcating strong reading abilities among students. This agreed with Ochineng (2019) who believed that adaptability skills are significantly related to the academic performance of students in schools. In order to make students adapt in schools, proper assessment and creating individual discovery learning is paramount in achieving this. The skills that are needed to make them adapt must be in line with what they are able to handle and as such must make them adapt to any new changes within the schools. Another way, according to the study to make students adapt is by giving them herculean tasks, thereby ensuring that they cope, manage and adapt to the new discoveries they encounter while carrying out these tasks.

Students’ self-direction skills in managing “education that works” for the attainment of Sustainable Development Goal 1

The study showed and revealed that ways administrators develop students’ self-direction skills include guiding students on how to focus on their academic activities, promoting a leadership quality that students emulate, giving students individual tasks, directing students on what to do at any given moment, reducing group activities among students in private schools, adopting the individual discovery learning method, bringing resource persons to speak to them on self-direction and promoting a conducive environment for self-direction to be enhanced. This finding was in agreement with Gunduz and Selvi (2016) who believed that if students are allowed to engage in self-learning, it would make them perform better than students who were directed by teachers in schools. They also stated that giving students in the classroom is a way of developing their self-direction skills for the attainment of sustainable goals. Students who are allowed to do things for themselves go a long way in performing well both in individual and group tasks. Guiding them, reducing group activities among students will also enhance and develop their individual directional skills, thereby enabling them to perform better in their academics. The study also showed that promoting a leadership quality amongst students is also a way of developing their self-direction skills. Leadership qualities will enable students seek direction on what to do thereby, developing their skills for enhanced and improved sustainable goal 1 in private secondary schools in Rivers State.

Conclusion

Based on the findings of this study, it was concluded that managing “education that work”

using innovative skills involve managing students' adaptability skills and managing students' self-direction skills for the attainment of sustainable development goal 1 among private secondary schools in Rivers State.

Recommendations

1. The administrators should strengthen their effort in managing the adaptability skills of students by ensuring they endure new tasks given in the classroom.
2. Students should not be directed always but should be allowed to discover things for themselves in schools without interference by the teachers or principals.
3. More demanding assignments and tasks should be given to students within the classroom to make them think far and wide so as to improve their higher order thinking skills.

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PERSONALITY TRAITS AND JOB SATISFACTION AMONG SECONDARY SCHOOL TEACHERS IN RIVERS STATE.

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Abstract

The study investigated the personality traits (neuroticism and openness to experience) as correlates of job satisfaction among secondary school teachers in Rivers state. Three research questions and corresponding null hypotheses were developed to guide the study. A sample of 400 senior secondary school teachers were randomly drawn from six selected Local Government Areas using the multistage sample approach of purposive and proportionate techniques. Data was collected using two instruments titled Big 5 Personality Traits Questionnaire (B5 – PTQ) and the Job Satisfaction Scale (JSS). Validity of the instruments were established through the certification of test experts. Reliability of the instruments were established using the Cronbach Alpha technique with 30 teachers to pilot test the instrument. Construct validity for neuroticism is 0.82, openness to experience is 0.70 and Job satisfaction is 0.73. The reliability coefficient for neuroticism was 0.74, openness to experience 0.73, and the overall personality trait reliability coefficient was 0.74 while the reliability coefficient for job satisfaction scale was .96. Simple regression was used to answer the research questions while for testing the corresponding null hypotheses, t-test associated with the regression analysis were used. The findings indicated that independently neuroticism and openness to experience have a positive significant relationship with job satisfaction among senior secondary school teachers while jointly there is no significant relationship with job satisfaction among senior secondary school teachers.

Key words: Personality traits, job satisfaction, teachers.

Introduction

Job satisfaction trends can influence work productivity, work performance, work effort, employee absenteeism and staff turnover (Ali, 2008). For any organization, particularly the school system where the teacher is seen as an important, indispensable tool for the actualization and realization of the educational goals, it is penitent that the various elements, factors, determinants of job satisfaction are to a reasonable degree provided for the workers.

Education has been acknowledged globally by different authors, practitioners, researchers, professionals as the bedrock of any nation building and development.

Louise (2019) stated that education is the most veritable and powerful tool in national growth and development. It exerts greater influence in national development. Teachers are the pivot of all the educational curriculum and objectives. The future of a nation and the quality of any educational institution mainly depends on the teachers. Quality of education mostly depends on the teachers and quality of teachers depends on their psychological wellbeing. So, it is necessary and pertinent to improve on the quality and effectiveness of the teachers. The best system of education may fail to achieve the desired aim and objectives in the absence of sincere, competent and professionally aware teachers. Effective teachers are required in the classroom because even the best curriculum and most perfect syllabus remain ineffective in the absence of a good teacher; “for no pupils can rise above the level of its teachers” (Louise 2019). Tagore in Louise (2019) stated that “only lighted lamp can lighten another” which means that only an enlightened teacher who remain ever alive and struggling in the pursuit of knowledge could enlighten his pupils and could enthuse them for more learning.

History is accentuated with facts and information about the efforts made by societies and nation around the globe in the establishment of one form of educational system or the other with which to produce citizenry capable of protecting, preserving and promoting the values and ideals of the society. From the classical time, nation like Greece, Rome and Athens formulated educational goals believed to achieve lofty objectives of their respective societies (Muller, 2010).

The nation building and development is hinged or anchored on the passage of the right information, values, knowledge and skills to the younger generation for continuity and perpetuity. This is carried out in a nation through the process of teaching and learning (educational system).

All nations across the globe have formulated one form of educational framework or the other for the actualization of the set educational goal. Nigeria as a nation has formulated her own policy on education; National Policy of Education (NPE 2014) fourth edition. It has the following as the national education goal:

- I. The inculcation of national consciousness and national unity.
- II. The inculcation of the type of values and attitudes for the survival of the individual and the Nigeria society.
- III. The training of the mind in the understanding of the world.

The acquisition of appropriate skills and the development of mental, physical and social abilities and competences as equipment for the individual to live in and contribute to the development of the society. A critical view of the above educational goal would reveal that the overall aim of the nation’s educational system is the development of the individual for the advancement of the society through the education system (teaching and learning) with the teacher as the major tool for the transmission of the values, knowledge, skills for the overall nation building and development. The teacher is the major vehicle for the implementation and actualization of the educational curriculum for national development. The teachers should be a model in the mind of his pupils.

Before now in Nigeria, teachers were highly regarded in the society as stores of knowledge and role models. The nation depends on the teachers for transfer of knowledge, manpower, development as well as the realization of educational policies of the nation. The quality of any nation's economy depends on the quality of its manpower and manpower can only be developed by teachers. No nation develops without education and education is not possible without the teachers because teachers inculcate what is worthwhile to learners who in turn utilize the knowledge, skills and attitude to develop the nation (Abraham, Ememe and Egu, 2012). The teachers are the telescope through which individuals can see the future of the students (Louise,2019).

Fafunwa in Amadioha (2007) stated that “the African teacher like his counterpart in most parts of the world is the most poorly paid of all professional workers”.

Teachers are key facilitators of knowledge and play vital roles in the educational sector. It is thus particularly pertinent to find out their job satisfaction in workplaces. Satisfied employees can more effectively fulfill their duties to achieve the overall goal of the educational system. Teachers that are satisfied with their jobs are usually very hard working, confident and courageous in discharging their duties and responsibilities. Efforts to improve job performance of teachers and academic performance of students in schools may be futile if job satisfaction of the teacher is not given the adequate attention it deserves. Aroge (2016), Dabo (2016) stated that the teaching profession is facing problem related to teachers' job satisfaction in Nigeria. The complaints of teachers include, poor working conditions, poor motivation, poor salary, and unpleasant conditions of service.

In Nigeria, the education sector has been bedeviled for over many decades. The teachers in Nigeria under the aegis of the Nigeria Union of Teachers (NUT) has had series of protest and prolonged nation-wide strike demanding for a separate condition of service and salary structure for teachers in primary and post-primary schools in the country.

Subair and Talabi (2015) reported that poor conditions of service, breach of agreement by government, unlawful retirement and retrenchment of teachers and poor remuneration, industrial conflicts and strikes has affected the performance of public secondary schools' students in WAEC and NECO negatively. To forestall this appalling trend, researchers, parents, teachers and other concern stakeholders have continued to ask questions about the job satisfaction level of the teachers.

The Concept of Teacher/Teaching

Louise (2019) stated that education is the most veritable and powerful tool in national growth and development. It exerts greater influence in national development. Teachers are the pivot of all the educational curriculum and objectives. The future of a nation and the quality of any educational institution mainly depends on the teachers. Quality of education mostly depends on the teachers and quality of teachers depends on their personal as well as the professional quality. So, it is necessary to improve the quality and effectiveness of the teachers. Mental health, personality traits and job satisfaction are three major pre-requisites of the teachers for productivity and efficiency. The best system of education may fail to achieve the desired aim and objectives in the absence of sincere, competent and professionally aware teachers. Effective

teachers are required in the classroom because even the best curriculum and most perfect syllabus remain ineffective in the absence of a good teacher, “for no pupils can rise above the level of its teachers” Louise (2019). Tagore in Louise (2019) stated that “only lighted lamp can lighten another” which means that only an enlightened teacher who remain ever alive and struggling in the pursuit of knowledge could enlighten his pupils and could enthuse them for more learning.

Ekeh and Onyekuru (2013) stated that the way teachers relate with the learners can make or mar learning. If the teacher is favorably and positively disposed to learners, tolerant and ready to work and listen to the learners and attend to their needs and problems, learning would be facilitated. The teachers should be a model in the mind of his pupils. It is the teacher who can create a national perspective for understanding social and economic difference in the nation. Education is the greatest influential and inducing medium of economic development of any nation. Teachers are the foundational instrument for the realization of any educational system and objectives. The fate of a nation and success of any educational programs for national development basically is hinged on the teachers. The position of the teacher mirrors the social ethos of the society. Louise (2015) stated that no individuals can transcend the level of his teachers. The teacher is a telescope.

Abraham, Emene and Egu (2012) stated that before now in Nigeria, teachers were highly regarded in the society. They were seen as stores of knowledge; role models and they settled disputes in the community. The society depended on teachers for the discipline of the youth as well as their moral and academic development geared toward our national development. No nation develops without education and education is not possible without teachers because teachers inculcate what is worthwhile to learners who in turn utilize the knowledge, skill, values and attitudes to develop the nation.

Concept of Job Satisfaction.

Job satisfaction has been defined in various contexts by different authors. The most reference and generally accepted definition and description of job satisfaction is given by Lock in Shahnaz (2011): Job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences”. It has cognitive, affective and evaluative components. It is positively related to life satisfaction, organizational commitment, and organizational citizenship behavior and job performance. Smith and Hulin in Shahnaz (2011) posited that job satisfaction was multi-dimensional. They argued that one may be more or less satisfied with some aspects of his or her job which may include the supervisor, pay, condition of workplace and so on.

Spector in Louise (2019) defined job satisfaction as a cluster of evaluative feeling about the job. George and Jones (2008), view job satisfaction as the collection of feelings, beliefs, and attitudes about the job, especially about work and its kinds and about co-workers, supervisors, subordinates and pay. It is complex and multifaceted and means different things to different people. Dabo and Azi (2016) see job satisfaction as the ability of employees to be able to provide workers with the conditions that will make them more efficient and active in their place of work with the view to improving their productivity level. The more the needs of workers are satisfied within an organization, the more they are motivated to work more effectively and efficiently. A satisfied employee operates at two levels of satisfaction, his own needs satisfaction and the satisfaction of the needs of the organization. Organizations have significant effects on the people who work for them and some of those effects are reflected in how people feel about their work. Ali (2015) stated that a person with a high level of job satisfaction holds

positive feelings about the job, while a person who is dissatisfied holds negative feelings about the job.

Louise (2019) posits that job satisfaction indicates the entire adjustment to carry out the job situation. A pair of thought that a worker holds towards his or her job. It is an appraisal of the perceived mental encounters in addition to employment attributes in the workplace. It is the extent to which one feels fantastic about the job. The source of job satisfaction comes out of the working environment, supervision layout, organizational culture and interpersonal relationship. Noraini (2015) sees job satisfaction as all the behavior employees engage in while at workplace. It is the total sum of employee's behaviours and actions which contribute to the organization's goal. It consists of observable behaviours that a person manifest in his or her job that is relevant to the organization's objectives and goals.

The researcher sees job satisfaction as the favourable aggregate sum of the reactions or disposition of an employee with respect to the intervening factors or variables attributable to his or her job condition. From the above arrays of definitions of job satisfaction as presented by many researchers and authors, one can conclude that job satisfaction will ultimately bring about increased organizational commitment and productivity.

Concept of Personality

The term "Personality" is derived from the Greek work "persona" which means "mask". It is a mask actors or actresses wore while playing or acting on the stage. The impression they left on the audience after acting was the persona, the personality (Awujo and Ekechukwu, 2015). Nwankwo (2015) stated that in interpreting personality from the root word, "Persona", there is the implication that the "real person" or the personality of the person is hidden behind the mask. Orluwene (2012) stated that the term personality is used to identify the most obvious characteristics or traits of an individual or to refer to people's social skills as displayed by the individual and observed by others.

To the psychologists, it is used to explain why people with similar heredity, experience and motivation may react differently in the same situation. It is used by the psychologists to indicate a more general kind of skill in representing ourselves to others (Orluwene, 2012).

Personality is not a simple amalgamated view of various aspects. The process of its development is very subtle, and the structure dynamics are very complex (Onomuodeke and Wachikwu, 2012). The psychological explanation suggests a host of biological and socio-cultural indices which contribute to personality development. It suggests that the personality should mean the characteristic pattern or style of behaviour of an individual as is revealed through his extended and literal constituents. The external constituents of a person include his dress, bodily actions, postures, speech, habit, expression, adjustments and physique. The internal constituents are his feelings, thoughts, motives, emotions, precepts, intentions, etc. (Onomuodeke and Wachikwu, 2012). Ukwuije in Awujo and Ekechukwu (2012) sees personality as a global term representing the unique pattern of behaviour of an individual which is made up of problem solving, mental abilities, interests, attitudes, temperaments, thought, feelings, values, behaviours, morals and interpersonal relationship.

Furthermore, Miller in Orluwene (2012) sees personality as consistency in an individual behaviour in different situations about such characteristics as dominance, fearfulness, social openness and sensation seeking. Kaplan and Saccuzzo in Orluwene (2012) define personality as the relatively stable and distinctive patterns of behaviour that characterize an individual and his

or her interactions with the environment. Colman in Nwankwo (2015) defines personality as the sum total of the behavioural and mental characteristics that are distinctive of an individual.

From all the foregoing definitions, the researcher sees personality as the dynamic product of biological and environmental factors and experiences of the individual. In other words, the interaction of biological and environmental factors will determine to a large extent the dynamic predisposition (personality) of the individual.

Personality is used to identify the most obvious characteristics of a person. It is used to explain why people with similar heredity, experience and motivation may react differently in the same situation. It is a major non-cognitive domain of humans in the field of psychology. Allport in Orluwene (2012) defined personality as a dynamic organization within an individual of those psychophysical systems that determine his or her unique behavior and thought in his environment. Ukweje (2007) referred the term personality as the unique pattern of behavior of an individual which is made up of problem-solving mental abilities, interests, attitudes, temperaments, thoughts, feelings, values and behavior, moral and interpersonal relationship. Julie (2012), defined personality as enduring patterns of action or behavior. Colman in Nwankwo (2013) defines personality as “the sum total of the behavioral and mental characteristics that are distinctive of an individual”.

It is worthy to note from the above various definitions of personality as given by various experts and authors that the individual unique characteristics, dispositions and behavioral pattern must be enduring and long lasting and not ephemeral. Levy (2011) stated that work related personality characteristics has become a vital function of human resources in the process of employee selection and employment in recent times.

The domain of personnel assessment before now was limited to job-related knowledge, skills and abilities (KSA's). It has expanded to include other personal characteristics, specifically personality traits. Assessment of personality characteristics may increase the probability of someone to succeed in their career. If their personality traits match with career needs (Noraini, Norashikin & Lily 2015). Personality traits can be dispositional predictors of job performance and by extension job satisfaction. This situation might be true among teachers, where they have different capabilities, dispositions and personality characteristics that later can influence their job performance and satisfaction directly (Siadat, Arbabisario, Azhdari, Amiri and Abooeimehrizi, 2011). It has been adduced that certain teachers who perform well in teaching and providing quality instructions are those who display certain traits of personality, such as outgoing, humor, enthusiasm and emotional stability (Noraini et al 2015). Thus, personality traits of teachers are one of the factors that is crucial in delivery of effective teaching and learning for national development (Noraini et al, 2015). Personality trait comprises of neuroticism, extraversion, openness to experience, conscientiousness and agreeableness but for the purpose of this work, only neuroticism and openness to experience is studied.

The Big Five Factor model of personality

The Big Five Factor model depicts a broad set of related behavioural features. For example, Neuroticism (sometimes referred to by its socially desirable role, Emotional Stability) captures differences in the occurrence and magnitude of negative emotions. Highly neurotic individuals are prone to experiencing anxiety, mood swings, prolonged sadness, whereas emotionally stable persons tend to remain calm and resilient, even in difficult circumstances.

Extraversion represents individual differences in social engagement, assertiveness, and energy level. High scoring individuals in Extraversion enjoy socializing with others, are comfortable expressing themselves in group situations and frequently experience positive emotions such as enthusiasm and excitement, in contrast, introverted individuals tend to be socially and emotionally referred. Furthermore, conscientiousness which represents differences in organization, productivity, and responsibility. Highly conscientious individuals prefer order and structure, work persistently and religiously to pursue their goals, and are usually committed to fulfilling assigned duties and obligations, whereas unconscientious individuals are comfortable with a state of disorder and less motivated to complete a given tasks. Also, openness to Experience (sometimes referred to as intellect) represents differences in intellectual curiosity, aesthetic sensitivity, imagination and creative ability. They enjoy critical thinking and learning, generate origin ideas, whereas close minded individuals tend to be parochial, and have a narrow range of intellectual and creative interests.

Lastly, Agreeableness captures differences in compassion, respectfulness and acceptance of others. Agreeable individuals experience emotional concern for others well-being, treat others with regard for their personal rights and preferences, and hold high positive beliefs about others, while disagreeable persons tend to have less regard for others, and for social norms of politeness. Awujo and Ekechukwu (2012) opined that high Agreeable individuals are fundamentally self-sacrificial and sympathetic to others and are also eager to help while low or disagreeable persons are egocentric and skeptical of the intentions of others. Azlina and Jew Lee (2008) stated that unstable emotion among school teachers might affect their achievement and job satisfaction. It is postulated by the researcher that the Personality traits (neuroticism and openness to) of the teachers may have relationship on their job satisfaction, therefore it is pertinent to understand how they correlate with job satisfaction. The problem of the study therefore is to investigate personality traits as correlate of job satisfaction among secondary school teachers.

Research Objectives

This study investigated personality traits as correlates of job satisfaction among secondary school teachers. In specific terms, the study intend to:

1. Establish the relationship between personality trait of Neuroticism and job satisfaction among secondary school teachers?
2. Determine the relationship between Openness to experience and job satisfaction among secondary school teachers?
3. Find out the joint relationship between neuroticism and openness to experience and job satisfaction of secondary school teachers.

Hypotheses

The following null hypothesis were tested at 0.05 level of significance:

1. There is no significant relationship between the neuroticism and job satisfaction among secondary school teachers.
2. There is no significant relationship between openness to experience and job satisfaction among secondary school teachers.
3. There is no significant joint relationship between trait (neuroticism and openness) and job satisfaction among secondary school teachers.

Methodology

The study employed correlational research design. The population for the study comprises of all senior secondary school teachers in the 23 local government areas in Rivers State with a total of 6893 teachers (Rivers State Senior Secondary Schools Board, 2021) The sample used is 400 teachers via Taro Yamen sample size formula. The 400 teachers were randomly drawn from 6 selected local government area of Rivers State, with 2 local government representing each senatorial district using a multi-stage sampling procedure. In stage one, purposive sampling technique was employed to select 6 local government areas out of 23 local government areas with public secondary schools. At stage two proportionate stratified random sampling technique by senatorial district was employed. By this technique, the 23 local government areas were zoned into their districts; Rivers east, Rivers south east and Rivers west. At third stage, non-proportionate stratified random sampling technique by balloting was used to select 2 Local Government each from the senatorial districts making a total of 6 Local Government Areas. Three instruments were used for the study. They are Big 5 Personality Traits Questionnaire (B5 – PTQ) which was adapted from Goldberg (1992) and Job Satisfaction Scale (JSS) which was also adapted from Spector (1994). They are all cognitive instruments. All instruments were rated on four-point likert scale of Agree, strongly agree, Disagree and strongly disagree. Face and content validity of the instruments were established by test experts. Construct validity for neuroticism is .82, openness to experience is .70 and job satisfaction is .73. The reliability of the instrument was determined using Cronbach alpha technique with 30 teachers to pilot test the instrument who were not part of the final sample for the study. The reliability coefficient for neuroticism is .74, openness to experience is .73 and job satisfaction is .96. All the reliability coefficients were high which indicates that all the instruments are reliable. The data collected were analyzed using simple regression while the t-test associated with the regression analysis was used to test the hypothesis at 0.05 level of significance.

Results

The results of the data analysis are presented in the tables: Data analysis was done in relation to the research questions and hypotheses.

Research Question 1: What is the relationship between personality trait of neuroticism and job satisfaction among secondary school teachers in Rivers State?

Table 1a: Simple regression analysis showing R correlations relationship between personality trait of neuroticism and job satisfaction of senior secondary school teachers in Rivers state.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.128 ^a	.016	.014	6.587

From the analysis in table 1a, the relationship between personality trait of neuroticism and job satisfaction is $R = .128$, R^2 value is .016, the adjusted R^2 value is .014 while the standard error of estimates is 6.587. Furthermore, the R value of .128 signifies that personality trait of neuroticism has a positive, weak relationship with job satisfaction expressed by senior secondary school teachers in Rivers state.

Hypothesis One: There is no significant relationship between personality trait of neuroticism and job satisfaction of senior secondary school teachers in Rivers state.

Table 1b: Regression Coefficient Analysis of personality trait of neuroticism on Job Satisfaction of Senior Secondary School teachers in Rivers State.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Result
		B	Std. Error	Beta			
1	(Constant)	43.932	2.059		21.333	.000	Significant (reject Ho)
	Neuroticism	.367	.143	.128	2.567	.011	

The standardized regression coefficient (β or Beta) is .128 which is significant as the p value (sig) is .011 which is less than the chosen level of probability of 0.05 ($0.011 < 0.05$) therefore, the null hypothesis of no significant relationship between personality trait of neuroticism and job satisfaction of senior secondary school teachers is rejected.

Research Question Two: What is the relationship between personality trait of openness to experience and job satisfaction of senior secondary school teachers in Rivers state?

Table 2a: Simple regression analysis showing R correlations and F values for relationship between personality trait of openness to experience and job satisfaction of senior secondary school teachers in Rivers state.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.112 ^a	.012	.010	6.600

From the analysis in table 2a, the relationship between personality trait of openness to experience and job satisfaction is $R = .112$, R^2 value is .012, the adjusted R^2 value is .010 while the standard error of estimates is 6.600. Furthermore, the R value of .112 signifies that personality trait of openness to experience has a positive, weak relationship with job satisfaction expressed by senior secondary school teachers in Rivers state.

Hypothesis Two: There is no significant relationship between Openness to experience and job satisfaction of senior secondary school teachers in Rivers state.

Table 2b: Regression Coefficient analysis of Openness to experience and job satisfaction among teachers in senior secondary schools in Rivers State.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Result
		B	Std. Error	Beta			
1	(Constant)	45.302	1.748		25.917	.000	Significant (reject Ho)
	Openness to experience	.273	.122	.112	2.242	.026	

The standardized regression coefficient (β or Beta) is .112 which is significant as the p value (sig) is .026 which is less than the chosen level of probability of 0.05 ($0.026 < 0.05$) therefore, the null hypothesis of no significant relationship between personality trait of openness to experience and job satisfaction of senior secondary school teachers is rejected.

Research Question Three: What is the joint relationship of personality trait (Neuroticism and Openness to experience) on job satisfaction among senior secondary school teachers in Rivers state?

Table 3a: Multiple regression analysis showing R correlations for relationship between personality trait (Neuroticism and Openness to experience) and job satisfaction among senior secondary school teachers in Rivers state.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.118 ^a	.014	.008	6.270

Table 3a shows multiple regression (R) of .118, R^2 is .014, adjusted R^2 is .008 and the standard error of estimate is 6.270. The multiple Correlation R of .118 revealed that there is a positive relationship between personality trait (Neuroticism and Openness to experience) with Job satisfaction among senior secondary school teachers in Rivers State.

Hypothesis 3: Personality trait (Neuroticism and Openness to experience) do not have significant joint relationship on job satisfaction among senior secondary school teachers in Rivers state.

Table 3b: ANOVA and multiple regression analysis of personality trait (Neuroticism and Openness to experience) and job satisfaction among senior secondary school teachers in Rivers State.

Model		Sum of Squares	df	Mean Square	F	Sig.	Remark
1	Regression	199.201	2	99.600	2.533	.081 ^b	Not Significant (accept Ho)
	Residual	14193.489	361	39.317			
	Total	14392.690	363				

a. Dependent Variable: JSS

b. Predictors: (Constant), Openness to experience, Neuroticism

Table 3b showed that the calculated F-value of 2.533 was not significant at .081 which is greater than the chosen 0.05 probability level. Therefore, the null hypothesis of personality traits of (openness to experience and neuroticism) has no significant joint relationship on job satisfaction of senior secondary school teachers in Rivers state is accepted. Hence there is no significant joint relationship.

Discussion of Findings

The result revealed that personality trait of neuroticism has a positive relationship with job satisfaction among senior secondary school teachers in Rivers state as it is statistically significant. The result of the findings showed that the strength (magnitude) of the relationship is

very low ($R=.128$) while the direction of the relationship is positive. Neuroticism accounted for 12.8% of the job satisfaction of senior secondary school teachers in Rivers State. However, Shahnaz (2011) reported that neuroticism was negatively correlated to job satisfaction among high school teachers in India. The teachers were found to be lowest in Neuroticism (31.7) which is a good sign and indicates that they have fewer tendencies to experience unpleasant emotions easily, such as anger, anxiety, depression, or vulnerability, sometimes called emotional instability. The correlations between personality factors and job satisfaction show that Neuroticism was significantly correlated with all the facets of job satisfaction, except for the pay facet. Noraini, Norashiikin and Lily (2015) in a related study found a negative relationship between neuroticism and job satisfaction among Malaysian public-school teachers. Vimansta and Hemantha (2016) reported a negative and weak relationship between neuroticism of male and female teachers with their job satisfaction. Neuroticism which is the general tendency to manifest negative responses such as fear, sadness, anger, guilt, anxiety, depression, mood disorders and other negative emotional state. It also depicts poor impulse control and lower generalized coping ability (Awujo and Ekechukwu, 2012). Soto (2018) posits that neuroticism is negatively associated with subjective well-being and psychological health. Highly neurotic persons tend to experience lower levels of overall life-satisfaction as well as in job and relationship satisfaction. A low neuroticism depicts emotionally relaxed and stable person. Although the relationship between neuroticism and job satisfaction among senior secondary school teachers in Rivers state was statistically significant, the magnitude of the relationship was very low, revealing that the teachers are emotionally relaxed and stable hence can contribute meaningfully to the educational system in the transmission of the educational curriculum to the students for the overall achievement of the national policy on education of the nation.

The result also revealed that personality trait of openness to experience has low positive significant relationship with job satisfaction among senior secondary school teachers in Rivers state. The result of the findings showed that the strength of the relationship is low ($R=.112$) while the direction of the relationship is positive. Openness to experience accounted for 11.2% of the job satisfaction of senior secondary school teachers in Rivers State. This finding agrees with Shahnaz (2011) who found out that openness has low positive significant relationship with job satisfaction among high school teachers. Noraini, Norashikin and Lily (2015) in a related study also revealed that openness has low positive significant relationship with job satisfaction among secondary school teachers. Vimansta and Hemantha (2016) revealed a strong relationship between openness traits of Big five personality with job satisfaction of male and female teachers. Openness to experience is the quality of seeking and appreciation of experiences for their own sake. A person high in openness is experimentally rich and willing to entertain novel and unconventional ideas, experiences and values. They predict intellectual and creative outcomes. A low openness is conventional and conservative in the approach of life and outlook. They prefer familiar territory, and their emotional responses are highly reserved. From the findings of this present study, teachers in Rivers State manifested low openness to experience which follows that they are not prone to new methodology and innovation to the teaching and learning process, hence could constitute a cog in the wheel of progress to the implementation of new ideas and techniques in the educational system.

Conclusion

Personality trait of neuroticism has a significant positive relationship with job satisfaction of senior secondary school teachers in Rivers state, hence the null hypothesis of no significant

relationship of personality trait of neuroticism with job satisfaction of senior secondary school teachers in Rivers state is rejected. Personality trait of openness to experience has a significant relationship with job satisfaction of teachers in senior secondary school in Rivers state. There is no joint significant relationship of neuroticism and openness to experience with the job satisfaction of teachers in Rivers State.

Recommendations

1. The neurotic dispositions of the teachers must be ascertained during the process of recruitment hence a compulsory personality test should be introduced in the ministry of education during the engagement process.
2. The openness to experience state of the teachers should also be determined during the engagement exercise and also during the active years of service of the teachers.
3. The government should establish counselling and psychological centers in the ministry of education with professionals and specialists to provide counselling and psychological interventions as the case may be to the teachers. Appropriate interventions must be given by the State government for those manifesting poor mental health condition. This is to ensure a mentally, psychologically and emotionally stable teachers as the vehicle for the inculcation of educational curriculum for national development.

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PERFORMANCE IMPROVEMENT STRATEGY AND TEACHER PRODUCTIVITY IN THE 21ST CENTURY

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Abstract

Human wants are insatiable, which goes to explain man's constant need for change and desire for improvement. The traditional face-to-face method of instruction delivery has been widely practiced until the COVID-19 pandemic came unannounced, suggesting other ways of teaching. Learners were forced to stay at home and attempts were made to reach out to them via radio, television, mobile phones, etc. with parents and guardians mediating to direct and supervise the learners to learn. These methods yielded little results as it met with lots of pitfalls resulting to the parents and guardians being overwhelmed with the burden of coaching their wards. This points to the clear fact that the place of teachers in the lives of learners cannot be replaced. This paper which is anchored on the Human Performance Improvement theory, explains Performance Improvement as a very important strategy that teachers need to improve teaching, especially in this period that COVID-19 and its resultant effects have changed the normal ways of doing things. It also gives suggestions such as teachers at every levels of education should be properly, promptly and appropriately motivated (remunerated) to bring out their best in order to enhance their performance and productivity.

Keywords: Performance Improvement, Motivation, Teacher.

Introduction

The 21st century has placed lots of demands on teaching professionals. It requires that teachers become progressive in their discipline and align with the creative and innovative ways of teaching and learning. Learning is unending. As one in the forefront of learning, learning is a continuous process for the teacher. The teacher is said to be a learner for life. Once a teacher stops improving, the education process becomes ineffective and moribund. To be effective educators, teachers must learn from and with others in their field to utilize the full potentials of technology in education. To be efficient, effective and innovative, the teacher needs to continuously train, retrain, develop and keep developing to meet the demands of the 21st century, technological, informative and knowledge-based age. Teachers need to keep abreast on current trends as well as develop new teaching skills for the purpose of advancement in teaching. Teachers should expand their professional skills, communicate and collaborate with other professionals for better ideas on how to develop professionally. Skills enhancement is imperative in education, especially in this period of uncertainty.

Performance improvement encourages teachers and teaching professionals to apply the methodology that best fits the situation (Dessinger, Moseley and Tiem 2012) to tackle any educational challenge. The human performance improvement which is a result-based and systematic approach (Ross, 2017), provides educational stakeholders with a structure to identify human performance gaps and their possible solutions. Knowledge, skills and expertise are evolving, so also is the society and technology. Education and educational approaches also need to evolve to meet the needs of the society. Teachers should imbibe the culture of teaching to make a purposeful and lasting impact and not just for a pay-package. They should teach because teaching is an integral part of their lives and seek ways to improve upon their teaching. As life-long learners, they should also seek opportunities to learn and grow.

Justification for the Paper

Human wants are insatiable and this insatiability goes to explain man's constant need for change and desire for improvement. For some time in this part of the world, the traditional method of face-to-face teaching and learning has been widely practiced until the COVID-19 pandemic came unannounced, suggesting other ways of teaching and learning. Teachers and learners were forced to stay at home and attempts were made to reach out to learners via radio, television, mobile phones, etc. with parents and guardians mediating to direct and supervise the learners to learn. These methods yielded little results as it met with lots of pitfalls resulting to the parents and guardians being overwhelmed with the burden of teaching and coaching their wards. In some situations, or homes where there are no radios, televisions or mobile phones, the learners are left to while away their time with no worthwhile and meaningful academic engagement. In other cases, where these technological devices were available, availability of internet (data) and power supply becomes a challenge. Gradually a vast majority of learners lost interest in academics as they have gradually acclimatized with staying and playing at home.

This made it clear that the place of teachers in the lives of learners cannot be replaced. As academic work has gradually taken shape and learners have gone back to school and schooling; teachers are therefore faced with the challenge of bringing back the interest and confidence of the learners to learn. The effects of the pandemic have created a wide gap in learners' interest in education and academic work which the teachers are challenged to bridge. This goes to question the performance of teachers in bringing back the lost interest of learners. Performance improvement has become a very important concept that teachers and teaching professionals need to be acquainted with. There are always better and improved ways of doing things. Especially in this period that COVID-19 and its resultant effects have changed the normal ways of doing things.

Aim and Objectives

The paper is concerned with making teachers appreciate the need for performance improvement. Specifically, the objectives of the paper are as follows:

1. Explain Performance Improvement
2. Identify How to Improve Teachers' Performance

Literature Review

This paper is anchored on the Human Performance Improvement theory. Human performance improvement in the views of Reiser and Dempsey (2012) is a natural advancement toward systematic alignment of human capital management with organizational requirements to

meet tough and competitive demands. This concept has become imperative in the educational sector for teachers, educators and educational stakeholders to meet the tough and competitive demands of the 21st century, especially those instigated by the Covid-19 pandemic. Thomas F. Gilbert (1970s) is generally considered to be the father of Human Performance Improvement. Human performance improvement migrated from the field of Human Performance Technology, as a result both terms/concepts are synonymous. The growth in availability of alternative means for achieving success in business and more especially in the business of education and the demands to demonstrate concrete success, survival and continuity posed by these challenging times have made human professional improvement relevant to the educational sector.

International Society for Performance Improvement (ISPI) has a working model for HPT process which will serve as a functional model for this write up. ISPI defines human performance technology as “a systematic approach to improving productivity and competence, uses a set of methods and procedures and a strategy for solving problems and also for realizing opportunities related to the performance of people (teachers). It has five phases which are as follows:

1. Performance Analysis of Need or Opportunities,
2. Cause Analysis,
3. Intervention Selection, Design and Development,
4. Intervention Implementation and Change Management,
5. Evaluations – Continuous Improvement.

HUMAN PERFORMANCE TECHNOLOGY (HPT) MODEL

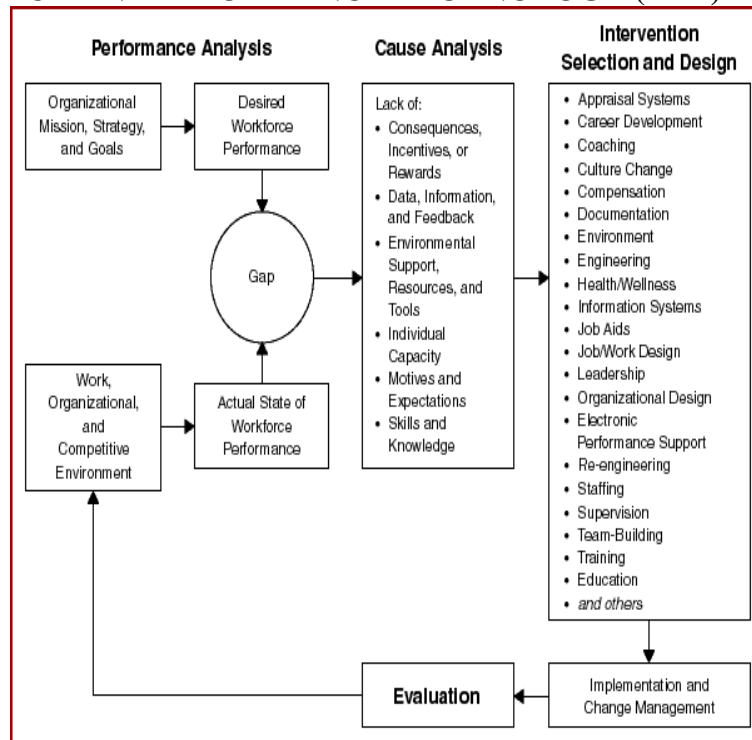


FIGURE 1: HTP Model of the International Society for Performance Improvement
https://sites.google.com/a/nau.edu/learning-theories-etc547-spring-2011/_/rsrc/1472680987477/theory/human-performance-technology/whatishtchart.gif

1. **Performance Analysis of Need or Opportunities:** This is the process of identifying the organization’s performance requirements and comparing them to its objectives and capabilities. The organization in question here is the school (Education). Education is the process of imparting and acquiring knowledge through teaching and learning especially at school or learning institutions. This, points to the fact that the aim of education is the development of the human mind, the personality, the potentials and impartation of useful and relevant skills to individuals thereby enhancing the growth of the society. Aminigo and Nwaokugha (2007) are of the opinion that education prepares the human mind to enable it cope with future challenges. Industry, science and technology and their advance are intimately bound up with the progress of education. In order to achieve the aim of education, the school which serves the purpose of transmitting desirable social norms from one generation to another and in fact, the educational system in general must be robust, functional and up-to-date with societal trends as the need of the individuals are subsumed within those of the society. Also, teachers who are the pioneers in bridging the literacy gap in the society need to keep abreast on current trends as well as develop new teaching skills for the purpose of advancement in teaching.
2. **Cause Analysis:** This is to identify the “why” behind the performance analysis. The cause analysis often uses Gilbert’s Behavior Engineering Model (BEM) to determine the performance causes from either environmental support or workers’ (teachers’) behavior repertory.

Gilbert’s Behavioral Engineering Model

		Information	Instrumentation	Motivation		
Environment	1. Expectations & Feedback <ul style="list-style-type: none"> Does the individual know what is expected of them? Do people know how well they’re performing? Are people given guidance about their performance? 	2. Tools & Resources <ul style="list-style-type: none"> Do people have the right tools for performance? Are tools and materials designed to match the human factors of performance? 	3. Incentives (Consequences & Rewards) <ul style="list-style-type: none"> Are adequate financial incentives that are contingent upon performance available? Are non-monetary incentives available? Are career development opportunities available? 	Management System		
	4. Skills & Knowledge <ul style="list-style-type: none"> Do people have the skills and the knowledge needed to perform as expected? Is well-designed training that matches the performance requirements available? 	5. Individual Capacity <ul style="list-style-type: none"> Is performance scheduled for times when people are at their best? Do people have the aptitude and physical ability to perform the job? 	6. Motivation <ul style="list-style-type: none"> Are people willing to work for the incentives? Are people recruited to match the realities of the job? 			
Individual						

All 6 conditions are equally important, and must be present for performance to occur.

FIGURE 2: http://vertassets.blob.core.windows.net/image/79aa8c92/79aa8c92-4b8e-40b1-b3d6-6547d91ca6bc/behavioral_engineering_model.jpg

To carry out a proper cause analysis using Gilbert’s Behavioral Engineering Model one needs to examines the following 6 key issues: Expectations and Feedback, Tools and Resources, Incentives (Consequences and Rewards), Skills and Knowledge, Individual Capacity and Motivation.

- a. **Expectations and Feedback:** Teachers should be provided with the right information and knowledge. They should be able to:

- (i) Know what is expected of them in teaching in this challenging 21st century and technological era.
 - (ii) Know how well they are performing.
 - (iii) Receive guidance about their performance.
- b. Tools and Resources:** There should be the right instrumentation (technological teaching equipment and facilities) for teachers. Teachers should:
- (i) Have the right technological tools to drive learning home to the learners.
 - (ii) The tools and materials should be designed to match teachers' factors of performance.
- c. Incentives (Consequences and Rewards):** To accomplish the educational set goals and objectives especially in this technological and pandemic era, teachers' motivation is of great importance. Motivation addresses what factors motivate teachers and how they are motivated (Pratap2017). Thus:
- (i) Adequate financial incentives that are contingent upon performance should be available for teachers.
 - (ii) Non-monetary incentives should also be available for teachers.
 - (iii) Professional development programs should also be available for teachers especially in this post pandemic era.
- d. Skills and Knowledge:** The 21st century has placed lots of demands on teachers and as such they need to possess the adequate, innovative and technological skills and knowledge to teach the 21st century learners. Thus:
- (i) Teachers should have the right technological and innovative skills and knowledge to perform as expected of them.
 - (ii) There should be well-designed professional development and performance improvement trainings for teachers.
- e. Individual Capacity:** Individual teacher's capacity should be put into consideration.
- (i) Performance improvement should be scheduled for teachers, first as individuals and also collectively to bring out the best in them.
 - (ii) Teachers should have the right, cooperative and innovative attitude and disposition towards the issue/concept of performance improvement.
- f. Motivation:** Motivation is a strong personal drive/interest that moves an individual to pursue a goal and achieve it. It can also be a strong drive within an environment which is beyond the control of the individual that moves him/her towards the achievement of set goal(s). Motivation is important in human daily endeavours as it enables humans to accomplish set goals and objectives. It is very important in the business of teaching and learning because it is that drive/force that enable teachers to be committed and interested in their course (profession). It propels teachers to be committed to teaching and work hard even in the unfavorable teaching conditions they find themselves and the challenges posed to education by the pandemic and the little or no facilities they are forced to work with in the bid to carry out their job. Thus:

- (i) Teachers should be willing to work and improve.
- (ii) They should be recruited to match the realities of the job.

- 3. Intervention Selection, Design and Development:** Interventions are solutions to the identified performance problem. Since the 21st century has posed lots of challenges to education, forcing teachers to ‘innovate or perish’, coupled with the ‘new normal’ of social and physical distancing and the global era of virtual learning and blended learning; teachers are expected to embrace performance improvement to fit in globally in their teaching career.
- 4. Intervention Implementation and Change Management:** Interventions represent changes. Changes may induce resistance. It is not surprising that the 21st century and post-pandemic demands on education may seem unattainable. Yet change is a gradual process. With the right resources and facilities put in place, and performance improvement embraced, teaching profession especially in Nigeria will attain the desired positive result and wear a new look, though it may take a long while.
- 5. Evaluations – Continuous Improvement:** A completed human performance technology process measures the impact of solutions, and encourages continuous improvement. Performance improvement should be a course that must be embraced by the individual teacher and made available to teachers by the government and key players in piloting the affairs of education in Nigeria. Proper personal professional evaluation/assessment should be carried out by individual teachers for better improvement. Also educational organizations and institution should come up with innovative ways to evaluate teachers to ensure that they are technologically and innovatively inclined to meet the demands of teaching in times like this.

The need to have performance improvement can be triggered by one of the following: inadequate performance; introduction of something new (for instance, a new process, system, technology, employee or law); and increased expectations (Dent and Anderson, 2000). Inadequate performance is NOT a trigger in this context as teachers over the years have adequately performed and given their best to the teaching profession. They have produced and continued to produce professionals in every/and different fields of endeavor. The major triggers to teachers’ performance improvement need in this period are ‘introduction of something new’ and increased expectations.

As can be observed, over the past few months, the pandemic and crises period has introduced the global world to what is referred to as “new normal”. The physical and social distancing caused by the pandemic has seriously affected the educational system as lots of grounds have been lost and need to be recovered and covered. Educational stakeholders, educators and teachers should also rise up to the challenge by way of performance improvement in order to come up with ways to carry on with teaching and learning so that we will always experience stability, efficiency and continuity in our educational system even in the events of uncertainties.

The new normal occasioned by the COVID-19 pandemic has opened a new process/system of teaching and learning with technological tools (virtual learning) and blended learning (mixture of face-to-face and online learning). It is no longer business as usual as there is a global paradigm shift in education and the Nigerian educational sector, educators and in indeed teachers in general need to migrate and innovate or perish. Also, there is an increased expectation in the educational system as learners have gone back to school, parents, stakeholders

and the society at large are looking forward to better ways of schooling and overcoming the devastating effects of the COVID-19 pandemic. Dessinger, Moseley and Tiem (2012) opined that humans often have the desire for change to make things better. Presently, there is the desire and expectations in the hearts of all and sundry to see the educational system run smoothly with or without the pandemic or any form of uncertainty that may emanate in the near future.

Teaching and learning processes need to engage a sound, better, brighter, fun, convenient and more comfortable approach that will beat the challenges of this period. Performance improvement seek to effect significant, bottom-line change through people (teachers). Therefore, to effect that significant, bottom-line change in learners' behaviour and the educational sector in general, teachers, educators and educational stakeholders are the people needed to effect this significant change when teachers intentionally embrace performance improvement with the relevant 21st century skills and competencies to effect an improved change in their performance, learners' performance and general educational outlook. Ott (2017) gave reasons performance improvement is vital in the workplace which is also applicable to the teaching profession as follows:

- (a) **It effectively establishes expectation:** The expectation of teaching is to help or facilitate learning. It is expected in education that for learning to be said to take place, there should be a relatively permanent change in behaviour (Ekeh and Onyekuru 2017). This change in behaviour should be observed in the teacher first, who is believed to have learned or mastered what to impart to the learner in order to facilitate learning. The aim and expectation of education is the development of the human mind, the personality, the potentials and impartation of useful and relevant skills to individuals thereby enhancing the growth of the society (Aminigo and Nwaokugha 2007). As new ways of teaching and world circumstances changes, human performance improvement help teachers to understand that part of their duty is to enhance societal growth especially in this post-covid period which has posed a difficult situation for everyone in the society. Performance improvement helps stakeholders in education to identify the lapses/challenges in education and identify avenues to overcome these challenges/difficulties as Lucas (2020) noted that there are consequences for walking away from difficult situations without clearly and carefully addressing them.
- (b) **It gives teachers opportunity for continual improvement and development:** Teaching is a practical activity. Practice they say, give room for improvement. As teachers teach and facilitate learning, coupled with the changing trends in educational technology, human performance improvement helps teachers to continually improve upon themselves and their ways of instructional delivery, thereby helping them to develop professionally.
- (c) **It creates a sense of accountability in the individual teacher:** human performance improvement helps teachers to understand their roles as societal reformers and gives them a sense of accountability. Aminigo and Nwaokugha (2007) are of the opinion that education (teachers) prepares the human mind to enable it cope with future challenges and effects of the pandemic. Industry, science and technology and their advance are intimately bound up with the progress of education. In order to achieve the aim of education, the school, teachers and all educational stakeholders which serves the purpose of transmitting desirable social norms from one generation to another and in fact, the educational system in general must be robust, functional and up-to-date with societal and educational technology trends as the needs of the individuals are subsumed within those of the society. This sense of accountability will help teachers and all stakeholders in

education to carefully handle the learners, the processes and activities of imparting learning. Performance improvement efforts essentially begin and end with holding both teachers and all stakeholders in education accountable.

Improving Teachers' Performance

In order to improve teachers' performance, the following insight given by Lucas (2020) will be considered.

- (a) **Identify and examine any fundamental issues:** in order to put up any performance improvement plan for teachers, there is need to explore the vital issues that contribute to teachers' poor performance. Find out if the teachers are struggling as a result of lack of professional development opportunities they need to teach effectively and efficiently. Ensure that they take their health issues, family issues, working conditions, etc., into consideration.
- (b) **Involve the teachers:** when teachers are part of their professional development and performance improvement plan, they are likely to key into it, be part of it and ensure its success and actualization. Have a dialogue and collaborative discussion with the teachers and make them see themselves as a team. Express and clearly explain the school and educational concerns to them and give them the freedom and opportunity to express themselves. Allow them to communicate their perspectives and concerns and ensure that their interest is protected.
- (c) **Establish clear objectives:** teachers should be aware and clear about what exactly is expected of them to do differently, when and how it will be reviewed or measured. They should be meant to understand that the objective of the improvement plan is to help them improve on their performance. This objective should be different from the teaching and learning objective as outlined in the curriculum which is centered solely on the learners.
- (d) **Identify, agree and implement professional development and performance improvement opportunity and support programmes:** set up or organize professional development and performance improvement support programmes to enable teachers acquire the necessary skills or better still, enhance their already acquired skills in order to fill up the identified skill or knowledge gaps.
- (e) **Regularly and continuously review progress:** teachers professional and performance improvement programmes should be a regular and continuous activity. Assign days to meet with teachers in order to review the progress of any such programs that is put in place to enable teachers improve. Also, funds should be made available for such programs. Supervisory and monitoring team should be set up to monitor the progress of teachers. Note that all the activities should be properly documented for ease of review and necessary action/attention. Also, disciplinary actions should be taken to tackle any act of laxity when all the necessary resources are put in place.

The need and importance of performance improvement of the teacher cannot be over-emphasized. According to Siribodhi (2020), getting the right people to become teachers help develop learners as learners with high performance teachers will progress faster than those with low performance teachers. This in turn will help teachers to deliver the best possible instructions.

Conclusion

We live in a knowledge-based economy and at the core of learning revolution. This is the era of employment scarcity that has made lots of persons resort to the teaching profession as a

source of survival and thus handle it with laxity. Be that as it may, performance improvement will help teachers understand their areas of strength and weaknesses and seek out modalities for improvement. The quality of education depends largely on the quality of teachers. Learners' positive and sustained change in behaviour and performance can only be possible when they are tutored by professionally developed and improved teachers who are conversant with the demands of the 21st century on teaching and education. Teaching is no longer as it used to be, more so with the post pandemic era of uncertainty in which education has suffered lots of setback. Therefore, getting the right people as teachers who are intentional about performance improvement will help raise independent, confident and resourceful learners that are poised to face future challenges.

Recommendations

- (1) Teachers are encouraged to improve on their teaching as teaching has become demanding and innovative in this era.
- (2) Performance improvement programs should be made available for teachers to motivate them to put in more efforts in teaching.
- (3) Educational institution should liaise with government and the relevant authorities to encourage, motivate and fund educational research in order to enhance productivity in the education sector. Also, the outcome of such research should be implemented for better productivity and societal growth.
- (4) Teachers at every levels of education should be properly, promptly and appropriately motivated (remunerated) to bring out their best in order to enhance their performance and productivity.
- (5) Adequate modalities should be put in place to enhance teachers' job satisfaction and effective job performance to curb the incessant strike actions in our workforce that normally keep learners longer in school than necessary.

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**COMPARATIVE STUDY ON THE EFFECT OF ZOOM AND GOOGLE CLASSROOM
ON STUDENTS' INTEREST AND ENGAGEMENT IN GRAMMAR IN A YOUTH
RESOURCE CENTRE, BONNY ISLAND.**

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Abstract

This study investigated the effect of Zoom and Google Classroom E-learning platforms on learners' interest and engagement in Grammar at the Youth Resource Centre, Bonny Island Rivers State. A quasi-experimental research design was adopted. The population of the study comprised one thousand and eighty-four (1084) Senior Secondary Three (SSIII) students enrolled in the Youth Resource Centre Bonny Island in the 2020/2021 academic year. The sample size for this study comprised a total of 274 Senior Secondary Three (SS III) students made up of 170 male and 104 female students in intact classes determined purposively from the population. The instruments for data collection comprised two researcher-made instruments Grammar E-learning Interest Inventory (GEII), and Grammar E-learning Engagement Scale (GEES). The reliability analyses produced Cronbach's alpha coefficients of 0.851 and 0.863 for GEII and GEES respectively. Mean and standard deviation were used to answer the research questions while ANCOVA was used to test the hypotheses. Findings revealed that, that students who used Zoom E-learning platform had higher engagement level in grammar than those who used Google Classroom E-learning platform. Also, the male students had a better interest and engagement level in grammar with Zoom E-learning platform, while female students had better interest and engagement level in grammar when using Google Classroom E-learning platform. The study concluded that institutions of learning should be aware of students' current needs and interest related to their learning environment for better knowledge acquisition, engagement and engagement. Hence, the study recommended among others that Zoom and Google classroom platforms should be adopted in educational institutions as a form of blended learning strategy in addition to using other methods of teaching and language courses such as Grammar should be taught using Zoom, Google Classroom, Video-conferencing platforms and other innovative and student-tailored learning management systems (LMSs).

Keywords: E-learning, Videoconferencing, Zoom Google Classroom, Students' interest Engagement in grammar.

Introduction

The past few years have seen drastic changes in the way people communicate, work and most importantly learn as a result of the COVID-19 pandemic. This has also resulted in the emergence and rapid use of e-learning technologies such as Google Meet, Moodle, Zoom, Google

Classroom and more which have altered the traditional classroom environment. The adoption of e-learning platforms has become a necessity for educational institutions worldwide. With the supply and accessibility of such modern technology in educational institutions, integrated education using this technology has been designed and termed generally as e-learning.

E-learning refers to the use of new technologies in the service of learning and/ or learner support (Laurillard, 2006). It includes the delivery of content via the internet, intranet, audio and videotape, satellite broadcast, interactive TV and CD-ROM (Boon, Rusman, Van der Klink & Tattersall, 2005). E-learning technologies can be used in three main ways in education: technology-enhanced classroom teaching; distance education (in a bid to reach more students who cannot gain access to conventional classrooms); and distributed learning (a mix of deliberately reduced face-to-face teaching and online learning, also called 'the mixed mode' or 'flexible learning'). E-learning encourages learner-centredness and utilizes electronic technologies to get access to the educational curriculum (Dwidienawati, Tjahjana & Abdinagoro, 2020). It also refers to a course, program or degree that is completed online. Presently, e-learning is inspiring the world societies at large. In these turbulent times, obtaining a traditional education can be challenging due to social, economic, or interrelated issues. But many people nurse the ambition to continue their education through other possible means. E-learning makes education flexible because there is no limitation of time and space. So, e-learning makes learning easier. The evolution of technology is drastically changing social norms. Educated and uneducated masses use technology frequently for enjoyment and other benefits. It is observed that different social media platforms such as Facebook, WhatsApp, and Twitter play an important role in education. Other videoconferencing technologies such as Zoom and LMSs have been utilized for e-learning.

Zoom is a video conferencing tool that allows users to hold virtual meetings, webinars, and classes. It provides features such as screen sharing, recording, and breakout rooms that enhance communication and collaboration between participants. Google Classroom, on the other hand, is a learning management system that enables teachers to create and distribute assignments, quizzes, and other learning materials to students. It also allows for real-time feedback and grading, making it easier for teachers to monitor students' progress.

According to Paul (2013), interest could be seen as a psychological state of engagement, experienced in the moment, and also a predisposition to engage repeatedly in particular ideas, events, or objects over time. Interest has the power to transform struggling performers and lift higher achievers to a new plane. Interest cognitively engages students and statistically fosters learning. Interest guides and encourages students to think critically and to keep trying until success is achieved. Paul (2013) further found out that interest and achievement relate in teaching and learning process and have intra influence on each other. High interest improves students' achievement while high achievement promotes interest. On the other hand, low interest retards learning and results in poor achievement. Interest could be seen as the focusing of the sense organs on or giving attention to some person, activity, situation, or object. It is an outcome of experience and for educators, technology affords an important opportunity to increase students' interest and engagement.

Student engagement is globally recognized as an important influence on achievement and learning in education. Therefore, student engagement has been widely theorized and researched (Kahu 2013). Student engagement is desirable because students learn more when they are engaged in class and is therefore crucial to student learning and satisfaction. The value of student engagement and its impact on their achievement is no longer questioned (Trowler & Trowler,

2010). Student engagement has been defined and is understood in many ways. Fredericks, Blumenfeld and Paris (2004) identified three elements of student engagement: behavioural, emotional, and cognitive, which are shaped by a multitude of factors related to teachers, institutions, students, families, and communities, as well as curriculum and resources. Kahu (2013) extended the Fredericks, Blumenfeld, and Paris (2004) concept to incorporate both its antecedents (structural and psychosocial) and consequences (proximate and distal) while clearly distinguishing the state of engagement. Thus, student engagement is always challenging to define as it is a complex construct influenced by multiple factors.

In the context of e-learning, student engagement is challenging because online learners seem to have fewer opportunities to be engaged with the institution, signalling the absence of institutional factors. Additional barriers to student engagement in online course delivery that are typically not present in face-to-face courses are curriculum and resource factors, such as the need to design and develop courses before the actual delivery of the material (Khan, Egbue, Palkie & Madden, 2017).

However, the use of technology fosters engagement strategies based on active learning opportunities, such as participating in collaborative group work, facilitating students' presentations

and discussions, sharing resources actively, creating course assignments with hands-on components, and integrating case studies and reflections (Martin & Bolliger 2018). In fact, a significant amount of research demonstrates that educational technology can hugely support the engagement of online learners. The pedagogical benefits of using multimedia technologies when teaching, especially at the post-secondary education level, are strong. It has been shown that students learn better from computer-based instruction containing words and graphics rather than words alone in academic learning (Mayer, 2017). The integration of active learning into course material facilitates student engagement regardless of the learning environment (face-to-face or online) and enhances academic performance.

Studies have shown that e-learning platforms have the potential to enhance students' interest and engagement in learning. For example, a study by Lian, Zhang, Hsieh, Huang and Liu, (2016) found that the use of video-based e-learning tools improved students' motivation and engagement in learning English grammar. Another study by Armier, Shepherd and Skrabut (2016) showed that the use of gamification in e-learning platforms increased students' interest and engagement in learning mathematics. However, there is limited research on the comparative effect of Zoom and Google Classroom on students' interest and engagement in grammar. A study by Cavinato, Hunter, Ott and Robinson, (2021) compared the use of Zoom and Google Meet in a college-level chemistry course and found that both platforms were effective in promoting student engagement. However, the study did not focus on grammar, which is a fundamental aspect of language learning. With the shift towards e-learning, there is a need to evaluate the effect of these platforms on students' interest and engagement in grammar. This study will focus on the comparative analysis of the effects of Zoom and Google Classroom on students' interest and engagement in grammar at the Youth Resource Centre, Bonny Island. Bonny Island is a riverine community located in the Niger Delta region of Nigeria. The community is known for its rich cultural heritage, natural resources, and youthful population. The Youth Resource Centre in Bonny Island was established to empower young people through education, training, and skill acquisition. However, the COVID-19 pandemic disrupted the educational activities of the centre, leading to the adoption of e-learning platforms such as Zoom and Google Classroom.

Aim and Objectives of the Study

This study investigated the effect of Zoom and Google Classroom E-learning platforms on learners' interest and engagement in Grammar at the Youth Resource Centre, Bonny Island. Specifically, the objectives of the study were:

1. Examine the difference in the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
2. Ascertain the difference in the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
3. Find out the difference in the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
4. Determine the difference in the engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Research Questions

The following four research questions guided this study:

1. What is the difference in the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?
2. What is the difference in the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?
3. What is the difference in the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?
4. What is the difference in the engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?

Hypotheses

The following four null hypotheses were formulated and tested at 0.05 level of significance:

- H0₁:** There is no significant difference in the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
- H0₂:** There is no significant difference in the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
- H0₃:** There is no significant difference in the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).
- H0₄:** There is no significant difference in the engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Significance of the Study

Findings from this study will enhance teachers' utilization of e-learning software applications with similar features to Zoom web-conferencing platforms, Google Classroom and other learning management systems. It will also enable teachers to appreciate a proper instructional delivery by utilizing an alternative teaching strategy. The findings from this study will be of immense use to

educational technology experts in designing a better technological tool to proffer solutions to learning difficulties. It will also serve as a guide in making technological tools with the features of Zoom and Google Classroom to enhance instructional delivery in times of emergency. This study will expose educational administrators and curriculum designers in primary, secondary, tertiary and other institutions to the need to develop adequate technology-based contents to foster meaningful learning and improve performance. Students at undergraduate and postgraduate levels would benefit from the findings of this study. The findings, when published, will show how male and female students differ in their interest, engagement and academic performance in Grammar when the e-learning approach is used. Also, the results of this study would open other areas of research about e-learning and learning management systems (LMSs) on which students may intend to carry out their own research.

Methods and Materials

The research design adopted for this study was a quasi-experimental design using a non-randomized, non-equivalent, pre-test and post-test experimental group design. This study was carried out in the Youth Resource Centre, Bonny Island, Rivers State. The population of the study comprised one thousand and eighty-four (1084) Senior Secondary Three (SSIII) students enrolled in the Youth Resource Centre Bonny Island in the 2020/2021 academic year. The sample size for this study comprised a total of 274 Senior Secondary Three (SS III) students made up of 170 male and 104 female students in the intact classes. Experimental group 1 consists of 91 SS III students (58 male and 33 female) enrolled in the Youth Employability Program while experimental group 2 consists of 87 SS III students (46 male and 41 female) enrolled in the Youth Leadership Masterclass and the control group is made up of 96 SSIII students (66 male and 30 female) enrolled in the Island Coding and Robotics Class. A multistage sampling procedure was adopted to select these SS III students from three academic structured programs in the Resource Centre namely: Youth Employability Program, Youth Leadership Masterclass and Island Coding and Robotics Class. The instruments for data collection consisted of a Researcher-made interest inventory titled Grammar E-learning Interest Inventory (GEII), and Grammar E-learning Engagement Scale (GEES). Face and content validation was carried out on the instrument for this study. Three experts in Measurement and Evaluation in the Departments of Educational Psychology, Guidance and Counselling and Curriculum Studies and Educational Technology in the University of Port Harcourt validated the instrument. The internal consistency of GEII and GEES was determined with the use of Cronbach Alpha technique. The researcher administered the final GEII and GEES to forty (40) senior secondary school (SS III) students who were not involved in the study. The students' responses were used to compute the coefficient of internal consistency of the GEII and GEES. The reliability analyses produced Cronbach's alpha coefficients of 0.851 and 0.863 for GEII and GEES respectively. The method of data collection was done in phases. Permission was sought from the Director of Youth Resource Centre Bonny Island, heads of the English Language and ICT Departments of the Centre through an official letter written by the researcher and approved by the researcher's supervisors. The consent and cooperation of the English Language and ICT instructors used for the study were solicited to assist the researcher for the period of the study as research assistants. Thereafter, the readiness assurance process was followed for the experimental groups. The GEII and GEES were administered as pre-tests to the experimental groups and the control group to ascertain the students. Thereafter, treatment commenced and lasted for five weeks of fifteen periods. At the end of the treatment, the test items from the instruments were reorganized and re-administered to the same students. The researcher prepared an instructional package that would

suit Zoom and Google Classroom online learning platforms using PowerPoint slides and then added the students to the Google classrooms Platforms. During the class, the students were allowed to take ownership of their lesson, they interacted with one another, discussed the content and answered questions based on the content they have studied on the platforms. The data generated from the administration of GEII and GEES as pretests and posttests were analyzed using mean and standard deviation to answer the research questions while ANCOVA was used to test hypotheses. The statistical package for social sciences (SPSS version 21) was used for the analysis.

Results

Research Question 1: What is the difference in the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?

Table 1: Mean, Standard Deviation and mean difference (gain) on the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

Platform	N	Pre-Test		Post-Test		Mean Difference	
		Mean	SD	Mean	SD	Mean	SD
Zoom E-Learning	91	55.19	17.30	75.76	12.46	20.57	4.84
Google Classroom	87	53.50	13.61	62.52	5.20	9.02	8.41

From Table 1, the pre-test mean of the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) is 55.19, SD =17.30, the post-test mean score is 75.76, SD= 12.46, while their mean gain is 20.57. The interest level in Grammar of learners who used Google Classroom E-learning platform has a pre-test score of 53.53, SD= 13.61, their post-test mean score is 62.52, SD= 5.20 and mean gain is 9.02. This implies that learners who used Zoom E-learning platform have a higher interest level in grammar than those who used Google Classroom E-learning platform.

Research Question 2: What is the difference in the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?

Table 2: Mean, Standard Deviation and mean difference (gain) on the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

E-learning Platform	Male	Female	Mean
	\bar{X}	\bar{X}	
Zoom E-learning	81.12	66.36	73.74
Google Classroom	59.35	66.07	62.71

Mean Difference

21.77

0.29

11.03

From Table 2, the mean interest level in grammar of learners who used Zoom E-learning Platform is 73.74, while the mean interest level in grammar of learners who used Google classroom E-learning Platform is 62.71. This implies that the learners who used Zoom E-learning platform had higher interest level than the learners who used Google classroom E-learning platform. Also, the male learners have better interest level in grammar with Zoom E-learning platform, while female learners have better interest level in grammar when using Google classroom E-learning platform.

Research Question 3: What is the difference in the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?

Table 3: Mean, Standard Deviation and mean difference (gain) on the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

Platform	N	Pre-Test		Post-Test		Mean Difference	
		Mean	SD	Mean	SD	Mean	SD
Zoom E-Learning	91	53.21	18.17	75.19	11.01	21.98	4.84
Google Classroom	87	50.51	14.61	61.33	5.09	10.82	7.16

From Table 3, the pre-test mean of the engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) is 53.21, SD =18.17, post-test mean score is 75.19, SD= 11.01, while their mean gain is 21.98. The engagement level in Grammar of learners who used Google classroom E-learning platform has pre-test score of 50.51, SD= 14.61, their post-test mean score is 61.33, SD= 5.09 and mean gain is 10.82. This implies that learners who used Zoom E-learning platform have higher engagement level in grammar than those who used Google classroom E-learning platform.

Research Question 4: What is the difference in the engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)?

Table 4: Mean, Standard Deviation and mean difference (gain) on the engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

E-learning Platform	Male	Female	Mean
	\bar{X}	\bar{X}	

Zoom E-learning	82.69	62.00	72.35
Google Classroom	57.93	65.15	61.54
Mean Difference	24.76	3.15	10.81

From Table 4, the mean engagement level in grammar of learners who used Zoom E-learning Platform is 72.35, while the mean engagement level in grammar of learners who used Google Classroom E-learning Platform is 61.54. This implies that the learners who used Zoom E-learning platform had higher engagement level than the learners who used Google Classroom E-learning platform. Also, male learners have higher engagement level in grammar with Zoom E-learning platform, while female learners engaged better in grammar when using Google Classroom E-learning platform.

Hypothesis 1: There is no significant difference in the interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Table 5: Summary of One-Way ANOVA Analysis on the mean interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7810.931	1	7810.931	84.381	.000
Within Groups	16291.878	176	92.567		
Total	24102.809	177			

From Table 5, the analysis of variance on the mean interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP) yielded a mean square of 7810.931 (between groups) and 92.567 (within groups). This produced an F-value of 84.381 which has a significance value of 0.000 (2-tailed). Since the significance value is less than the 0.05 alpha value used for the test, a significant difference exists. The researcher rejected the null hypothesis and concluded that there is a significant difference in the mean interest level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Hypothesis 2: There is no significant difference in the interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Table 6: Summary of Two-Way ANOVA Analysis on the mean interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	13371.802 ^a	3	4457.267	72.273	.000
Intercept	795071.066	1	795071.066	12891.835	.000
E-learning Platform	5196.657	1	5196.657	84.262	.000
Gender	688.649	1	688.649	11.166	.001
E-learning Platform * Gender	4926.602	1	4926.602	79.883	.000
Error	10731.007	174	61.672		
Total	878752.000	178			
Corrected Total	24102.809	177			

a. R Squared = .555 (Adjusted R Squared = .547)

From Table 6, the analysis of variance on the mean interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP) yielded a mean square of 5196.657 (E-learning Platform), 688.649 (Gender) and 4926.602 (E-learning Platform and Gender). This produced an overall F-value of 79.883 with a sig value of 0.000(2-tailed). Since the significance value is less than the 0.05 alpha value used for the test, a significant difference exists. The researcher rejected the null hypothesis and concluded that there is a significant difference in the mean interest level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Hypothesis 3: There is no significant difference in the mean engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Table 7: Summary of One-Way ANOVA Analysis on the mean engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8536.078	1	8536.078	114.394	.000
Within Groups	13133.158	176	74.620		

Total	21669.236	177
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From Table 7, the analysis of variance on the mean engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP) yielded a mean square of 8536.078 (between groups) and 74.620 (within groups). This produced an F-value of 114.394 which has a sig value of 0.000(2-tailed). Since the significance value is less than 0.05 alpha value used for the test, a significant difference exists. The researcher rejected the null hypothesis and concluded that there is a significant difference in the mean engagement level in Grammar of learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Hypothesis 4: There is no significant difference in the mean engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Table 8: Summary of Two-Way ANOVA Analysis on the mean engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	18666.896 ^a	3	6222.299	360.612	.000
Intercept	765434.972	1	765434.972	44360.626	.000
E-learning Platform	4984.624	1	4984.624	288.883	.000
Gender	1939.273	1	1939.273	112.390	.000
E-learning Platform * Gender	8310.519	1	8310.519	481.634	.000
Error	3002.340	174	17.255		
Total	854836.000	178			
Corrected Total	21669.236	177			

a. R Squared = .861 (Adjusted R Squared = .859)

From Table 8, the analysis of variance on the mean engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP) yielded a mean square of 4984.624 (E-learning Platform), 1939.273 (Gender) and 8310.519 (E-learning Platform and Gender). This produced an overall F-value of 481.634 with a sig value of 0.000(2-tailed). Since the significance value is less than 0.05 alpha value used for the test, a significant difference exists. The researcher rejected the null hypothesis and concluded that there is a significant difference in the mean engagement level in Grammar of male and female learners who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP).

Discussion of Findings

From the study, the findings revealed that students who used Zoom E-learning platform had higher engagement level in grammar than those who used Google Classroom E-learning platform. Also, the male students had a better interest and engagement level in grammar with Zoom E-learning platform, while female students had better interest and engagement level in grammar when using Google Classroom E-learning platform. Furthermore, there was a significant difference in the mean interest and engagement level in Grammar of students who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP). This implies that Zoom E-learning platform enhances students' interest and engagement level in learning grammar, which eventually results in a better understanding of the subject. This, therefore, reveals that Zoom E-learning platform is preferred to Google Classroom E-learning platform when it has to do with interest and engagement level of learners in grammar despite the fact that Google Classroom is a learning management system and Zoom is used primarily for video conferencing. This finding therefore implies that the introduction of Zoom E-learning platform in teaching and learning will ensure higher interest and engagement levels of students in grammar and other subject areas. This finding corroborates the finding of Jang and Kim, (2020) who investigated the effect of real-time remote video instruction on learners' English reading achievement using Zoom. The study also sought to identify the efficiency of Zoom video lectures and consider supplementing them by surveying learners' opinions and satisfaction regarding them. The results demonstrated that Zoom video lectures had a positive effect on learners' English reading achievement. Feedback from the questionnaire showed that learners are satisfied with Zoom video lectures for the following reasons: increased interest in and motivation towards learning, self-directed learning, active interaction, ease of access, and ease of information retrieval. This agrees with the outcome of the present study. In the finding of Candarlia and Yukselb (2012) on students' perceptions of videoconferencing in the classrooms in higher education which aimed to find out students' perceptions of videoconferencing in higher education, revealed how prospective English teachers can deal with technology in their own classes in the future. This demonstrated how teachers develop interest in the use of Zoom E-learning platform in their future engagement with their students because instructors' characteristics are considered as a vital strategy adopted in e-learning. Quality lies in satisfaction (Sankar, et al. 2021). In the students' perspective of the quality of e-learning, the instructor can reflect the course quality and their academic achievement.

From the study, the findings revealed that students taught grammar using Google classroom E-learning platform performed better than those who used Zoom E-learning platform. Also, the male students performed better in grammar with Google classroom platform, while female students performed better in grammar when Zoom E-learning platform was used. Further, there is a significant difference in the mean performance scores in Grammar of students who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP). This implies that Google Classroom E-learning platform enhances students learning of grammar, which eventually results in a better academic performance. This, therefore, means that Google Classroom E-learning platform was preferred to Zoom E-learning platform when it has to do with performance in grammar. Hence, introducing the use of Google Classroom E-learning platform in schools is necessary. The findings of this study suggest that there was a high achievement from using the Google Classroom platform as an additional tool in the Grammar classroom. These results contradict earlier studies (Azhar & Iqbal, 2018; Yigit, 2020) but confirm the increasingly consistent results of more recent studies suggesting significant effects

(Subandoro & Sulindra; 2019). This finding also corroborates the finding of Anekwe and Amadi (2020) who investigated the effect of Google Classroom on trainee teachers' interest and performance in a Computer Education course in the University of Port Harcourt, Rivers State. From the study, the findings revealed that Google Classroom Discussion strategy has a significant effect on the teaching and learning of Computer in Education course. This result might be attributed to the fact that the teaching using Google Classroom Discussion strategy exposed students to not only the theory but the practical aspect of teaching and learning. With Google Classroom, students are better poised to experience and appreciate the integration of technological tools into educational packages. Google Classroom might have also improved participants' performance more than other learning management systems and teaching platforms because students can carry their learning to anywhere, even in their homes, unlike the face-to-face method where learners can only learn with their lecturers present in class. Furthermore, students exposed to Google Classroom can explore related concepts on the internet with fewer limitations unlike in other platforms where students might be prevented from accessing additional learning resources conveniently. Also, Mostafa and Sohail (2016) investigated the impact of Google Apps from the perspective of higher educational institutions. The data was collected via an online questionnaire survey that was distributed among the respondents through their emails. The data were collected between 1st November 2015 and 31st April 2016. Results revealed that the administrative staff were more positive toward using Google Apps than their academic counterparts in performing their work; 58.8 % of the academic staff indicated that they were using Google Apps in processing their work. It was further revealed that Google Apps are highly perceived by both academic and administrative staff. This study agrees with the finding of the present study.

From the study, the findings revealed that male students had better interest and engagement level in grammar with Zoom E-learning platform, while female students had better interest and engagement level in grammar when using Google Classroom E-learning platform. This finding was consistent in that the male students had better performance in grammar with Google classroom platform, while female students performed better in grammar when Zoom E-learning platform was used. Further, there is a significant difference in the mean performance scores in Grammar of students who used Zoom E-learning Platform (ZEP) and those who used Google Classroom E-learning Platform (GCEP). This implies that Google Classroom E-learning platform enhances students' learning of grammar, which eventually results in a better academic performance. This finding is similar to that of Heggart and Yoo (2018), who conducted a study to examine the effectiveness of using Google Classroom for final year primary teacher education students to encourage student voice and agency, and to consider how the platform might influence future pedagogies at the tertiary level. The findings revealed that Google Classroom increased student participation and learning and improved classroom dynamics. It also revealed concerns around pace and user experience. Their findings agreed with the present study. In a similar study, Shaharane, Jamil, and Rodzi (2017) undertook a study to explore the effectiveness of Google Classroom's active learning activities for a data mining subject under the Decision Sciences program. The findings showed that most of the students were satisfied with the Google Classroom tools that were introduced in the class where all ratios are above average. The implication is that comparative performance is good in the areas of ease of access, perceived usefulness, communication and interaction, instruction delivery and students' satisfaction with the Google Classroom's learning activities.

Conclusion

Based on the findings of the study, it was concluded that students who used Zoom E-learning platform had higher engagement level in grammar than those who used Google Classroom E-learning platform. Also, students taught grammar using Google classroom E-learning platform had better academic performance than those taught using Zoom E-learning platform. Therefore, institutions of learning should be aware of students' current needs and interests related to their learning environment for better knowledge acquisition and academic performance. It was also concluded that male students had better interest and engagement level in grammar with Zoom E-learning platform, while female students had better interest and engagement level in grammar when using Google Classroom E-learning platform. This finding was consistent in that the male students had better performance in grammar with Google classroom platform, while female students performed better in grammar when Zoom E-learning platform was used.

Recommendations

Based on the findings and conclusions, the following recommendations are made:

1. Zoom and Google classroom platforms should be adopted in educational institutions as a form of blended learning strategy in addition to using other methods of teaching.
2. Language courses such as Grammar should be taught using Zoom, Google classroom, Video-conferencing platforms and other innovative and student-tailored learning management systems (LMSs).
3. Teachers should act as guides on the side and allow students to take control of their learning as this will enhance their participation thereby increasing their academic performance.
4. Students should be encouraged to engage in interaction with both teachers and their colleagues during learning, as it will enhance their interest in the subject matter.

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**ADAPTIVE LEARNING INSTRUCTIONAL STRATEGY AND ACADEMIC
PERFORMANCE IN ICT EDUCATION AMONG UNDERGRADUATE STUDENTS IN
UNIVERSITY OF CALABAR**

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ABSTRACT

This study investigated the effect of Adaptive Learning Instructional Strategy on undergraduate students' academic performance in ICT in Education in University of Calabar. Two research questions and corresponding null hypotheses guided the study. The study adopted a quasi-experimental design. The population of the study consists of all the 200 level undergraduate students, who are offering the course ICT in Education (EDU 203.1) in Faculty of Educational Foundation Studies for 2020/2021 academic session in University of Calabar. The sample of the study comprised two hundred and sixty-eight (268) students selected using the multi-stage and purposive sampling procedures. The instrument used for data collection was a researcher-made performance test titled; Adaptive Learning Instructional Strategy for ICT in Education Performance Test (ALISICTEPT). The instrument was subjected to face and content validation with a reliability coefficient of 0.84. Mean, Standard deviation and t-test were the statistical tools used in the study. The study concluded that adaptive learning is one of the 21st-century innovative strategies that support learner-centred system of learning. It combines digital information with physical information in real time and with user participation. The study recommended amongst others that instructors should adopt the use of adaptive learning instructional strategy in teaching ICT in Education courses and other ICT-related courses so that students could produce better and dependable results.

Keywords: Adaptive learning, academic performance, ICT.

INTRODUCTION

Meaningful and useful education is something all students need regardless of the career choices they will eventually make. The issue is how best to integrate Information and Communication Technology (ICT) into the classroom. This has made students become more productive

researchers when they are helped to learn carefully and construct their own knowledge in the process of learning. Today's schools need to better prepare students for the 21st-century workforce. To do so, students need to experience a reformed learning environment that engages them meaningfully in activities in which they use computers as tools to solve real-world problems. This in turn deepens and enriches their understanding of requisite core content and skills. Most often, the younger generations bring increasingly high levels of competence into the learning environment. How prepared are teacher educators? What are the competency levels of educators? Are technology infusion and integration of 21st-century innovative teaching strategies in universities equal to this task? In spite of much research on learning and instruction, there is still much that cannot be understood and much more that could be done to improve learning and instruction.

Oshemughen (2013) explains the real situation of teaching Computer Education in Nigerian universities as ineffective. This is because the Federal Government has only given little attention to the provision of learning facilities, especially in the field of computer education. This discourages students from developing a high level of interest in learning Computer in Education as a course. He added that in assessing the effectiveness of teaching Computer in Education in higher institutions in this present era, appropriate teaching strategies must be used, and functional facilities must be on the ground that have quality control, efficiency, and students' educational results. Learners may be motivated to learn particular concepts as a result of the teaching approach adopted by the instructors, especially in the university education system. Unfortunately, some university instructors are not cognizant of this fact which may result in poor performance of students in that particular course.

However, when learners are properly motivated, their interest will be aroused in learning the course which will eventually foster their academic performance. Spector (2016) submitted that there is particularly a challenge in educational contexts. Students are no longer interested in schoolwork and do not have any connection with the web. It is obvious that today's learners are always glued to their phones either as they are chatting, pinging, skypeing, blogging, tweeting, or snapchatting and so on. They are digital natives; they do not learn about technology they are born into it. They seem so distracted from class work and to them the classroom is becoming too boring, as such, there is a need to introduce innovative strategies to the classroom, such as adaptive learning, augmented learning, blended learning, collaborative learning etc.

Adaptive learning, a groundbreaking approach that emerged in the 21st century, is centered around the learner and their unique learning needs. This innovative strategy is designed to enhance the learning experience by tailoring it to the individual learner's pace and level of understanding. In an adaptive learning environment, the focus is on developing bespoke solutions that digitize specific aspects of the curriculum. These solutions are not one-size-fits-all, but rather, they are tailored to each learner's needs based on the most current and relevant student data. This data-driven approach allows for real-time adjustments to the learning path, ensuring that each student's learning experience is personalized and effective. One of the key features of adaptive learning technologies is the ability to form collaborative teams quickly and efficiently at the teacher's request. This fosters a sense of community and collaboration among learners, further enhancing their learning experience. The use of adaptive learning technologies has led to the development of adaptive hypermedia systems. These systems personalize the learning experience by adapting the presentation of information to the learner's needs. This personalization extends beyond just the content; it also includes the creation of a personal learning environment in higher education settings. Adaptive learning has the potential to make

learning more efficient and effective by using adaptive, information-oriented models for adaptation. These models leverage technology to automate aspects of learning, making it more accessible and engaging for learners. Adaptive learning, as described by Ahmad, Zainuddin and Yusoff (2018), can significantly improve learning outcomes by providing a personalized and efficient learning experience. It represents a significant step forward in education technology, offering promising prospects for enhancing teaching and learning in the 21st century.

Students are encouraged to take an active role in the learning process when they are given the opportunity to do so through the use of the discussion teaching method, which is an interactive and participatory approach to education. Discussions, as opposed to more traditional teaching methods based on lectures, foster a collaborative learning environment in which students are encouraged to express their ideas, question fundamental ideas, and develop their ability to think critically. Not only does this method of teaching make it easier for students to remember what they have learned, but it also improves their capacity to analyze, evaluate, and apply the information that they take in.

Academic performance has to do with the achievement of objectives in various types of knowledge and skills. Here objectives are established based on the age, prior learning and capacity of individuals with regard to education, socialization and qualification. Presenting evidence of learning should be an important landmark in the journey toward lifelong learning and capabilities. Academic performance among learners is considered a criterion for deciding the effectiveness of educational programs; also, that is why in the evaluation of an education system, researchers often consider academic performance and search for factors affecting academic performance (Mudulia, 2016). It is against this backdrop that this study strives to investigate the effect of Adaptive Learning Instructional Strategy on Undergraduate Students' Academic Performance in ICT in Education in University Calabar.

STATEMENT OF THE PROBLEM

Adaptive learning, an instructional strategy for information and communication technology (ICT) in education, is being utilized by undergraduate students at the University of Calabar. Despite its growing prominence in pedagogical discussions, there is a notable lack of extensive research investigating the impact of adaptive learning on students' academic performance within this specific context. This study aims to address this gap by exploring the effectiveness of adaptive learning as an instructional strategy in enhancing the academic performance of undergraduate students enrolled in the ICT in Education course at the University of Calabar. The goal is to provide empirical evidence that could potentially validate the use of adaptive learning in this setting and contribute to its broader application in pedagogy.

AIM AND OBJECTIVES OF THE STUDY

The aim of this study was to investigate the effect of Adaptive Learning Instructional Strategy on undergraduate students' academic performance in a course ICT in Education in University of Calabar. Specifically, the study sought to:

1. determine the effect of Adaptive Learning Strategy on students' mean performance scores in ICT in Education.
2. examine the effect of Discussion Method on students' mean performance scores in ICT in Education.

RESEARCH QUESTIONS

The following research questions guided the study

1. What is the effect of Adaptive Learning Strategy on students' mean performance scores in ICT in Education?

2. What is the effect of Discussion Method on students' mean performance scores in ICT in Education?

HYPOTHESES

The following null hypotheses were formulated to guide this study:

H0₁. Adaptive Learning Strategy has no significant effect on the students' mean performance in ICT in Education

H0₂. Discussion teaching method has no significant effect on the students' mean performance in ICT in Education

SIGNIFICANCE OF THE STUDY

The findings of this study will be of immense benefit to lecturers as adaptive learning can become a new pedagogy of teaching and learning which is a learner-centred actively providing the lecturers with the opportunity of acting as facilitators, coaching and mentoring in the classroom. It can also create a platform that supports knowledge transfer between lecturers and students. The research work will also task the lecturers to see the need for embracing this new approach to teaching, which will make learning more effective and result oriented.

Instructional designers can take advantage of the findings of this study as a guide on how to design instructional models that are flexible, which can be used in teaching ICT in Education and every other related course in the Faculty of Education. The strategies can help in inspiring students learning by making them creative thinkers and problem solvers in the course of their learning.

To curriculum planners, the study will serve as a guide for them to plan the school curriculum for the higher institution. It can help planners to incorporate some of the 21st-century innovative strategies into the university curriculum, which will help in the realization of a better academic goal.

METHODOLOGY

This study adopted a quasi-experimental design. The study was carried out in Cross Rivers State which is one of the states in the South-South part of Nigeria. The population of the study consisted all the 200-level undergraduate students taking ICT in Education course (EDU 203.1) in the Faculty of Educational Foundation Studies for 2020/2021 academic session in University of Calabar. These include four hundred and fifty-eight (458) students offering the course ICT in Education. The sample size of this study consisted two hundred and sixty-eight (268) 200-level students in the Department of Curriculum and Teaching (126), Guidance and Counselling Department (64) and Department of Educational Foundations (78) in the Faculty of Educational Foundation Studies, University of Calabar who offered the Course ICT in Education for 2020/2021 academic session. Multistage and purposive sampling procedures were used in selecting the sample for the study. The reason for using these three departments is that ICT in Education course is domiciled in the faculty where these three Departments are and as such, they have an idea of what the course is all about. The instrument for data collection was a researcher-made performance test on Computer in Education Course titled; Adaptive Learning Instructional Strategy for ICT in Education Performance Test (ALISICTEPT). The face and content validity of the instrument was determined by three experts in the Departments of Educational Psychology, Guidance and Counselling and Curriculum and Teaching, University of Calabar. The reliability coefficient of the ICTEPT was determined with the Kuder Richardson Formula 21 (KR-21) technique which yielded a coefficient of 0.84. The method of data collection was done

in phases. The researcher sought permission from the Heads of Department and Computer in Education course lecturers to use the students as well as some facilities in the selected departments. The next phase involved the readiness assurance process for the experimental group. The performance test was administered to students in experimental and control groups as pretests to determine the baseline knowledge. The researcher prepared an instructional package that suits the Adaptive Learning Instructional Strategy and exposed them to different technologies to personalize the learning experience. The instructional packages were sent to the students' WhatsApp platforms to study and interact. During the class, the students were allowed to take ownership of their lesson, they interact among themselves, discussed the content and answered questions based on the content they have studied on the platforms. Also, the students in the control group were taught using the discussion method teaching strategy. Post-test was administered at the end of three weeks. The data collected were analyzed using mean and standard deviation to answer research questions. The null hypotheses were tested using a t-test at 0.05 alpha levels. The statistical package for the social sciences (SPSS) was used for the analysis.

RESULTS

Research Question 1: What is the effect of Adaptive Learning Strategy on students' mean performance scores in ICT in Education?

Table 1: Effect of Adaptive Learning Strategy on students' mean performance scores in ICT in Education

Strategies		Pretest	Posttest	Mean gain
Adaptive Learning Strategy	Mean	38.63	72.97	
	N	64	64	34.34
	Std. Deviation	8.50	12.48	

Table 1 showed that students taught with Adaptive Learning Strategy had a mean score and a standard deviation of 38.63 and 8.50 during the pre-test. After post-test, same students had a mean score of 72.97 and standard deviation of 15.44 respectively. This indicated that Adaptive Learning Strategy has effect on students' (pre-test and post-test mean) performance scores in ICT in Education.

Research Question 2: What is the effect of discussion method on students' mean performance scores in ICT in Education?

Table 2: Effect of discussion method on students' mean performance scores in ICT in Education

Strategies		Pretest	Posttest	Mean gain
Discussion method	Mean	38.41	65.21	
	N	78	78	26.79
	Std. Deviation	12.71	11.13	

Table 2 showed that students taught with the discussion method had a mean score and a standard deviation of 38.41 and 12.71 respectively during the pre-test. After the post-test, same students had a mean score of 65.21 and standard deviation of 11.13 respectively. This indicated that discussion method has effect on students' (pre-test and post-test mean) performance scores in ICT in Education.

Hypothesis 1: Adaptive Learning Strategy has no significant effect on the students' mean performance in ICT in Education

Table 3: T-test analysis on the students' means performance in ICT in Education

		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Pretest - Posttest	34.34	14.45	1.81	-19.012	63	.000

Table 3 showed the degree of freedom of 63 at 0.05 level of significance, the t-calculated value of -19.012 and p-value of 0.001 less than 0.05. Hence the null hypothesis is rejected. This indicates that Adaptive Learning Strategy has a significant effect on the students' mean performance in ICT in Education.

Hypothesis 2: Discussion teaching method has no significant effect on the students' mean performance in ICT in Education

Table 4: T-test analysis on the students' means performance in ICT in Education

		Mean	Std. Deviation	Std. Error Mean	t	df	Sig. (2-tailed)
Pair 1	Pretest - Posttest	-26.79	17.49	1.98	-13.533	77	.000

Table 4 showed the degree of freedom of 77 at 0.05 level of significance, the t-calculated value of -13.533 and p-value of 0.001 less than 0.05. Hence the null hypothesis is rejected. This indicate that discussion teaching method has a significant effect on the students' mean performance in ICT in Education.

DISCUSSION OF FINDINGS

The analysis of the results presented in Table 1 showed that Adaptive learning Strategy has a significant effect on students' (pre-test and post-test mean) performance scores in ICT in Education. The pair t-test analysis presented in Table 3 showed that Adaptive learning Strategy significantly affected the experimental group students' ICT in Education as well as their usability of learning through the proposed environment. Meeting students' individual differences, preferences, needs and intelligences may be the reason for such a significant difference. In addition, the adaptive environment was designed to provide personalized content, activities, means of communication, feedback and assessment in light of each individual student's ICT level which directed the student to his/her appropriate learning path. These findings support the earlier studies carried out on investigating the significance of adaptive learning environments. For example, the results reached by Balme (2019) Kudzai (2014) and Izundu (2015) are very consistent with the present study since they supported the use of adaptive learning strategy. In

addition, when examined the effect of an adaptive learning strategy it has positive effect on students' learning performance and engagement, which is closely related to the results of the present study. Furthermore, adapting the application of Adaptive learning Strategy in class activities was very effective in improving their ICT skills of students since such activities fostered students' participation; consequently, they outperformed their counterparts of the control group in their ICT in Education. These findings are also in agreement with that of Bangert (2009) whose findings revealed that there are three elements of a community of inquiry, which are; the cognitive presence which has to do with the extent to which the learner contributes to their learning by constructing his or her own knowledge which is created through interaction and not transferred from educator to the learner, also the social presence which has to do with the extent to which learners interact with their colleague during the learning process and finally the teaching presence which involves teachers preparation of the learning environment and the organization of the learning content. The study also reported that the CoI survey instrument was a suitable tool to determine and to enhance the educational quality of faculties. Moreover, it was reported that structures related to the cognitive, social and teaching presence and the CoI framework were a useful model in the description, explanation, and development of online education for learners. The findings also disagreed with that of Sarfo and Ansong-Gyimah, (2010) who conducted a study on the students' perception of the use of information and communication technology for learning by pre-service teachers in Ghana using third-year students in the college of education. The findings revealed that the majority of the pre-service teachers had a positive perception towards the use of information communication technology for their learning while other had a counter opinion on the use of information and communication technology for their learning.

Table 2 revealed that discussion method has an effect on students' (pre-test and post-test mean) performance scores in ICT in Education. The result of the hypothesis in table 4 shows that the effect of discussion method on students' (pre-test and post-test mean) performance scores in ICT in Education was significant. This finding is in line with the findings of Irinoye, Bamidele, Adetunji and Awodele (2015) and Zainal, Yahya and Rahman (2014) who reported a statistically significant effect on the performance mean score of students taught using discussion method. The discussion method espouses the teacher's guidance using purposeful questions aimed at directing learners' attention to important ideas and assisting them with hard-to-grasp concepts in ICT in education in a manner that other methods do not offer. This is because discussion creates opportunities for students to reflect on the storyline or the text language and this promotes comprehension. For teaching and learning of ICT in education to exert a positive impact on students' performance, classroom instruction should include posing questions during lessons. Abeysekera and Dawson (2015) in a study also reported on designing and teaching a third-year course with 30 students enrolled in education for enterprise in the economics faculty in the University of South Africa. The results revealed that videos contribute to the mastering of the concepts representing strong teaching present in the online component. The online technology in the individual space was inspiring and fostered independent and self-directed learning which corresponds to both emotional and learning presence, based on these the students had a positive perception of the use of video for learning.

CONCLUSION

Adaptive learning is one of the 21st-century innovative strategies that support learner-centred system of learning. Adaptive learning environments have been concerned with creating customized solutions designed to digitize a specific part of the curriculum used by teachers.

Adaptive learning technologies are based on the use of the most relevant and up-to-date student data, and collaborative teams are formed instantly on the request of teachers. This leads to the development of adaptive hypermedia systems and personalization of learning experiences and the creation of a personal learning environment in higher education. Adaptive learning can make learning more efficient and effective. Learning can be improved by using adaptive, information-oriented models for adaptation and computerization of learning among learners.

RECOMMENDATIONS

Based on the findings of this study the following recommendations were made;

1. Instructors should adopt the use of adaptive learning instructional strategy in teaching ICT in Education course so that students could produce better and dependable results.
2. Faculty of Education in conjunction with the University should organize conferences, seminars and workshops for lecturers in the Faculty of Education to expose them to the design and implementation of the current and innovative instructional strategies to promote students' performance in schools in the University.
3. Proper attention should be given to new pedagogies in the educational sector since the 21st century has brought in new innovations in the system.

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COMPONENTS OF TEACHER EVALUATION AND TEACHER PRODUCTIVITY IN PUBLIC SENIOR SECONDARY SCHOOLS IN RIVERS STATE

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Abstract

The aim of this study examined components of teacher evaluation and teacher productivity in public senior secondary schools in Rivers State. Two research questions and two hypotheses guided the study. The study adopted correlational design. The population for this study was 289 principals in the 289 public senior secondary schools in Rivers State. Census sampling technique was used to draw 289 principals. Components of Teacher Evaluation Scale (CTES) and Teacher Productivity Scale (TPS) were used for data collection. Cronbach method was used to determine the reliability coefficients .81 and .74 for components of teacher evaluation and teacher productivity. Out of 289 copies of the instrument administered, 275 were properly filled and retrieved representing 96% success. The research questions were answered using Pearson Product Moment Correlation while hypotheses were tested using z-ratio at 0.05 level of significance. The findings among others revealed that, to a high extent there is correlation between teacher effective planning and teacher productivity and the hypothesis showed that there is a significant correlation between teacher effective planning and teacher productivity in Public Senior Secondary Schools. Based on the findings of the study, it is concluded that components of teacher evaluation such as effective planning and teacher subject mastery have strong correlation with teacher productivity in Public Senior Secondary Schools. It was recommended that teachers in public Senior Secondary Schools should improve more on teachers' effective planning to promote teacher productivity in Public Senior Secondary Schools in Rivers State.

Key Words: Teacher Evaluation, Teacher Productivity, Subject Mastery

Introduction

In every sphere of life, education is very essential. It is an all important aspect in the growth and development of any society. Education is the transmission of knowledge, idea, culture and information from one generation to another. It is also regarded as the oil that drives the wheel of the engine of any nation. No country can fully make progress without imbibing the tenets of education. Education is the bedrock on which development thrives. It is seen and regarded as the most important tool that can be used to transform a society, state or nation. For the meaningful growth and development of any society, education is widely seen as a viable instrument that can make that happen. It has been empirically proven and universally acknowledged that unless the citizens of a given country are well educated and appropriately trained, the achievements of rapid economic and social development cannot be guaranteed (Ahmed, 2013).

It has been observed that education helps develop a society and propel them to greater heights. There are basically three levels of education namely; primary, secondary and tertiary.

No society can sustain itself comprehensively without education and its practices. Economic and social status depend to a great extent on the education obtained by an individual since education contributes to individual capacity and capability. Education is the best investment in people because well educated people have more opportunities to get a job which gives them satisfaction. Educated individuals enjoy respect among their colleagues and they can effectively contribute to the development of their country and society.

In secondary schools, teachers are the managers of the classroom. They help to transmit knowledge to students and also help to guide their actions. Teachers carry out certain duties in the school. These include teaching, record keeping, giving student assignments, attending meetings, holding lessons, managing classroom activities amongst others. Teachers play a huge role in ensuring that the educational policies are sustained and enhanced. They are responsible for facilitating the teaching and learning process, thereby ensuring quality education in schools. It is believed that no nation can grow above the quality of its teachers. Hence, the importance on the quality of works that they do in schools. The productivity of teachers in schools is very essential in the education process. Teachers play a huge role in the teaching and learning process. They carry out various activities in schools and are expected to carry out their tasks effectively. Schools exist to achieve educational goals and objectives and so the productivity of teachers is very vital.

Teacher productivity is the outcome of teachers' inputs in schools. It refers to the efforts that teachers put in the course of carrying out their duties to ensure the achievement of goals. It involves the interplay of various elements in the workplace in the school while the inputs may be related to miscellaneous resources (labour, materials, and capital) (Oyedepo, 2011). It also means better performance from teachers leading to school leavers or graduates who are morally, spiritually, physically and mentally able to fit into the society as well as the labour market. For effective teaching and learning in the educational system, teachers are appraised and evaluated from time to time.

Teacher productivity, as defined by Onugwu (2013) is the relationship between the total resources input utilized in the production process. In this context a teacher is said to be productive if such an individual is sufficiently motivated, devoted and committed to his or her duties, and demonstrates willingness to stay in the teaching profession. Such an efficient or productive teacher can be seen to produce maximum output with a given quantity of input or produce a given quality of output with the minimum quantity of inputs. For a highly productive teacher, there is an optimal relationship between his output and input. A highly productive teacher makes optimal use of the time available to him to see that the students acquire necessary skills, knowledge and attitudes as specified in the school's curricular and co-curricular activities. He further said that such a teacher demonstrates sufficient interest in the operation of the school in spite of adverse external influences.

Teachers that are highly motivated by the principal are found to be associated and committed to school work. It, therefore, suggests that for teachers to be highly productive in the school, the principal has to be dynamic, show good examples and treat teachers as colleagues. Teacher productivity can be seen as all the efforts the principal puts in the administration of their duty in bringing out teachers' potentials to impart their students to have better results in examinations. The principal can promote teacher productivity by encouraging them to go for in-service training, workshops, conferences, motivating them and providing conducive working environment (Onugwu, 2013).

Teacher evaluation is the standardized process of rating and assessing the teaching effectiveness of educators. It is a well-defined and systematic process that is used to assess a teacher's performance in the classroom. During teacher evaluation, the instructor's pedagogic behaviors are assessed using a set of standardized criteria that is determined by the evaluation team. Teacher evaluation is integral to maintaining a standard educational system. It helps stakeholders in the educational sector to track the performance of teachers and rate the overall quality of knowledge impartation. At the end of the evaluation exercise, the assessment team provides constructive feedback on the teacher's performance and highlights areas needing improvement. There are standardized criteria or component for teacher evaluation which include the demonstrated ability to plan lessons and teacher demonstrated ability to subject mastery. These criteria are expected of teachers to possess for the facilitation of the teaching and learning process.

An effective system of teacher evaluation accomplishes two things: it ensures quality teaching and it promotes professional learning. The quality of teaching is the single most important determinant of student learning; a school district's system of teacher evaluation is the method by which it ensures that teaching is of high quality. Therefore, the system developed for teacher evaluation must have certain characteristics: it must be rigorous, valid, reliable, and defensible, and must be grounded in a research-based and accepted definition of good teaching. When teachers are evaluated, they become more thoughtful and analytic about their work, and are in a position to improve their teaching. Evaluators can contribute to teachers' professional learning through the use of in-depth reflective questions.

According to Cleaver (2018), teacher evaluation serves two purposes: improvement and accountability. Evaluation provides teachers with information that can improve their practice and serve as a starting point for professional development; for example, using information from teacher evaluations to set a plan of study for professional learning community (PLC) meetings. Evaluation provides accountability when information gained from the evaluation is used to guide decisions regarding bonuses, firing, and other human resource decisions.

Evaluation is determining the value of something. So, more specifically, in the field of education, evaluation means measuring or observing the process to judge it or to determine it for its value by comparing it to others or some kind of a standard. Evaluation is the systematic assessment of the design, implementation or results of an initiative for the purposes of learning or decision-making. In general, teacher evaluation refers to the formal process a school uses to review and rate teachers' performance and effectiveness in the classroom. Ideally, the findings from these evaluations are used to provide feedback to teachers and guide their professional development. No country can rise above the quality of its teachers, thus teachers need the necessary support in discharging their responsibilities. Hence, teacher evaluation is an important tool because of its relevance to teachers and educational stakeholders (Kayode, 2020).

Effective planning is a component of teacher evaluation in schools. It refers to the ability to plan the curriculum and instructions well and properly. Without effectively planning what and how to teach any subject in the class, the teacher is bound to make mistakes in delivering the lesson. Obu (2012) posited that effective planning has a tremendous effect on knowledge acquisition, and students will learn better from well thought out and planned lesson delivery. Effective planning helps the teacher to determine the areas to teach, the procedure on how to start the lesson and the teaching methods to apply while teaching. Planning within the classroom on any subject by the teacher is very important for effective service delivery. It also shows the quality of teaching skills that teachers have in the implementation of their teaching tasks.

Good lesson planning is essential to the process of teaching and learning. A teacher who is prepared is well on his/her way to a successful instructional experience. The development of interesting lessons takes a great deal of time and effort. All teachers should understand that they are not an island unto themselves. The educational philosophy of the district and the uniqueness of their schools should be the guiding force behind what takes place in the classroom. According to Miller (2014), research has shown that thinking and planning play a significant role in classroom teaching; that teachers “plan in a rich variety of ways, have real consequences in the classroom, and make planning decisions frequently. Lesson planning is an important aspect of a teacher’s job that directly impacts what and how students learn the necessary materials; therefore, how teachers plan is important to study. In addition, Smith in Miller (2014) stated that teacher planning is important for educational research and policy in that: 1.) planning decisions and activities are a major factor affecting the quality, quantity, and nature of classroom instruction, 2.) the effects of planning decisions and activities upon instruction can be assessed, and 3.) the cost of making alterations and adjustments to planning decisions is minimal and thus planning represents a potentially powerful tool for the improvement of instruction.

Although there is a growing body of evidence about teacher effectiveness, in general, and instructional planning, more specifically, there still remains a dearth of clear, direct evidence regarding teachers’ lesson planning. Understanding the lesson planning process, and how to intervene in the process to improve instruction, is helpful for both teachers and administrators. This can be done through watching instruction and also through the pre-active or planning phase. When it comes to research regarding the relationship between the planning process and that which leads to effective instruction, there is a paucity of research available. It is important to understand the relationship between the planning process and effective instruction; until this relationship is understood, administrators and supervisors cannot help teachers plan effectively. There also is concern in the field, as it is not really known how to differentiate good and bad plans, or how these plans play out in the classroom, so principals cannot use only the lesson plan to effectively monitor instruction. It could be argued that a teacher’s role is not to teach but to arrange for learning (Danielson, 2007). The importance of lesson planning is evident in the many decisions a teacher must make in order to prepare students for the learning experience.

Teacher subject mastery is an important part of teacher evaluation. Teachers who are employed in schools are expected to master the subjects they intend to teach. They are expected to gain mastery of the subject and also know how to deliver the lesson. If a teacher is going to teach a subject, then he/she should really know a lot about the subject, especially in secondary schools where teachers often specialize into one or two subject areas.

Teacher competence needs to be very high in order for meaningful teaching-learning to take place. Being taught by an effective teacher has important result on student academic achievement. Teachers matter more to student achievement than any other aspect of schooling. According to Tope, (2012), Teacher’s competency enhances teacher’s ability to create an environment that is fair, understanding, and accepting to diverse students, ideas, experiences, and backgrounds. Teachers have been found to be the single most important factor influencing student achievement. According to Wright and Horn (2013), education can be improved by improving the competence of teachers. Competent teachers appear to be effective with students of all achievement levels, regardless of the individual differences in their classrooms.

Teachers are professionally trained and certificated to manage and control instructional process in the school. Teachers are the basic element that greatly influences the teaching-learning

environment through their abilities, potentialities and professional competence. If students have a high-performing teacher one year, they will enjoy the advantage of that good teaching in future years. Conversely, if students have a low performing teacher, they simply will not outgrow the negative effects of lost learning opportunities for years to come.

Competent teachers are the most critical element in improving student achievement and closing the achievement gap. If teachers are not given the opportunities to improve practices in the classroom, it is the student's achievement that may be harmed as a result (Kishwar, 2016). Subject knowledge by teacher not only inspire students but also help them to achieve, it also improve the quality of teaching as well. Mastery is very important in any teaching/learning process. This is so because a teacher only gives what he has. You don't give what you don't have. The teacher has a pivotal role to play in a nation's development. It is the teacher who constructs the pillars of nation building in the form of students' development. Modern society demands high quality teaching and learning from teachers. Teachers have to possess a great deal of knowledge and skills with regard to both teaching and assessment practices in order to meet those demands and standards of quality education (Ksenia, 2017).

The productivity might be high or low depending on their input. Productivity can be determined through job evaluation and appraised by the extent to which the objectives have been achieved. Teachers in public secondary schools are usually evaluated based on their productivity. The evaluation of teachers as it relates to their productivity is very paramount in schools. This is because when teachers know that they will be evaluated based on their individual productivity, they will perform better which will lead to improved and general productivity in the education system. Therefore, there is need to evaluate teachers in public secondary schools to access their productivity. It is against this back drop that the researcher is embarking on this study to determine components of teacher evaluation and teacher productivity in public senior secondary schools in Rivers State.

Statement of the Problem

Teachers carry out various tasks and activities in schools. These teachers are expected to function effectively and help in the attainment of educational goals and objectives. However, the case appears different in some public secondary schools in Rivers State. There are reports that teachers are not evaluated from time to time based on research findings, public opinions and personal observations. This tends to show little or no proper evaluation and appraisal by the statutory authorities. They appear not to be supervised by principals and this may have implications for poor performance and lack of productivity on their part. Personal observations tend to show that most teachers do not plan their lessons before entering the classroom to teach apart from exhibiting frosty relationship with other school members. It is on this basis that the researcher found it expedient to conduct this research on components of teacher evaluation and teacher productivity in public senior secondary schools in Rivers State

Aim and Objectives of the Study

The aim of this study examined components of teacher evaluation and teacher productivity in public senior secondary schools in Rivers State. Specifically, the objectives sought to:

1. determine the extent to which teacher effective planning correlate with teacher productivity in public senior secondary schools in Rivers State.
2. examine the extent to which teacher subject mastery correlate with teacher productivity in public senior secondary schools in Rivers State.

Research Questions

The following research questions guided the study

1. What is the extent to which teacher effective planning correlate with teacher productivity in public senior secondary schools in Rivers State.?
2. What is the extent to which teacher subject mastery correlate with teacher productivity in public senior secondary schools in Rivers State?

Hypotheses

The following null hypotheses tested at 0.05 level of significance guided the study

1. There is no significant correlation between teacher effective planning and teacher productivity in public senior secondary schools in Rivers State.
2. There is no significant correlation between teacher subject mastery and teacher productivity in public senior secondary schools in Rivers State.

Methodology

The design adopted in this study was correlational. The population for this study comprised the 275 principals in the 275 (two hundred and seventy five) public senior secondary schools in the 23 Local Government Areas of Rivers State. The sample of the study was all the 275 principals in the 275 public senior secondary schools in Rivers State which represented 96% of the population while census sampling technique was used to determine sample size. The instruments used for data collection in this study were two self-structured scale titled Components of Teacher Evaluation Scale (CTES) and Teacher Productivity Scale (TPS). All the instruments have 40 items in all, structured in modified 4 points likert scale. The reliability coefficients are as follows: components of teacher evaluation was .81, teacher productivity was .74, teachers' effective planning was .73 and teacher subject mastery was .82 using Cronbach Alpha Statistics. The research questions were answered using Pearson Product Moment Correlation while hypotheses were tested using z-ratio at 0.05 level of significance.

Results

Research question 1: What is the extent to which teacher effective planning correlate with teacher productivity in Public Senior Secondary Schools in Rivers State?

Table 1: Pearson Product Moment Correlation Coefficient on the extent to which teacher effective planning correlate with teacher productivity in Public Senior Secondary Schools in Rivers State.

Variable	Σ	Σ^2	N	Df	ΣXY	r	Decision
Teacher effective planning (X)	11520	2163	275	273	2162	.89	Very High Extent
Teacher productivity (Y)	21220	3349					

Result from Table 1 reveals a correlation coefficient of .89. This value is very high, indicating that there is very high correlation between teacher effective planning and teacher productivity. This implies that increase in teacher effective planning will improve teacher productivity in Public Senior Secondary Schools in Rivers State.

Research question 2: What is the extent to which teacher subject mastery correlate with teacher productivity in Public Senior Secondary Schools in Rivers State?

Table 2: Pearson Product Moment Correlation Coefficient on the extent to which teacher subject mastery correlate with teacher productivity in Public Senior Secondary Schools in Rivers State.

Variable	Σ	Σ^2	N	Df	ΣXY	r	Decision
Teacher subject mastery (X)	8531	2451					
			275	273	2562	.79	High Extent
Teacher productivity (Y)	21220	3349					

Result from Table 2 reveals a correlation coefficient of .79. This value is high, indicating that there is high correlation between teacher subject mastery and teacher productivity. This implies that more teacher subject mastery leads to corresponding improvement in teacher productivity in Public Senior Secondary Schools in Rivers State.

Test of Hypotheses

Hypothesis 1: There is no significant correlation between teacher effective planning and teacher productivity in Public Senior Secondary Schools in Rivers State.

Table 3: transformed z-value on the correlation between teacher effective planning and teacher productivity in Public Senior Secondary Schools in Rivers State.

Variable	Σ	Σ^2	N	Df	ΣXY	r	z-cal	z-crit.	Decision
Teacher effective planning (X)	11520	2163							
			275	273	2162	.89	32.74	1.96	Sig. Correlation
Teacher productivity (Y)	21220	3349							

Result from Table 3 reveals that a high positive relationship exists between teacher effective planning and teacher productivity. To establish the significance of the correlation, a transformed z-value was computed and an index of 32.74 was obtained. This was compared to the critical z-value of 1.96 at the 0.05 level of significance with a degree of freedom of 273, indicating that there is a significant correlation between teacher effective planning and teacher productivity (calculated $z = 32.74 < \text{critical } z = 1.96$ at $p < 0.05$ and $df = 273$). Therefore, the null hypothesis of no significant correlation between teacher effective planning and teacher productivity is rejected in favour of the alternative that there is a correlation of teacher effective planning on teacher productivity in Public Senior Secondary Schools in Rivers State.

Hypothesis 2: There is no significant correlation between teacher subject mastery and teacher productivity in Public Senior Secondary Schools in Rivers State.

Table 4: transformed z-value on the correlation between teacher subject mastery and teacher productivity in Public Senior Secondary Schools in Rivers State.

Variable	Σ	Σ^2	N	Df	ΣXY	r	z-cal.	z-crit.	Decision
Teacher subject mastery (X)	8531	2451							
			275	273	2562	.79	28.01	1.96	Sig. Correlation
Teacher productivity (Y)	21220	3349							

Result from Table 4 reveals that a high positive relationship exists between teacher subject mastery and teacher productivity. To establish the significance of the correlation, a transformed z-value was computed and an index of 28.01 was obtained. This was compared to the critical z-value of 1.96 at the 0.05 level of significance with a degree of freedom of 273, indicating that there is a significant correlation between teacher subject mastery and teacher productivity (calculated $z = 28.01 < \text{critical } z = 1.96$ at $p < 0.05$ and $df = 273$). Therefore, the null hypothesis of no significant correlation between teacher subject mastery and teacher productivity is rejected in favour of the alternative that there is a correlation of teacher subject mastery on teacher productivity in Public Senior Secondary Schools in Rivers State.

Summary of Findings

The findings of this study are summarized as shown below:

1. To a high extent there is correlation between teacher effective planning and teacher productivity in Public Senior Secondary Schools in Rivers State. Therefore, there is a significant correlation between teacher effective planning and teacher productivity.
2. To a high extent there is a correlation between teacher subject mastery and teacher productivity in Public Senior Secondary Schools in Rivers State. Therefore, there is a significant correlation between teacher subject mastery and teacher productivity.

Discussion of Findings

The discussion of findings was done as follows:

Teacher effective planning and teacher productivity

The finding in table 1 revealed that there is high correlation between teacher effective planning and teacher productivity in Public Senior Secondary Schools in Rivers State. The finding is agreement with Miller (2014) who stated that teacher planning is important for educational research and policy in that: 1.) planning decisions and activities are a major factor affecting the quality, quantity, and nature of classroom instruction, 2.) the effects of planning decisions and activities upon instruction can be assessed, and 3.) the cost of making alterations and adjustments to planning decisions is minimal and thus planning represents a potentially powerful tool for the improvement of instruction. Although, in the view of Oyedepo (2011) there is a growing body of evidence about teacher effectiveness, in general, and instructional planning, more specifically, there still remains a dearth of clear, direct evidence regarding teachers' lesson planning. Understanding the lesson planning process, and how to intervene in the process to improve instruction, is helpful for both teachers and administrators. This can be done through watching instruction and also through the pre-active or planning phase. When it comes to research regarding the relationship between the planning process and that which leads to effective instruction, there is a paucity of research available.

It is important to understand the relationship between the planning process and effective instruction; until this relationship is understood, administrators and supervisors cannot help teachers plan effectively (Onugwu, 2013). There also is concern in the field, as it is not really known how to differentiate good and bad plans, or how these plans play out in the classroom, so principals cannot use only the lesson plan to effectively monitor instruction. Therefore, there is a significant correlation between teacher effective planning and teacher productivity

Teacher subject mastery and teacher productivity

The study revealed that there is a high correlation between teacher subject mastery and teacher productivity in Public Senior Secondary Schools in Rivers State. The finding agreed with Tope (2012) who opined that quality teacher is the major criterion for offering the quality education. Researches reveal that, of all factors under the control of a school, teachers are the

most powerful influence on student success (Babu & Mendro, 2020). It is obvious that, if you are going to teach a subject, then you should really have a good knowledge of the subject. In secondary schools, where teachers often specialize in one or two subject areas, there is a real emphasis on the teacher's knowledge of the subject matter (Keith, 2016).

Teacher competence needs to be very high in order for meaningful teaching-learning to take place. Being taught by an effective teacher has important result on student academic achievement. Teachers matter more to student achievement than any other aspect of schooling. According to Tope, (2012), Teacher's competency enhances teacher's ability to create an environment that is fair, understanding, and accepting to diverse students, ideas, experiences, and backgrounds. Teachers have been found to be the single most important factor influencing student achievement. According to Wright and Horn (2013), education can be improved by improving the competence of teachers. Competent teachers appear to be effective with students of all achievement levels, regardless of the individual differences in their classrooms. Therefore, there is a significant correlation between teacher subject mastery and teacher productivity.

Conclusion

Based on the findings of the study, it is concluded that components of teacher evaluation variables of effective planning and teacher subject mastery have strong correlation with teacher productivity in Public Senior Secondary Schools in Rivers State.

Recommendations

Based on the findings, the following recommendations are proffered:

1. Teachers in public Senior Secondary Schools should improve more on teachers' effective planning to promote teacher productivity in Public Senior Secondary Schools in Rivers State.
2. Teachers should continuously be encouraged to master their subject to enable them improve teacher productivity in Public Senior Secondary Schools in Rivers State.

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ANALYSIS OF SENIOR SECONDARY THREE STUDENTS' NEEDS ON TRIGONOMETRIC GRAPHS IN YENAGOA LOCAL GOVERNMENT AREA

By

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Abstract

The study focused on analysis of senior secondary three students' needs on trigonometric graphs in Yenagoa Local Government Area. A mixed design, descriptive and quasi-experimental research design was employed. The population of the study encompassed 4,039 SS3 students in Yenagoa Local Government Area of Bayelsa State. 78 students {45 male and 33 female} comprised of four intact classes were selected from four schools using purposive sampling technique. The instruments were "Trigonometric Graphs Questionnaire" (TGQ) and "Analytic Performance Test on Trigonometric Graphs" (APTTG). The instruments were validated by researchers' supervisors as well as experts in Measurement and Evaluation. The reliability of TGQ was determined using Cronbach Alpha in order to assess the internal consistency of the instrument. A reliability index of 0.94 was obtained for TGQ. Mean and standard deviation were used to answer the research questions, whereas t-test was used in testing the hypotheses formulated for the study at 0.05 level of significance. The results shown the needs of students on the concept of trigonometric graphs that are in three contents: table of values, plotting of the graphs and the interpretation of plotted graphs. It also specified the students' needs based on school ownership (public and private schools) and gender (male and female students). Based on the findings of the study, students and teachers should be familiar with the key contents on trigonometric graphs for effective performance. Moreso, teachers and instructors should always analyze students' needs on the concept of trigonometric graphs before remediating the problems.

Key words: Trigonometric graph, conceptual knowledge, Needs.

Introduction

Mathematics has different branches and trigonometry is one of them. Trigonometry deals with calculations with triangles. It performs explicit functions like relationships on lengths, heights and angles of different triangles. In senior secondary schools, questions are commonly asked in their external examinations on trigonometric graph which is part of their theory section. There are two commonly used functions, which are sine (sin) and cosine (cos) graphs those questions are set for students to respond to. So, what are trigonometric graphs?

Trigonometric graphs are graphs that display the summary of trigonometric functions like sine, cosine, tangent, and so on. Rick (2014) stated that the trigonometric functions are the foundation of reasoning about geometry, which in turn is the foundation of how we reason about the physical world. He gave a short list of the areas of study which are absolutely dependent on trigonometric functions: periodic motion; distance measurements; electricity and magnetism; actually, all of physics; computer graphics; complex numbers; chemistry; materials science, etc.

They are also used for modeling many different natural and mechanical phenomena (populations, waves, engines, acoustics, electronics, UV intensity, growth of plants and animals, etc). The

trigonometric graphs are periodic, which means the shape repeats itself exactly after a certain amount of time. The coordinates of a point that's moving along the circumference of a circle vary with time according to the sine and cosine functions. The sine function is needed to describe waves. Light comes in waves. So does alternating current electricity. In the UK, electricity is supplied at 240 V, 50 Hz. The graph of this voltage has a period of 0.02 sec and amplitude of 240 V. The best thing to do in this section is to learn the basic shapes of each graph. Then it is only a matter of considering what effect the variables a, b and c is having. You can do a table of values and join the dots (Bourne, 2017). The usefulness of trigonometric graphs is relevant, so students should have adequate knowledge of it. Fui, Masitah, and Lawrence, (2015) opined that Conceptual knowledge is defined as the implicit or explicit knowledge of the principles that govern a domain and of the relationships between units of knowledge in a domain. Oginni (2016) stated that conceptual knowledge is about facts, (generalizations) and principles, without requiring that the knowledge be richly connected. As spelt out in the curriculum, trigonometric graph comprised of table of values, plotting of graphs and interpretation of graphs. It is expected that students should be familiar with this trigonometric graph knowledge before their final examinations (WAEC). However, a thorough study should be carried out, that is analysis of the concept. Analysis is a comprehensive examination of anything intricate in order to understand its part or to determine its vital features. It is the process of breaking up a concept, proposition, linguistic complex, or fact into its simple or ultimate constituents (Michael, 2014). Muhammad (2017) analysis proposed that most of the students acquired neither instrumental nor relational understanding of elementary quadratic equation. To be precise, the researcher seeks to look at the analysis of the level of senior secondary school students' performances on trigonometric graphs and desires to remediate problems using games.

Statement of the Problem

Students' knowledge on the concept of trigonometric graphs should not be taken for granted. This is useful in their future careers. It acts a critical part in numerous scientific disciplines, engineering, and applied Mathematics such as understanding complex functions, modeling, real-world phenomena and showing advanced Mathematical analysis. Nevertheless, it has been observed that students often struggle with comprehending these graphs and their implications. Most WAEC scripts on Mathematics marked by the researcher, it was observed that few students respond to the questions on trigonometric graphs and majority of them do not respond to the questions. The study seeks to analyze the students' needs on the concept of trigonometric graphs.

Aim and Objectives of the Study

The aim of the study is to analyze SS3 Students' needs on trigonometric graphs in Yenagoa Local Government Area of Bayelsa State. Clearly, the objectives of the study are to:

1. find out SS3 students' needs on the concept of trigonometric graphs;
2. determine if SS3 female students' needs on the concept of trigonometric graphs differ from those of the male;
3. investigate if public SS3 students' needs on the concept of trigonometric graphs are more than private SS3 students';

Research Questions

The following research questions were used in the study:

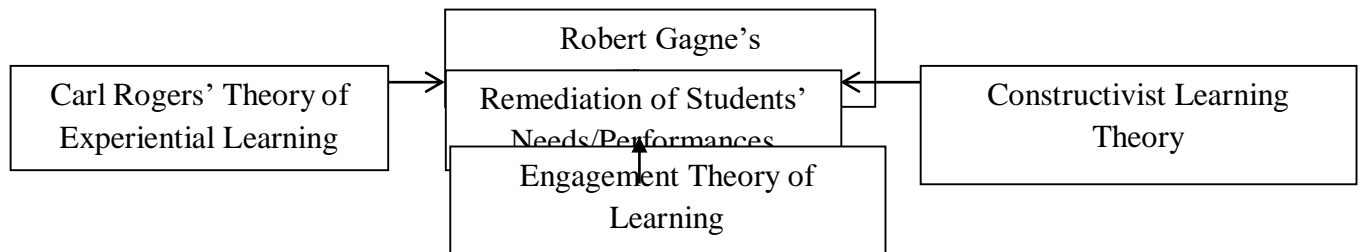
1. What are the SS3 students' needs on the concept of trigonometric graphs?
2. How do the needs of SS3 female students on the concept of trigonometric graphs differ from male?
3. In what way does the need of public SS3 students on the concept of trigonometric graphs differ from private SS3 students?

Hypotheses

Two null hypotheses guided the study at 0.05 level of significance:

1. There is no significant difference between the SS3 male and female students' needs on the concept of trigonometric graphs.
2. There is no significant difference between public and private SS3 students' needs on the concept of trigonometric graphs.

Theoretical Framework



The conceptual review was on tables of trigonometric functions, concept of trigonometric graph, concept of gamification, concept of analysis, remediation as a concept, concept of school ownership (Public and Private Schools), concept of Gender, and concept of Performances.

Methodology

A mixed design, descriptive and quasi-experimental research design was adopted. The population of the study involved Senior Secondary School three (SS3) of both public and private schools. Purposive sampling technique was used to select four intact classes of seventy-eight (78) students {45 male and 33 female} as the sample of the study. The instruments were "Trigonometric Graphs Questionnaire" (TGQ) and "Analytic Performance Test on Trigonometric Graphs" (APTTG). APTTG comprised 3 sections, section A is to find out if students need is table of values on trigonometric graphs, section B checked on their need of plotted graphs, and section C discovered if they can interpret the graphs. Validation of the instrument was done by experts in Measurement and Evaluation as well as researchers' supervisors in the Department of Curriculum Studies and Educational Technology, University of Port Harcourt. The reliability of TGQ was determined using Cronbach Alpha in order to assess the internal consistency of the instrument. A reliability index of 0.94 was obtained for TGQ.

Mean and standard deviation were used to answer the research questions, while t-test was used in testing the hypotheses formulated for the study at 0.05 level of significance.

Results

The results of the data analysis are presented according to the serial order of stated research questions and hypotheses. The data is presented in a tabular form. The responses of the students were analyzed collectively.

Research Question 1: What are the SS3 students' needs on the concept of trigonometric graphs?

Table 1: Analysis of items of SS3 students' needs on the concept of trigonometric graphs

S/N	Contents	Mean	
		(\bar{X})	SD
A.	Table of Values		
1.	Interpret the inequalities expressions of the values of x eg $0 \leq x \leq 150^\circ$	1.88	0.99
2.	Derive the sine values eg $y = 3\text{Sin}2x$	1.68	0.93
3.	Derive the cosine values eg $y = 2\text{Cos}x$	1.70	0.94
4.	Derive the relation of y with sine and cosine values eg $y = 3\text{Sin}x + 2\text{Cos}x$	1.36	0.62
5.	Tabulate the values of x	1.83	0.96
6.	Tabulate the values of y using the given equation	1.82	0.95
B.	Plotting of Graphs		
7.	Use the given scale of x and y axes	1.47	0.80
8.	Take convenient scale of x and y axes	1.42	0.76
9.	To partition the graph into x and y axes	1.42	0.73
10.	Plot the graph using the constructed table of values	1.40	0.69
11.	Draw the graph of sine of angle	1.37	0.72
12.	Draw the graph of cosine of angle	1.12	0.36
13.	Draw the graph of the relation of y with sine and	1.12	0.32

cosine of angles

C. Interpretation of Plotted Graphs

14. Read out values of the equations	1.00	0.00
15. Solve problems and deduce results from the plotted graphs eg $3\sin 2x + 2\cos x = 0$; $2 + 2\cos x + 3\sin x = 0$	1.00	0.00
Cumulative mean	1.44	

Decision mean = $\frac{4+3+2+1}{4} = 2.50$

Table 1 revealed the SS3 students' needs on the concept of trigonometric graphs. The table showed that the overall cumulative mean response was 1.44 which is less than the decision mean of 2.50. This implies that the student's need on the concept of trigonometric graphs demands strict attention in order to improve their academic performance in Mathematics.

Research Question 2: How do the needs of SS3 female students on the concept of trigonometric graphs differ from male?

Table 2: SS3 students' needs on the concept of trigonometric graphs for males and females

Content	Males		Females	
	Mean	SD	Mean	SD
	(\bar{X})		(\bar{X})	
Table of values	1.65	0.89	1.80	0.92
Plotting of graphs	1.36	0.64	1.30	0.60
Interpretation of plotted graphs	1.00	0.00	1.00	0.00

Table 2 revealed the SS3 male and female students' needs on the concept of trigonometric graphs. The table showed that both males and females mean responses are less than the decision mean of 2.50. This point toward the student's need on the concept of trigonometric graphs (table of values, plotting of graphs, and interpretation of plotted graphs) that requires attention.

Research Question 3: In what way does the need of public SS3 students on the concept of trigonometric graphs differ from private SS3 students?

Table 3: SS3 students' needs on the concept of trigonometric graphs for Public and Private

Content	Public		Private	
	Mean	SD	Mean	SD
	(\bar{X})		(\bar{X})	
Table of values	1.30	0.21	2.34	0.07
Plotting of graphs	1.00	0.00	1.83	0.18
Interpretation of plotted graphs	1.00	0.00	1.00	0.00

Table 3 revealed the SS3 public and private students' needs on the concept of trigonometric graphs. The table showed that both public and private students' mean responses are less than the decision mean of 2.50. It is an indication that the student's need on the concept of trigonometric graphs attracts urgency in both categories, but more in the public schools.

Hypothesis 1: There is no significant difference between the SS3 male and female students' needs on the concept of trigonometric graphs.

Table 4: The SS3 male and female students' needs on the concept of trigonometric graphs

Gender	N	\bar{X}	Df	$t_{critical}$	$t_{calculated}$	Sig.	Decision
Male	45	21.38					
Female	33	21.91	76	1.992	-0.532	0.05	Insignificant

Table 4, $t_{calculated} (-0.532) < t_{critical} (1.991)$ at 0.05 level of significance. It resulted that H_{O1} is accepted (retained) which means there is no significant difference between male and female SS3 students' needs on the concept of trigonometric graphs.

Hypothesis 2: There is no significant difference between the public and private SS3 students' needs on the concept of trigonometric graphs.

Table 5: The public and private SS3 students' needs on the concept of trigonometric graphs

Group	N	\bar{X}	Df	$t_{critical}$	$t_{calculated}$	Sig.	Decision
Public	47	16.81					
Private	31	28.87	76	1.992	9.210	0.05	Significant

Table 5, $t_{calculated}$ (9.210) > $t_{critical}$ (1.992) at 0.05 level of significance. As a result, H_0 is rejected which means there is a significant difference between public and private SS3 students' needs on the concept of trigonometric graphs.

Discussion of Findings

The findings indicated the related concepts when working on trigonometric graphs that consist of table of values, plotting graphs and interpreting/solving related problems. It presents the mean and standard deviation of areas that needs special attention by students and teachers for better performances. The mean of males and females SS3 students on the interpretation of related problems are 1.00 and 1.00, likewise that of the public and private SS3 students are 1.00 and 1.00 which shows the least mean amongst the related concepts on trigonometric graphs, and demands consideration. Moreso, it implies that items 14 and 15 with mean of 1.00 have serious setback and attention must be given to those areas of the concept.

Furthermore, it revealed from table 4 and 5 that there is no significant difference between male and female SS3 students, and there is significant difference between public and private SS3 students' needs on the concept of trigonometric graphs. There is no difference of the male and female SS3 students' needs. This implies that gender does not affect anyone as seen in this study. Individual has to put effort to learn the concept (trigonometric graphs). Likewise, there is difference of the public and the private SS3 students' needs on the concept of trigonometric graphs, The construal of the indication of these hypotheses shows that so much efforts are required for better performances. This is in line with James, Taiwo and Ahmed (2015), Onowighose and Charles-Ogan (2019) and Sam-Kayode and Salman (2015) with regard to areas of needs. Also, it was negated by Adeniji and Kajuru (2016) that analyzed misconceptions held by senior school Mathematics students in algebraic equations which were significantly related. Key aspects were been analyzed and teachers should look for possible means to improve performances of students.

Conclusion

Findings of the study confirmed that students' need on trigonometric graphs needs care. The poor knowledge of trigonometric graphs should be resolved by critically looking at the three key contents on trigonometric graphs and be implemented promptly.

Recommendations

Based on the findings of the present study, the following recommendations are made:

- 1.) Students and teachers should be familiar with the contents on trigonometric graphs for effective performance.
- 2.) Irrespective of gender (male or female) or ownership of schools (public or private), students should be encouraged to know the key contents when solving/ constructing trigonometric graphs.
- 3.) Mathematics teachers should see the need to analyze their students' needs and lay more emphasis on those areas when they are teaching to improve performances.

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RESOURCES MANAGEMENT AND TERTIARY EDUCATIONAL GOALS ACHIEVEMENT IN IMO STATE, NIGERIA

BY

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Abstract

The study investigated resources management and tertiary educational goals achievement Imo state, Nigeria. The study employed a descriptive survey design guided by two research questions and two null hypotheses. The study was carried out in three state owned tertiary educational institutions in Imo State, Nigeria with a population of 1,393 academic and management staff. A sample of 388 respondents was drawn through stratified random sampling technique. Questionnaire was the instrument used to collect data for the study. The data was analyzed using mean scores and standard deviation, while t-test statistics was adopted to test the null hypotheses at 0.05 level of significance. The findings revealed among others that time and financial resources are managed for tertiary educational goals achievement to a little extent. The study recommended among others that educational managers and administrators should ensure that all activities to be carried out within each academic semester are timely indicated and clearly communicated to every staff to enable them get abreast with the policies of tertiary educational institutions to be implemented ahead of time.

Key words: Resources Management; Tertiary Education; Goals Achievement

Introduction

Globally, education is considered as one of the most essential instruments for growth and development. Education is essentially planned for the promotion of specific goals in the society. Ebong (2006) noted that education is planned with the view to achieving specific goals and objectives in the society. Educational goals describe the instructions, physical activities, traditional households' division of labour, vocational activities, civic responsibilities, worthy use of leisure, academic skills, competences and qualities individuals should possess upon completion of a course or programme (Rottstein & Jacobsen, 2006). The Federal Republic of Nigeria (FRN, 2013) specifies the goals of education to be achieved at different educational levels such as the tertiary education goals. According to Oboegbulem and Onwurah (2011), tertiary education covers post-secondary section of the national education system which is given in Universities, Colleges of Education, Polytechnics and correspondence colleges. Tertiary education goals have to be achieved through the activities and involvement of tertiary educational institutions and cannot function expectedly well without resources management.

Resources according to Anyanwuocha (2011) are basic instruments with which individuals' wants are satisfied and organizational objectives achieved. Resources management is an exercise that exists to ensure efficient allocation, effective implementation and smooth administration of educational resources for the attainment of set objectives of educational institutions. Educational resources are sources through which one has an open access to

education (Akpomi & Nwamadi, 2020). Educational resources can be categorized into human, material, financial, time resource and external aids (Agabi, 2010 and Maduagwu & Nwogu, 2006). Every educational activity is allocated some time frame within which the educational goals are achieved (Ozochi, 2009). Time is the interval between the commencement and end of an activity or programme. The extent to which educational goals are achieved is directly proportional to the time resource available, allocated and managed (Ikpitibo, 2013). Financial resources are fiscal materials available for use and the sources of funding educational activities. Fiscal relates to public revenue, public spending, debt and finance (Business Dictionary, 2015). Akinsolu (2012) recognizes financial resources as major resource in the development of any education system. No educational system will survive without adequate financial resources (Olelewe, Nzeadibe & Nzeadibe, 2014).

In Imo State educational system, educational resources are limited in supply in relation to the demand for educational goals achievement. Education sector competes with other sections of the economy for available resources within the state. There are competing needs in the area of staff recruitment, allocation and welfare services. Also, there are competing needs in the area of provision and allocation of facilities, equipment and materials. Regrettably, government rarely provides enough educational resources to the educational system in the state. Odelola and Anyoma (2006) lamented that funding sources are growing less dependable and unrealistic in the educational system. All these problems have implications for tertiary educational goals achievement in the state educational system. In light of the above, educational resources management becomes imperative for tertiary educational goals achievement.

Resources management is the organization of all the components of resources in the educational system for the achievement of educational goals in the most rational manner. Management is a major function of all administrators (Abraham, 2003). The management functions are planning, organizing, staffing, reporting, directing, coordinating and budgeting. The principal officers, through the Directors, Heads of Departments and Coordinators of various academic and non-academic units manage the educational resources in tertiary educational institutions. But the extent to which these resources are managed in the tertiary education is still a matter, subject to verification. Against this background, the study seeks to investigate educational resources management for tertiary educational goals achievement in Imo State, Nigeria.

Statement of Problem

Resources are acknowledged to be scarce; as such, educational resources for tertiary educational goals achievement are limited in supply in relation to the demand for goals to be achieved. Tertiary education competes with other sectors for educational personnel, staff welfare and development, quality equipment, instructional materials and facilities within specific timeframe. Unfortunately, government rarely provides and allocates adequate funding to tertiary education in the state. Funding sources are growing less dependent and unrealistic. It is worrisome to observe that many tertiary educational institutions in the state lack adequate educational resources and the required available ones are not fully managed. Hence, this study seeks to investigate the resources management and tertiary educational goals achievement Imo state, Nigeria.

Aim and Objectives of the Study

The aim of the study is to investigate resources management in education and tertiary educational goals achievement Imo state, Nigeria. The specific objectives are to:

1. examine the extent to which time resource is managed for tertiary educational goals achievement in Imo state, Nigeria.
2. determine the extent to which financial resources are managed for tertiary educational goals achievement in Imo state, Nigeria.

Hypotheses

1. There is no significant difference between the mean scores of academic and management staff on the extent to which time resource is managed for tertiary educational goals achievement in Imo state, Nigeria.
2. There is no significant difference between the mean scores of academic and management staff on the extent to which financial resources are managed for tertiary educational goals achievement in Imo State, Nigeria.

Significance of the Study

The study will enable the educational managers and administrators as well as government, and the society to become aware of the extent to which time and financial resources are managed for tertiary educational goals achievement. This will enable them to ensure that the required time and financial resources available for tertiary education are effectively and efficiently managed.

Time Resource Management for Tertiary Educational Goals Achievement

Time resource management is the allocation of time and strict compliance to activities as programmed and scheduled in tertiary educational institutions with the intent of achieving tertiary educational goals. Time management involves taking conscious control over the sequence of time allocated to specific activities. Asodike (2013) defined time management as the ability to make the most productive use of a set period of time. Fybin (2012) noted that time management involves prioritizing, delegating tasks, analyzing and reviewing spent time, organizing workspace, keeping concentration and focus at work, motivating personnel to work towards a goal. Oku, Emenalo and Okeke (2008) indicated that many factors such as over population, emergencies, inadequate knowledge of time management skills and improper delegation play against time management practices in educational institutions for goals achievement. Adu-Oppong, Agyin-Birikorang, Darko and Aikins (2014) believed that time management is more than what experience can teach hence, it must be learnt and practiced. Akinfolarin (2017) submitted that educational managers and administrators should adopt time management strategies by setting achievable goals, prioritizing tasks, delegating tasks to subordinate, avoiding unnecessary interruptions and time wasting activities, maintaining focus on tasks and leading by example, if tertiary educational goals must be achieved.

Financial Resource Management for Tertiary Educational Goals Achievement

Financial resources management actions center on handling of funds, procurement, payment of services, expending and disbursement of funds, making inventories, auditing, financial reporting and maintenance of institutions' assets, as well as budgetary control. Mestry and Bisschoff (2009) refer financial resources management as the performance of management actions on the financial aspects of an educational institution with the aim of achieving quality education. Ebong (2013) subscribed to financial management as one of the core activities involving fund mobilization, allocation, and judicious utilization for the achievement of defined educational goals. Watson (2000) remarked that educational administrators can manage educational institutions' funds through financial planning and communication of educational institution budgets to every stakeholder. Oyekan, Adelodun and Oresajo (2015) opined that it is necessary to put on ground planning strategies like budgeting, auditing, financial rules and

regulations, financial records and accountability, if educational funds are to be managed effectively. Budget is a means for ensuring effective and efficient resource mobilization, proper management of expenditure as well as policy adjustment, effective coordination and control of economic activities (Duezeh, 2020). To Samuel and Wilfred (2009), budget is the second most important document in any country of the world after the country's constitution. Onyenweigwe (2018) indicated that budget should be formulated, balanced and implemented on annual basis. On the other hand, Dodd and Konza (2002) stressed that communicating the institutions' budget allows every department and units to know when to make their submission and how to spend the funds allocated to them for goals achievement. Anichebe (2010) explained that auditing is the systematic investigation and appraisal of transactions, procedures, operations and results in financial statement. Ogbonnaya (2005) noted that financial control involves the task of keeping expenditures in check and controlling the inflow of revenues as well as ensuring values for money in terms of resources management and application.

Theoretical Framework

Scarce Resource Theory

Scarce resource theory is associated with Swanson and Gradous in 1986. The main idea of this theory is that there are limitations to everything. The theory upholds that the limitations in resources require rational choice to know the most efficient way of utilizing the available resources required to gain the greatest return. The theory posits that decision makers separate the most valuable things and take worthy initiatives on the many things that could be done from the limited resources. The implication of scarce resource theory to this study is that educational resources required to achieve tertiary educational goals are limited in supply while the educational needs are on the increase comparatively. The theory suggests that the limitations in educational resources such as time and finance require rational choice in order to achieve educational goals.

Empirical Literature

Akinfolarin (2017) revealed that school administrators adopt delegation and meetings management strategies like communicating meeting agenda one day prior; setting clear time limits for meeting tasks; sticking to meeting time and following-up on plans for actions after meetings in managing time for administrative effectiveness in schools. Cyril (2015) found that students who are sincere and responsible to their work utilize their time effectively. Abraham, Meenyinikor and Ebirim (2021) discovered that maintaining a complete record of every financial transaction and ensuring regular supervision and consistent auditing of budget and financial implementation are measures for improving financial management of education institutions.

Methodology

This study employed a descriptive survey design and the opinions of academic and management staff to describe the state of resources management and tertiary educational goals achievement Imo state, Nigeria. The study was carried out in state owned tertiary educational institutions in Imo State, Nigeria with a population of 1,393 staff made up of 1,312 academic staff and 81 management staff and a sample size of 388 respondents comprising 307 academic staff and 81 management staff through stratified random sampling technique. "Questionnaire on Educational Resources Management for Tertiary Educational Goals Achievement" (QERMTEGA) with 12-items built on two clusters, "A" and "B", structured on a four point scale of Very Great Extent (VGE) -- 4 points; Great Extent (GE) -- 3 points; Little Extent (LE) -- 2 points; Very Little Extent (VLE) -- 1 point was developed by the researchers as an instrument for data collection. The reliability of the instrument was established using Cronbach Alpha Method

and an overall reliability co-efficient of 0.83 was obtained and considered appropriate for the study. With the help of six (5) research assistants, data for the study was delivered and collected personally by the researchers. A total of 379 copies representing 98% of the entire copies administered were completed, retrieved and used for analysis. Mean and Standard deviation scores were used in answering the two research questions while t-test statistics was used to test the null hypotheses at 0.05 level of significance. A mean of 2.50 and above was adopted as the decision rule for the items.

Results

Table 1: Perceptions on extent to which time resource is managed for tertiary educational goals achievement

S/N	ITEMS	Academic Staff n=302		Management Staff n=77		Overall		Remark
		(\bar{X})	SD	(\bar{X})	SD	(\bar{X})	SD	
1.	Activities to be accomplished within each academic semester are communicated clearly to staff.	1.84	0.58	2.59	0.89	2.22	0.74	LE
2.	Specific functions every staff is expected to perform each week of the academic semester are clearly indicated.	1.68	0.51	1.90	0.81	1.79	0.66	LE
3.	Deadline is provided for commencement and completion of assigned tasks to staff in each academic semester.	2.92	0.58	3.22	0.74	3.07	0.79	GE
4.	Duties are delegated to staff based on their areas of specialization and competence.	2.67	0.81	3.31	0.73	2.99	0.77	GE
5.	Functions are strictly adhered to as works delegated to staff are followed-up.	1.68	0.52	2.32	0.95	2.00	0.74	LE
6.	Responsibilities are performed in conformity with the daily implementation policy of the institution.	2.57	0.85	2.01	0.80	2.29	0.83	LE
CLUSTER MEAN		2.23	0.67	2.56	0.82	2.39	0.75	LE

Key: (\bar{X}) =Mean; SD = Standard Deviation; DL = Decision Level; GE = Great Extent; LE = Little Extent; n = Number of Respondents

The result on the table 1 shows that time resource is managed for tertiary educational goals achievement in Imo State, Nigeria to a little extent with an aggregate weighed mean of 2.39 below the criterion mean of 2.50 and with a weighed standard deviation of 0.75 for both academic and management staff. This is because; the aggregate weighed mean is within the range of 1.50-2.49 set as criterion for little extent.

Table 2: Perceptions on the extent to which financial resources are managed for tertiary educational goals achievement

S/N	ITEMS	Academic Staff n=302		Management Staff n=77		Overall		Remark
		(\bar{X})	SD	(\bar{X})	SD	(\bar{X})	SD	
7.	Budget is prepared according to needs and activities of various units and departments in the institution.	1.64	0.56	2.19	0.84	1.92	0.70	LE
8.	Budget is communicated to various units and departments to identify priorities and expenditure needs in the institution.	1.64	0.52	2.00	0.87	1.82	0.69	LE
9.	Funds are sourced and provided to various units and departments in the institution.	1.66	0.55	2.05	0.93	1.86	0.74	LE
10.	Approval is given to various units and departments before any expenditure is made in the institution.	2.70	0.93	3.02	0.61	2.86	0.77	GE

11.	Financial records of every department in the institution are examined at the end of each academic semester.	1.63	0.55	1.87	0.82	1.75	0.69	LE
12.	Financial operations of various departments are reported to Council Board at the end of every academic semester.	1.72	0.49	1.96	0.73	1.84	0.61	LE
CLUSTER MEAN		1.83	0.60	2.18	0.74	2.01	0.70	LE

Key: (\bar{X}) =Mean; SD = Standard Deviation; DL = Decision Level; GL Great Extent; LE = Little Extent; n = Number of Respondents

The result on the table 2 shows that financial resources are managed for tertiary educational goals achievement in Imo State, Nigeria to a little extent with an aggregate weighed mean of 2.01 below the criterion mean of 2.50 and with a weighed standard deviation of 0.70 for both academic and management staff. This is because; the aggregate weighed mean is within the range of 1.50-2.49 set as criterion for little extent.

Table 3: t-test analysis of the difference between the mean scores of academic and management staff on the extent to which time resource is managed for tertiary educational goals achievement

Staff	N	\bar{X}	SD	t-value	df	Alpha level	Sig	Decision
Academic	302	2.23	0.67	2.82	377	0.05	0.03	S (Ho Failed to Accept)
Management	77	2.56	0.82					

Key: N=Number of Respondents; \bar{X} =Mean; SD=Standard Deviation. S= Significant, df= Degree of Freedom = $(n_1 - 1) + (n_2 - 1) = (302-1) + (77-1) = 377$

Information on table 3 indicated that a t-value of 2.82 with a degree of freedom of 377 at an alpha level of 0.05 and a significant value of 0.03 were obtained. Since the significant value of 0.03 is greater than 0.05 established as the alpha level of significance for testing the hypothesis, this means that the result is significant. Hence, the null hypothesis which stated that there is no significant difference between the mean scores of academic and management staff on the extent to which human resources are managed for tertiary educational goals achievement in Imo State, Nigeria becomes not rejected.

Table 4: t-test analysis of the difference between the mean scores of academic and management staff on the extent to which financial resources are managed for tertiary educational goals achievement

Staff	N	\bar{X}	SD	t-value	Df	Alpha level	Sig	Decision
Academic	302	1.83	0.60	1.05	377	0.05	0.09	NS (Ho Failed to Reject)
Management	77	2.18	0.74					

Key: N=Number of Respondents; \bar{X} =Mean; SD=Standard Deviation. NS=Not Significant, df=Degree of Freedom = $(n_1 - 1) + (n_2 - 1) = (302-1) + (77-1) = 377$

Information on table 4 showed that a t-value of 1.05 with a degree of freedom of 377 at an alpha level of 0.05 and a significant value of 0.09 were obtained. Since the significant value of 0.09 is greater than 0.05 established as the alpha level of significance for testing the hypothesis, it means that the result is not significant. Hence, the null hypothesis which stated that

there is no significant difference between the mean scores of academic and management staff on the extent to which financial resources are managed for tertiary educational goals achievement in Imo State, Nigeria stands not rejected.

Summary of Findings

The findings are summarized as follows:

1. Time resource is managed for tertiary educational goals achievement in Imo State, Nigeria to a little extent.
2. Financial resources are managed for tertiary educational goals achievement in Imo State, Nigeria to a little extent.
3. The difference between the mean scores of academic and management staff on the extent to which time resource is managed for tertiary educational goals achievement in Imo State, Nigeria is statistically significant.
4. The difference between the mean scores of academic and management staff on the extent to which financial resources are managed for tertiary educational goals achievement in Imo State, Nigeria is statistically not significant.

Discussion of Findings

From the findings, overall result of this study indicated that time resource is managed for tertiary educational goals achievement to a little extent. However, the findings showed a significant difference between the opinions of academic and management staff. The academic staff revealed that time resource is managed for tertiary educational goals achievement to a little extent while the management staff results revealed that time resource is managed for tertiary educational goals achievement to a great extent. This implies that the respondents did not share the same view on the extent to which time resource is managed for tertiary educational goals achievement in Imo state, Nigeria. The management staff showed a contrary opinion that activities to be accomplished within each academic semester are communicated clearly to staff to a great extent. The finding was in line with the revelation of Akinfolarin (2017) who discovered that school administrators adopt certain management strategies like communicating meeting agenda one day prior to the meeting time and setting clear time limits for meeting tasks in managing time.

The finding showed that specific functions every staff is expected to perform each week of the academic semester are clearly indicated to a little extent. This also implies that staff duties and activities within each week of the academic semester in the institutions are being affected by time schedule. As noted by Maduagwu and Nwogu (2006), every educational activity is guided by time. Therefore, educational managers and administrators should ensure that time is specifically and properly allocated to all specific functions in the institutions and strictly adhere to it. From the finding, deadline is provided for commencement and completion of assigned tasks to staff in each academic semester to a great extent. The finding implies that the importance of time scheduling, goal setting and priorities is being recognized in the activities of tertiary educational institutions for goals achievement. The finding supported Cyril's (2015) view who observed that students who are sincere and responsible to their work utilize their time effectively. It was observed that duties are delegated to staff based on their areas of specialization and competence to a great extent. This finding implies that time wastage is prevented and minimized as responsibilities are transferred to staff who are experts in their various fields of assignments. The finding was in line with the notion Maduagwu and Nwogu (2006) gave when they advocated that educational managers and administrators can manage the little time at their disposal by delegating certain duties and functions to capable employees and wait for accountability.

It was also observed that functions are strictly adhered to as works delegated to staff are followed-up to a little extent. This agreed with the submission of Fybin (2012) who noted that time management involves delegating tasks, analyzing and reviewing spent time as well as keeping concentration and focus at work thereby motivating staff to work towards a goal. Educational managers and administrators should be able to follow up works delegated to staff through effective supervision to ensure strict adherence and total compliance to functions thereby minimizing wastage of time in achieving educational goals. It was observed that responsibilities are performed in conformity with the daily implementation policy of the institution to a little extent. The implication is that time scheduled for each programme of events or activities in tertiary educational institutions are not strictly observed, adhered to and followed while carrying out responsibilities to meet up with deadline set on the policies of the institutions geared towards achievement of educational goals. When responsibilities are performed in conformity with the daily implementation policy of the institution, delay in accomplishment of tasks is averted.

Contrary to the opinions of management staff which revealed that responsibilities are performed in conformity with the daily implementation policy of the institution to a little extent, the finding, in the opinion of academic staff showed that responsibilities are performed in conformity with the daily implementation policy of the institution to a great extent. This finding supported the view of Asodike (2013) who maintained that time management is the ability to make the most productive use of a set period of time to avoid delay in accomplishment of task. The educational managers and administrators should ensure that time is properly allocated to programmes and activities of the tertiary educational institutions, duly communicated to staff and followed up to avoid any form of delay in accomplishing set objectives of the institutions.

Alternatively, from the findings of this study, it was observed that financial resources are managed for tertiary educational goals achievement to a little extent. The implication is that both respondents share the same opinions on the extent financial resources are managed for tertiary educational goals achievement in Imo state, Nigeria. However, the study revealed that budget is prepared according to needs and activities of various units and departments in the institution to a little extent. The implication of this finding is that the needs and activities of various units and departments in the tertiary educational institutions are not properly captured in budget preparation of the institutions. The reason could be that Coordinators of Units and Heads of Departments are not mostly or directly involved in the preparation of tertiary educational institutions' budget. This finding was in agreement with the notion of Ogbonnaya (2005) who submitted that most educational managers and administrators do not involve their subordinate in budget preparation. The practice of not involving other unit heads in budget making can lead to omission in identifying the needs of those units in the institutions.

According to the finding, budget is communicated to various units and departments to identify priorities and expenditure needs in the institution to a little extent. This finding implies that policy programme relationship and priorities of the tertiary educational institutions are not properly and, or mostly not related to various units and departments in the institutions to know when to make their submissions and how to utilize the funds allocated to them in the institutions. This point is in consent with Dodd and Konza (2002) who indicated that communicating the institutions' budget allows every department and units to know when to make their submission and how to spend the funds allocated to them for achievement of goals. Tertiary educational managers and administrators should ensure that institutions' budget is properly and timely communicated to various members of the tertiary educational institutions to enable them identify

with the policies of the institutions and work towards the accomplishment of the policies of the institutions.

It was observed that funds are sourced and provided to various units and departments in the institution to a little extent. This implies that various units and departments in the tertiary educational institutions are not provided with adequate funding to carry out different activities they have in plan. Ebong (2013) noted that financial management practices of the school administrators revolve around sourcing for funds and controlling the expenditures of the schools. Therefore, tertiary educational managers and administrators should be able to explore other sources of funding such as by engaging in some educational business ventures and harnessing the potentials of organizational partnerships to be able to carry on with the needs of the institutions.

From the findings of this study also, financial records of every department in the institution are examined at the end of each academic semester to a little extent. Further, it was observed that financial operations of various departments are reported to Council Board at the end of every academic semester to a little extent. The implication of the findings is that receipts and payments made in or to various units and departments of the tertiary educational institutions are not constantly evaluated and made known to council board at the end of every academic semester. The finding supported the avowal of Oku, Emenalo and Okeke (2008) who asserted that financial reporting is a very important aspect of educational administrators' responsibility considering the high interest and awareness of the general public on education. Educational managers and administrators should ensure that all financial operations of every units and departments in tertiary educational institutions are consistently recorded and reported to the Council Board of the institutions at the end of every academic semester. This will guarantee high level of accountability and transparency that could lead to achievement of goals of education.

Conclusion

Based on the findings, the study concluded that the required time and financial resources available in tertiary educational institutions must be properly allocated, efficiently utilized, effectively maintained and regularly improved to a great extent for tertiary educational goals to be achieved. The study therefore made the following contributions to knowledge and management of time and financial resources for tertiary educational goals achievement:

1. The study has created awareness on the extent to which time resource is managed in tertiary educational institutions to enable educational managers, administrators, government and the society ensure that time resource required for tertiary education are efficiently managed for tertiary educational goals achievement.
2. The study has created awareness on the extent to which financial resources are managed in tertiary educational institutions to enable educational managers, administrators, government and the society ensure that available financial resources in tertiary educational institutions are effectively managed for tertiary educational goals achievement.

Recommendations

1. Educational managers and administrators should ensure that all activities to be carried out within each academic semester in tertiary educational institutions are timely indicated and clearly communicated to every staff, stating clearly when and who does what among the staff to enable the staff in question get abreast with the policies of the institutions to be implemented ahead of time and be prepared to follow suit as expected to achieve set objectives of tertiary educational institutions. This can be achieved through delegation of duties to staff and students with regular supervision.

2. Educational managers and administrators should ensure that tertiary education' budget is always prepared according to specific needs and activities of various units and departments in tertiary educational institutions and the budget should be timely communicated to various units and departments to identify priorities and expenditure needs of institutions. Source of funds should be diversified by engaging in some educational business ventures such as printing press services and internet services business centres. Equally, financial operations and records of every department in tertiary educational institutions should be regularly examined at the end of every academic semester and reported to the institutions' Council Board by Heads of Departments.

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