



Teacher Education and Educational Funding Revitalization as Correlates of Quality Secondary Education in Rivers State

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ABSTRACT

The study investigated teacher education and educational funding revitalization as correlates of quality secondary education in Rivers State. Two research questions and two corresponding null hypotheses were raised and tested in the study. Correlation design was adopted for the study. Population of the study was 7,142 teachers while 379 teachers were sampled for the study using simple random sampling technique. The instruments used for the collection of data were 16 items questionnaire titled “Teacher Education and Educational Funding Revitalization Scale” (TEEFRS) and 32 items questionnaire titled “Quality Secondary Education Scale”. Face and content validities of the instruments were determined by two experts in Educational Management and Measurement and Evaluation, Faculty of Education, University of Port Harcourt. Reliability of the instruments was determined using Cronbach statistics with an average reliability index of 0.74 for TEEFRS while QSEQ was 0.88. Out of 379 copies of the questionnaire administered, 368 copies were properly filled and retrieved which represented 97% recovery rate. Research questions raised were answered using Pearson Product Moment Correlation Coefficient (PPMC) while the hypotheses were tested using r-ratio at 0.05 level of significance with 366 degrees of freedom. The findings of the study indicated that teacher education revitalization had a strong and positive relationship of $r=0.87$, while educational funding revitalization had a strong and positive relationship of $r=0.81$ with quality secondary education in Rivers State. The relationship of both variables with quality secondary education in Rivers State was significant. It was recommended that the government should endeavour to comply with the 26% budgetary allocation to education as recommended by UNESCO.

Keywords: Teacher Education, Educational Funding, Revitalization, Secondary Education, Rivers State

INTRODUCTION

Education remains one of the fundamental factors of development as it has the potential of enriching people’s understanding of themselves and the world. It has the capacity to improve the quality of human life and leads to broad social benefits for individuals and society. Quality Education has the potential to raise people’s productivity and creativity and promotes entrepreneurship and technological advancement. In addition, it plays a very crucial role in securing economic and social progress and improving income distribution. It is evident that no nation or community can progress beyond the level of her human capital development. Generally, political stability is a function of the quality of human capital. However, more importantly is the revitalization of all essential educational services for building the required human capital that can solve all contemporary societal problems which is the basis of any functional education system. Similarly, at the center of these educational services is the need for teacher education

revitalization and educational funding revitalization which are non-negotiable resources for a meaningful education system.

Teacher education refers to professional education of teachers towards attainment of attitudes, skills and knowledge considered desirable so as to make them efficient and effective in their work, in accordance with the need of a given society at any point in time. It includes training and or education occurring before commencement of service (pre-service) and during service (in-service or on-the-job). Every society requires adequate human and material resources to improve its social organizations, preserve its culture, enhance economic development and reform the political structures (Ogunyinka *et al.*, 2015) and this is non-negotiable for national growth and development.

Education is often seen as a prerequisite for quality manpower development and creation of wealth, a sure path to success in life and service to humanity. Thus, teachers have important role to play to adequately prepare the young for their roles in the society in order to achieve the set national objectives. Education is an inevitable tool for sustainable development and a vehicle for advancing the frontier of knowledge (Abdul-Kareem, 2001). In this regard, education is severally conceived and inculcated by people of varying backgrounds, ages, needs and aspirations for sustainable development. The potency of education is more evident in its globalization trends imbued with instrumental values of nurturing productive citizens for sustainable development and democracy. Education has been recognized as a process of imparting knowledge, skills and attitudes to the learners. Teachers' influence is always felt in every aspect of the society. The effectiveness of any educational system depends greatly on the educational attainment of teachers because no system of education can be qualitatively higher than the quality and commitment of its teachers.

Teacher education revitalization involves orientation which is the introductory phase in the process of assimilating new teachers into a school. This is where new teachers are welcomed and introduced into the system. It is aimed at educating them about the goals and responsibilities of the position they have been given. This orientation is usually done on the first day of work, where they are given a warm welcome in the form of an introduction to the school authorities and co-workers. Most times, a welcome party is also provided depending on the organization. Ingram (2009) posits that orientation means the direction in which something points, it is seen by some as the process of getting the newly employed teachers pointed to the right direction in order to meet the aims and objectives of the school. It is planned so as to acquaint the new teacher with the demands of his work setting. This orientation consist of the school polices and guidelines, mission statements, dress codes, ethics, working hours, parents policies, office equipments and stationeries, instructional materials, internet and e-mail use and so on.

Orientation programme revitalization aids newly employed teachers to become comfortable in their new place of work. It is also the process of integrating the new teachers into the visions and culture of the school. Orientation, aside the fact that procedural activities and Safety awareness are addressed, often takes place as an intensive full day training session. Uche (2018), is of the opinion that principals should provide orientation exercise for their teachers, adding that it is in such exercise that teachers gain insights into the mode of conduct of the school, gathers information which will enable him/her know the sort of issues or questions to be asked. She further states that orientation raises the enthusiasm of the new teacher.

Orientation programme revitalizations is designed to welcome the new teachers into their new work place. This exercise is aimed for new teachers to settle down on their new jobs easily without difficulties. The programme is used to create a friendly working environment between new and old teachers. Cheese (2018) advocates that orientation is the procedure involved in providing new teachers with information about their jobs, the members of staff and the organization as a whole. It is an avenue to clear doubts in the minds of the new teachers. Bedeian as cited in Ogbiji *et al.*, (2011) defines orientation as the process of introducing new teachers, to the organizations, their work units and their jobs. Orientation aims at enhancing comfort in the new teacher by reducing any anxiety or unresolved negative emotions because new teachers tend to exhibit tendencies of fear and reluctance to engage fully in their duties during their first days at work. Orientation programme revitalization is so necessary to lay a foundation for the new

employees, mainly to provide them with concise information about how things are done in the school so as to make them more comfortable in their teaching profession.

A good Orientation programme revitalization can develop impression on the school, just like a first impression of an individual helps to form a good relationship so also an impression of the school, creates a good relationship between the staff and new teachers, thereby making them adjust better. Furthermore, effective Orientation programme revitalization can have a lasting effect on absenteeism and turnover and also, enhance the performance of these new teachers because the rate at which they would have made mistakes will be reduced.

Objectives of Orientation Programme Revitalization

Schools that provide orientation programme revitalization for their new teachers end up with higher levels of teachers who are productive, and with lower turnover rates. Orientation is designed to give new teachers a solid and strong foundation from where they develop a positive relationship. Orientation programme revitalizations enhances new teachers satisfaction when they are been instilled the organizational spirit of cooperation thereby reducing absenteeism, turnover rates which can hinder productivity. Orientation offers tentative information about the duties and responsibilities expected of the new teachers.

Orientation programme revitalization aids new teachers to be fully socialized, understand and accept the values of the school. This means that they are able to communicate effectively with their employers and co-workers, develop a sense of belonging in their new place of work, and also become enthusiastic of their job. Orientation programme revitalizations stills cognitive, affective and behavioural forms of learning into the new teachers. Cognitive learning in the sense that it will provide or instil information about the organization to them, Affective learning which will promote the development of positive attitudes towards their job and then Behavioural learning which will serve to betone the new teachers skills and abilities.

Importance of Orientation programme Revitalization

Orientation programme revitalization lays the basic foundation for newly employed teachers to provide them with information about the school, their policies and culture, so as to make them be at easy in their teaching profession. Orientation bridges communication gap between the new employee's and the old/experienced teachers. Orientation contributes more by making teaching practice more productive. It boosts any teacher's confidence and helps them to adapt easily to their new environment. Orientation programme revitalization also ensures a smooth transition into the new workplace for the new teacher. Orientation programme revitalizations help the new teachers to learn the important details of the job and position. Orientation aids the new employees to do their paper work review handbooks, know the elements of their positions such as the restroom, parking arrangement, classrooms, cafeteria and so on. When new teachers are properly oriented, they make fewer mistakes and are more relaxed. Orientation provides opportunity for new teachers to meet and interact with role models who serves as coaches and mentors during the process.

Hindrances to Orientation Programme Revitalization

Orientation programme revitalization can be seen as an avenue where principals can employ creativity and ideals of the school into the new teachers (Ogbiji & Ada, 2018). But unfortunately, because of logistics issues, this programme is not carried out effectively. Some of the challenges include:

- 1) Lack of finance to fund the programme in terms of refreshment.
- 2) Production of school rules and regulation booklet.
- 3) Invitation of resource persons.
- 4) Interference with school programmes.
- 5) Late arrival of new teachers.

Procedures of Orientation Programme Revitalization

Noller (2017) lists the procedures of orientation to include:

- a. Tour Facility: New teachers need to be familiar with their school environment by being taken around to see the bathrooms, school eatery, offices, principals office, staff club and so on.
- b. Introduction to the school life.

- c. Acquainted to social activities of the school, such as parties, social gatherings, hang-out times, games and concerts. It is assumed that when a teacher is not properly socially integrated, their turn-over is low.
- d. Review Goals and Job Expectations: Orientation helps the new teacher get clarification on points he/she is not sure of.
- e. Introduce to co-workers: Schedule a formal meeting with the experienced staff's and department's the new teachers will work with.
- f. Reviewing of Handbook and Paperwork: A handbook consists of the school's rules and regulations.

Despite efforts to help new teachers succeed, some still experience problems such as feeling of isolation to lack of support from old/experienced teachers. Schools plan for orientation of teachers but despite those efforts many still encounter adjustment problems such as poor knowledge of what is expected of them, workloads they did not prepare for, lack of support from experienced teachers, all contribute to make them feel frustrated (Rubinstein, 2010) which effect can make them see teaching as unrewarding and stressful hence the reason and importance of Orientation programme revitalization to help new teachers acclimate to the school environment.

For the teaching profession to be an effective one in maximizing productivity, Orientation programme revitalization must be strictly adhered to so as to make teachers be at ease and bring out the best in themselves. When this knowledge is being inculcated into them, the outcome will be excellent and the goals of education will be maximally achieved.

Educational Funding Revitalization and Quality Secondary Education

Educational funding need to come from different sources such as business, individuals, firms, government grants, school fees, proceed from school activities, community assistance, payment of educational tax, donations from individuals, charity organizations donation from external aid, alumni, levies and statutory allocation. When such funds are not available, it affects the overall funding of the school system most especially tertiary institution school system. Education funding is actually a process of raising different types of support for educational system. Resource could be mobilized through the following:

1. Submitting proposals to a typical donor agency is the most conventional way of getting support
2. Organizing fundraising events where guest are invited and request donations for the school.
3. Donation boxes could be made available to request small amounts of money from public
4. Collecting in-kind contribution such as used clothes, furniture, books, vehicles or even buildings
5. Volunteer support where volunteers provide their time and resources to support the work of the school.
6. Income from business-oriented projects of the school like selling of publications, offering consultancies, microfinance, micro insurance or micro-enterprise-based activities

Effective resource utilization is a priority for all professional services executives looking to optimize profit margins and improvement. Developing countries like Nigeria, Ghana, Togo, perceive education as vital and important tool for rapid development both at societal and national levels. Apart from the effect of education on national development, education is also perceived as a catalyst that brings about rapid socio-economic, political, scientific and technological development. Thus these countries perceive education as a factor of wholesome national development, an instrument for fast-tracking such development. Consequently most developing nations have been investing a lot of human and financial resources in support of aggressive drive to provide educational opportunities for their citizens at various levels. Broadly speaking, the term resources encompasses natural, physical, financial, human, and social resource, but the vast majority of the resources that make up the inputs to educational institutions are financial resources.

These resources can be further classified into two-funds from Government and funds from internal sources (non-governmental sources). Carrying out an educational funding strategy includes the following steps: identifying potential sources funds, actively soliciting pledges, following up on pledges to obtain funds, depositing these funds, and recording the transactions and any restrictions on their use. The process is generally governed by legal agreements at various stages. Education funding strategies and processes

may be constrained by parameters or rules established by the partners at the inception of the program and recorded in the character or initiating legal document. For example, these may require donors to contribute a minimum amount per year in order to have a seat on the governing body.

They may require separate accounts for different expected uses of funds, which would affect the recording of the deposits. Proper utilization of financial resources brings about quality education delivery. School administrators must be abreast with financial management to effectively utilize the scarce resources available in schools. Financial management is that management activity which is concerned with planning and controlling of an organization's financial resources.

Ebong in Liebovich (2014) did not differ so much when she defined financial management as the process of fund mobilization, allocation and judicious utilization for the achievement of defined educational goals. From the definitions above, it is clear that financial management involves the setting aside and allocation of money for specific purpose in the school system. School managers use funds to run the affairs of the school. They take decisions on what to use the monies for based on the needs of the school. The school manager should be very rationale in the management of school funds. He needs to have a knowledge of accounting and economic principles for effective rationale decisions. The school manager should aim at using the available financial resources in the school to overcome some perceived deficiencies in the existing system.

The benefits of financial resource in educational development are enormous. No organization can carry out its function effectively without adequate financial resources at its disposal. According to Obi (2013), without adequate financial resource, standards of education at any level shall be tantamount to a mirage that is, building castles in the air. Money is important in a school because it is used to provide all the physical, material and human resources in schools, maintain them and keep the services going.

In 2019, a novel virus known as "Corona Virus or Covid-19" exposed Africa and especially Nigeria to how decayed our educational system is and has failed us. While the rest of the world especially Europe and America were researching on how to develop vaccine to curb the virus, Nigeria on the other hand concentrated on how to lock the populace in their houses which would have been easily done like the rest of the world if before the pandemic we had had a good futuristic and functional education geared towards production and quality secondary education. If our educational system where to be well equipped and funded, if our teachers where well trained, if we had the latest technology in our schools, our attention would have been more focused on developing the vaccine than looking for how best to distribute food and other palliatives to the populace.

Schools were on shutdown all over the world, but on reopening of schools, other part of the world were quick to pick up from where they left it owing to the fact that although they were on lockdown, they continued school activities from home through online classes and this was only possible because of huge investment made in their educational sector unlike Nigeria where our educational system lack the required investment especially financially and this made a huge difference.

Alternative ways in which Nigerian schools would have coped perfectly during lockdown if the right investments were made in our educational system especially public schools are:

Online learning: Many schools and universities around the world opted to continue their normal classes on online platforms. This includes the use of online tools, such as group video programs, that allow teachers and students to meet and conduct classes over the internet. Another way that students continued their studies were through distance education, which uses online programs that replace instructors with educational material that students study on their own. An example of distance learning would be online classes or videos which students use on their own time, as opposed to meeting live with the teacher and other students.

Free Online Programmes: In light of the pandemic, and the interruption of normal education, many online educational platforms were advertising free educational tools for students around the world who were stuck at home. Companies were advertising free online courses to encourage students to continue learning at home, and websites such as UNESCO and Open Culture were creating lists of free online

courses and resources for anyone who wished to learn at home. With proper investment in our educational system, teachers would not find it difficult interacting with their students through these platforms and no time would have been lost on resumption.

Education in Nigeria is often times viewed as an exclusive service of the government. It has always been the belief of the public that the funding of education is the sole responsibility of the three tiers of government. Those who believe that the funding of education will be too cumbersome for government alone, agitated that there must be a paradigm shift to imbibe new core values that would align with other global realities of the rapid technological changes. Educational policies are not often government based. It has to do with demand. The fact is that policies cannot take place without conflict which is the brain child for new educational policies. It is based on the will of the people and since the policy makers in education and other stakeholders are in the business of providing education, it is, therefore, necessary for both parties to join hands in funding education and should not be exclusively left in the hands of the government.

Educational scholars have asserted that there is no amount of money that is enough to fund education in Nigeria. He, also, said that there is no amount of money that is too much to fund education. In his view, there is the rising need to involve corporate and other private organizations to partake in the funding of education as the task of funding education should be a collective responsibility by all stakeholders. The call by the various government institutions to inject adequate funds into the educational sector is expedient. Until government invests adequately in education, we cannot achieve our set goals. Funding is central to an efficient and effective education. Inadequate funding has been the bane of our educational growth and development at all levels of education.

For example, the problem of inadequate and dilapidated structures, inadequate facilities and equipment for teaching and learning as well as the welfare of staff in terms of remuneration and working environment all impedes the educational advancement in the country. On funding of education, one makes bold to say that the Federal Government owes it a responsibility to co-ordinate things that would promote educational growth and development in the country through the National Council on Education (NCE) which is made up of Ministers and State Commissioners of Education. It is necessary to stipulate in the National Policy on Education that the financing of education in Nigeria should be a joint responsibility of the Federal, State and Local Governments. Again, communities, corporate organizations and well placed individuals in the society should contribute their quota to the growth and development of education in the country by augmenting government's efforts through the provision of grants. Organizations such as Alumni associations should equally be encouraged to assist in this regard through the payment of levies that may include the institutional endowment funds to help in the funding of education in Nigeria.

Members of the public have been clamouring for private sector involvement in the provision, management and funding of educational services in Nigeria as it was enshrined in Section II Sub-section 109 of the National Policy on Education (NPE). It (The Policy) stipulates that education should be a joint responsibility of all levels of government and that the private sector which is an important segment of the society should, also be involved in this regard. According to Professor Imogie, University education is becoming very expensive to run as a result of the state of inflation and the declining purchase power of the naira. He suggested that government alone cannot bear the burden of financing education and that this is why the highly resisted Public Private Partnership (PPP) Initiative in funding of education should be re-examined.

It has been advocated that all the multinational companies operating in Nigeria should partner with the various governments towards funding education at the second and third levels of education in areas such as contributing money and encourage research and consultancy services in universities, provide laboratory equipment, computers and laptops to our secondary schools to help ameliorate the bottleneck in the funding of education among other essential issues. There is a greater need to establish research centres and have them fully equipped while funds should be made available to encourage innovations, functionality and performance. Aside from these research centres, effort should, also, be geared towards encouraging those who carry out these research programmes. Private organizations should be compelled

to fund such programmes in order to help reduce some of the problems inherent in research. The government should review legislation on the public/private partnership so as to encourage growth and development in the education sector.

Though in the last three decades, education in Nigeria witnessed a significant growth in terms of expansion of access through increase in enrolment and establishment of additional institutions. However, it is sad to note that many of the indices that can guarantee qualitative education are not taken into consideration in the country's quest to meet quantitative target. It has been found that political factors are the main motives behind many of the expansion policies especially, in the university system (Ekundayo, 2008). In fact, capital projects to meet the expanding programmes could not take off and given the poor state of the country's budget to education, the current financing trend might not be sustained in the near future. The revenue from government allocations have to increase to meet this rising costs or else education at all levels will suffer setbacks either in total number of staff, in relative wage and salary increase or in capital and equipment. The fact remains that education in Nigeria has been experiencing loss of facilities, deterioration of equipment and plants and uncompleted projects as a result of financial crises facing the system.

When all this pressure does not meet with increasing revenues, the results are obvious in the form of decreased efficiency and productivity and diminished services and output (i.e., teaching, scholarship and services, diminished working and living condition for professors, staff and students alike) (Adewale et al., 2006). In addition, in many public institutions of learning, students are found standing outside the classrooms receiving lectures thus their population has outstripped the classroom space that are available. The implication of all these is that output from this investment process in education cannot actually achieve the goals that were set for it. It is a known fact that most of our institutions neither have a written or unwritten vision nor a mission statement to guide their activities. There is widespread shortage of qualified teachers, shortage of even classrooms, shortage of both pupils and teachers' furniture and a dearth of required funds teaching materials and textbooks. When the issue of Nigeria educational system today is raised, the first sets of thoughts that comes to mind are: decline in standards, deterioration of facilities, examination mal practices, mass promotion syndrome and the like before any other thing else. This calls for an in-depth study and analysis aimed at enlightening each and every stakeholders in the education system on how their actions and inactions have individually and collectively contributed to the collapsing state of education in Nigeria.

In recent time, the demand for formal education is so high because this social service is not only an investment in human capital, but also a pre-requisite for social relevance and correlates with economic development (Adeyemo, 2000). The belief that education is an engine of growth rests on the quality and quantity of educated people in any country. The Federal Republic of Nigeria (2014) in the National Policy on Education explicitly states that education is a government affair in which free education is to be provided by the government at all levels when and practicable. The public sector is the major provider and financier of Education in Nigeria since it took over most of the schools in the country from primary to tertiary level in the mid 70s. This was based on the assumption that it is only the government that can effectively provide education appropriately given the externalities associated with it.

It is common knowledge today that for education, which is an instrument of change and National development to succeed presently and beyond, it must be adequately financed for the achievement of its goals. Adequate financial support is crucial as money must be made available for provision of meaningful leadership for improving educational administration, procurement of facilities, and payment of teaching and non-teaching personnel as well as making the educational system more responsive to the needs of different segments of the Nigerian populace.

The need to improve management practices also calls for more investment in the education sector. With the present status of finances in higher Education, there is the need for revolutionizing the management of educational institutions to make it more efficient and in line with present demand. The chief executive of the institutions should not be appointed on academic excellence alone but also because of previous managerial effectiveness in pursuing the ideals of quality, the Nigerian Educational Research and Development Council (NERDC) should be strongly supported in its efforts at curriculum reform towards

greater relevance. Accountability must be enshrined in our socio-economic philosophies and policies if the proposed Universal Basic Education Scheme must take care of the problem of access.

The anti-corruption crusade initiated by the Obasanjo administration deserves to be widely supported. Teacher's low morale should be improved by providing them with good conditions of service and by remunerating them appropriately. Their professional growth and development should be encouraged by the government. In conclusion, Nigeria government must initiate and empower a Nigeria "Education Development Foundation" which will plan and finance as well as restructure educational system of Nigeria. The additional functions of this distinguished foundation would include national awards and prizes to first class education institution of Nigeria, first class scholars and scientist with first class achievements, first class principals and professors in educational institutions in Nigeria. Annual scholarship awards should be given on merit to outstanding graduates of secondary schools, colleges, polytechnics and universities of Nigeria.

An independent inspectorate committee should be put in place to monitor activities in schools as the existing inspectorate unit has seized to function effectively. Schools should be properly staffed and equipped. Applicants seeking job placement irrespective of grades obtained and institutions attended should be given fair and equal opportunity, to compete for placement. More modern learning aids such as computers, internet facilities, projectors among others should be provided in schools.

Aim and Objectives of the Study

The study investigated teacher education and educational funding revitalization as correlates of quality secondary education in Rivers State. In specific terms, the objectives of the study were to:

1. examine the extent teacher education revitalization correlate with quality secondary education in Rivers State.
2. investigate the extent educational funding revitalization correlate with quality secondary education in Rivers State.

Research Questions

The following research questions were raised and answered:

1. To what extent does teacher education revitalization correlate with quality secondary education in Rivers State?
2. To what extent does educational funding revitalization correlate with quality secondary education in Rivers State?

Hypotheses

The following hypotheses were tested at 0.05 level of significance:

1. There is no significant relationship between teacher education revitalization and quality secondary education in Rivers State.
2. There is no significant relationship between educational funding revitalization and quality secondary education in Rivers State.

METHODOLOGY

The study engaged correlation design. Population of the study was 7,142 teachers distributed across the two hundred and seventy six (276) public senior secondary schools spread across the three (3) senatorial zones in 23 Local Government Areas of Rivers State, Nigeria. Source: Department of Planning Research and Statistics Secondary Education management Board (SEMB) Port Harcourt, 2019/2020 academic session. There were 379 teachers sampled for the study using simple random sampling technique. The sample size was determined using Taro Yamane formula for minimum sample size estimation. Instruments adopted for the collection of data was questionnaire tagged "Teacher Education and Educational Funding Revitalization Scale" (TEEFRS) with 16 items and "Quality Secondary Education Scale" with 32 items. The instruments were structured using the four point modified Likert scale of Very High Extent (VHE) =4 points , High Extent (HE) = 3points, Low Extent (LE) =2 points, Very Low Extent (VLE) =1 point. The face and content validities of the instrument were determined by two experts in Educational Management and Measurement and Evaluation, Faculty of Education, University of Port Harcourt. The reliability of the instruments was determined using Cronbach statistics as 30 copies of the

instruments were administered to 30 teachers outside those selected as sample for the study. The reliability index for Teacher Education Revitalization was 0.74 and Educational Funding Revitalization was 0.73 which implied an average reliability of 0.74 while Quality Secondary Education was 0.88 and was considered adequate for the study. Out of 379 copies of the questionnaire administered by the researcher and two research assistants, 368 copies were properly filled and retrieved which represented 97% recovery rate and was adequate for the study. The research questions were answered using Pearson Product Moment Correlation Coefficient (PPMC) while the hypotheses were tested using r-ratio at 0.05 level of significance with 366 degrees of freedom.

RESULTS

Answer to Research Questions

Research Question 1: *To what extent does teacher education revitalization correlates with quality secondary education in Rivers State?*

Table 1: Pearson Product Moment Correlation Analysis on the Relationship between Teacher education revitalization and Quality secondary education in Rivers State

Variable	\sum	\sum^2	n	df	$\sum XY$	r	Decision
Teacher education revitalization (X)	10250	2345	368	366	2545	0.87	High Positive Correlation
Quality secondary education (Y)	10360	3423					

Data on Table 1 reveal a correlation coefficient = 0.87. This value is high and positive, indicating that there is high and positive relationship between the teacher education revitalization as correlate with quality secondary education. This implies that increase in teacher education revitalization correlates with quality secondary education in Rivers State.

Research Question 2: *To what extent does educational funding revitalization correlate with school-community relations in Rivers State?*

Table 2: Pearson Product Moment Correlation Analysis on the Relationship between Educational Funding Revitalization and Quality Secondary Education in Rivers State

Variable	\sum	\sum^2	n	df	$\sum XY$	r	Decision
Educational funding revitalization (X)	9703	2213	368	366	2665	0.81	High Positive Correlation
Quality secondary education (Y)	10360	3214					

Data on Table 2 reveal a correlation coefficient of = 0.81. This value is high and positive, indicating that there is high and positive relationship between the educational funding revitalization and quality secondary education. This implies that, increase in educational funding revitalization leads to corresponding increase in quality secondary education in Rivers State.

Test of Hypotheses

Hypothesis 1: There is no significant relationship between teacher education revitalization and quality secondary education in Rivers State

Table 3: Transformed r-ratio on the Relationship between Teacher Education Revitalization and Quality Secondary Education

Variable	Σ	Σ^2	n	df	ΣXY	r	r-ratio	z-crit.	Decision
Teacher education revitalization (X)	10250	2345							
			368	366	2545	0.87	34.58	1.96	Sig. Rejected H_0
Quality secondary education (Y)	10360	3423							

Data on Table 3 reveal that a high positive relationship exists between teacher education revitalization and quality secondary education. To establish the significance of the relationship, r-ratio was computed and an index of 34.58 was obtained. This was compared to the critical z-value of 1.96 at 0.05 level of significance with a degree of freedom of 366, indicating that there is a significant positive relationship between teacher education revitalization and quality secondary education (calculated $z = 34.58 < \text{critical } z = 1.96$ at $p < 0.05$ and $df = 366$). Therefore, the null hypothesis of no significant relationship between teacher education revitalization and quality secondary education is rejected. This implies that the relationship is positive and strong, and any increase in the teacher education revitalization tends to be accompanied by improvement in quality secondary education in Rivers State.

Hypothesis 2: There is no significant relationship between educational funding revitalization and quality secondary education in Rivers State.

Table 4: Transformed r-ratio on the Relationship between Educational Funding Revitalization and Quality Secondary Education in Rivers State

Variable	Σ	Σ^2	n	df	ΣXY	r	r-ratio	z-crit.	Decision
Educational funding revitalization (X)	9703	2213							
			368	366	2665	0.81	29.05	1.96	Sig. Rejected H_0
Quality secondary education (Y)	10360	3214							

Data on Table 4 reveal that a high positive relationship exists between educational funding revitalization and quality secondary education. To establish the significance of the relationship, r-ratio was computed and an index of 29.05 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 366, indicating that there is a significant positive relationship between educational funding revitalization and quality secondary education (calculated $z = 29.05 < \text{critical } z = 1.96$ at $p < 0.05$ and $df = 366$). Therefore, the null hypothesis of no significant relationship between educational funding revitalization and quality secondary education is rejected. This implies that the relationship is positive and strong, and any increase in the educational funding revitalization tends to be accompanied by improvement in quality secondary education in Rivers State.

DISCUSSION

Teacher Education Revitalization and Quality Secondary Education

The study revealed that there is high and positive relationship between teacher education revitalization and quality secondary education in Rivers State. Teacher education revitalization involves orientation which is the introductory phase in the process of assimilating new teachers into a school. This is where new teachers are welcomed and introduced into the system. It is aimed at educating them about the goals

and responsibilities of the position they have been given. This orientation is usually done on the first day of work, where they are given a warm welcome in the form of an introduction to the school authorities and co-workers. Most times, a welcome party is also provided depending on the organization. Ingram (2009) posits that orientation means the direction in which something points.

Teacher education revitalization is seen as an avenue where principals can employ creativity and ideals of the school into the new teachers (Ogbiji & Ada, 2018). But unfortunately, because of logistics issues, this programme is not carried out effectively. Despite efforts to help new teachers succeed, some still experience problems such as feeling of isolation to lack of support from old/experienced teachers. Teachers' participation in conferences, seminars and Workshop programme revitalizations as components of teacher development programme has been found to correlate positively with teacher output.

Locke cited in Akpan and Ita (2015) report that teachers' regular attendance in conferences, seminars and workshop programme revitalizations resulted in improvement of skills and hence quality output. It was also found that the greater the value placed on these aspects of staff development, the higher the attainment of quality output in terms of academic achievement. Similarly, Waton in Akpan and Ita (2015) study the influence of workshop programme revitalizations on teachers' job performance and reported a significant influence of Workshop programme revitalizations on teachers' output. Conversely, Ekpela in Akpan and Ita (2015) identify causes of poor quality output of teachers to include unpreparedness in terms of skills update, attendance at Workshop programme revitalizations/seminars and conferences.

Therefore, the null hypothesis of no significant relationship between teacher education revitalization and quality secondary education is rejected. This implies that the relationship is positive and strong, and any increase in teacher education tends to be accompanied by improvement in quality secondary education in Rivers State

Educational Funding Revitalization and Quality Secondary Education

The study revealed that there is a high and positive relationship between educational funding revitalization and quality secondary education in Rivers State. Obi (2013) said that without adequate financial resource, standards of education at any level shall be tantamount to a mirage that is, building castles in the air. Money is important in a school because it is used to provide all the physical, material and human resources in schools, maintain them and keep the services going. The importance of financial resources in educational development is enormous. No organization can carry out its function effectively without adequate financial resources at its disposal.

Betty (2014) believed that education in Nigeria is often times viewed as an exclusive service of the government. It has always been the belief of the public that the funding of education is the sole responsibility of the three tiers of government. Those who believe that the funding of education will be too cumbersome for government alone, agitated that there must be a paradigm shift to imbibe new core values that would align with other global realities of the rapid technological changes. It is common knowledge today that for education, an instrument of change and National development to succeed presently and beyond, it must be adequately financed for the achievement of its goals. Adequate financial support is crucial as money must be made available for provision of meaningful leadership for improving educational administration, procurement of facilities, and payment of teaching and non-teaching personnel as well as making the educational system more responsive to the provision of needs and desires of different segments of the Nigeria populace (Barett, 2016).

Therefore, the null hypothesis of no significant relationship between educational funding revitalization and quality secondary education is rejected. This implies that the relationship is positive and strong, and any increase in the educational funding revitalization tends to be accompanied by improvement in quality secondary education in Rivers State.

CONCLUSION

The following conclusion was made based on the findings of the study:

The revitalization of teacher education and educational funding had a strong and positive relationship with quality secondary education in Rivers State. The relationship was also significant at 0.05 level of significance and 366 degrees of freedom.

RECOMMENDATIONS

The following recommendations were made in line with the findings of the study:

1. It is important that school managers should lay emphasis on teacher education on regular basis so as to promote the quality of secondary education in Rivers State.
2. There is need for the government to increase educational funding to 26% as recommended by UNESCO as funding benchmark or more as this will help in the procurement of necessary educational resources that will be used to uplift the quality of secondary education in Rivers State.

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Material Resources Management for Effective Teaching and Learning in Nigerian Tertiary Education: Implications for Quality Tertiary Education Delivery

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ABSTRACT

The poor management of material resources is manifested in the large number of obsolete and unserviceable equipment prevalent in school stores. The outcome of inappropriate management of material resources is dearth of functional tools and equipment and this cripples effective teaching/learning and students' acquisition of deserved skills. This study was carried out to determine material resource management for effective teaching/learning in tertiary education in South-South States of Nigeria. Three research questions were developed and answered. Three null hypotheses were formulated and were tested at 0.05 level of significance. The population of the study is 42 persons. The sample size of the study is still 42 persons. This is because of the manageability of the population size. The data collected were analyzed using mean to answer the research questions and t- test statistics to test the null hypotheses. The findings of the study showed that all the 50 items of the questionnaire on planning, organizing, controlling and coordinating were agree by respondents as needed in management of material resources for effective teaching/learning in tertiary education. The results of the null hypotheses tested revealed that there was no significant difference in mean responses of the respondents on the planning, organizing, controlling and coordinating strategies for proper management of material resources for effective teaching/learning in tertiary education. The study recommended that government through the ministry of education should organize workshop on the findings of this study for lecturers and instructors to enhance their knowledge and skills on management of material resources. Also, in the educational administrators in the state should ensure that lecturers are skilled in planning, organizing, controlling and coordinating of the use of material resources tertiary education in the state. School administrators should be encouraged to develop methods of prudent material resource management to increase their efficiency in tertiary education.

Key words: Material Resource, Management, Effective Teaching, Tertiary Education, Quality Education

INTRODUCTION

Education is unarguably a useful instrument in the hands of the society to help meet her need and aspiration, and also an indisputable positive bearing her economic growth and poverty alleviation. Tertiary education contributes to social and economic development through four major missions:-The formation of human capital (primarily through teaching);-The building of knowledge bases (primarily through research and knowledge development);-The dissemination and use of knowledge (primarily through interactions with knowledge users); and-The maintenance of knowledge (inter-generational

storage and transmission of knowledge).The tertiary education or institution is commonly referred as higher education.

Higher Education covers all organized learning activities at the tertiary level. The Nigerian National Policy on Education (2004) defined tertiary education to include, universities, colleges of education, polytechnics and monotechnics. According to the Nigerian National Policy on Education, the major objectives of tertiary education were: a) To contribute to national development through high-level relevant manpower training. b) To develop and inculcate proper values for the survival of the individual and society. c) To develop the intellectual capability of individual to understand and appreciate their local and external environment. d) To acquire both physical and intellectual skills which will enable individuals to be self-reliant and become useful members of the society. e) To promote and encourage scholarship and community services. f) To forge and cement national unity; and g) To promote national and international understanding and interaction. Basically, in Nigeria, higher education is synonymous with the universities, the colleges of education and the polytechnics. Higher education in the country is currently provided by both private individuals and agencies such as religious organizations and the states and the federal governments.

These resources are of great important to teaching and learning. This involves facilities that are used to develop and add value to people. It includes physical assets like laboratories, libraries, instructional tools, writing materials, classrooms, etc used to develop student academic performance. Material resources are also seen as physical resources utilized by educational institutions in the process of implementing educational programmes. They act as ancillaries for the achievement of educational goals and objectives. Educational material resources are the integral part of a well-organized school system. It could be understood to be any material which is used to facilitate the overall teaching and learning process in schools. They include textbooks, visual aids, charts, maps, laboratories equipment, chalkboard/whiteboard, playground and other materials applicable in education system.

Usman (2016) sees material resources as the tangible resources that can easily be seen and observed in any educational institution, such as classroom, staff office, vehicles, health centres, library, laboratories, instructional facilities and so on which directly or indirectly contributes to the achievement of educational goals and objectives. The school system may not attain its set out goals without proper management of materials resources No school can operate in a vacuum, the buildings, furniture, teaching aids, and several other materials are needed before a school can be said to be operational. However, the term school plant management is often adopted by most school administrators without adequate knowledge of the complexities involved Knezevich (2006) explained that school plant does not necessarily mean the school buildings alone, it is the provision of safe structure, adequate sanitary facilities, adequate shelter, balanced visual environment, appropriate thermal environment, room for work and play, the various types of equipment and materials on hand in school, the size of the learning classroom within the school building, as well as the nature of the classroom environment. All of these constitute the focus the material resource management in a school. Material resource management is therefore the process of ensuring that building and other technical systems support the operations of the organization. In most Nigeria public schools especially the primary and secondary, it is a common sight to see chairs and tables littered everywhere in the school premises, broken windows and doors, dilapidated buildings with cracked walls and leaking roofs, exposed electrical fittings, unkept bushes and lawn as well as a picture of total neglect of the school facilities.

Statement of Problem

Despite the efforts of government and non-governmental organisation in provision of school materials or resources, there is still problems in the management of the resource or materials. Some of the tertiary education management lack the managerial strategies in managing the materials resources in teaching and learning. Lack of control, proper planning, lack of organisational skills and coordinating skills have hindered effective management of material resources for teaching and learning in tertiary education delivery.

Purpose of the Study

The main purpose of the study is to examine material resources management for effective teaching and learning in Nigeria tertiary education: implications for quality tertiary education delivery. The specific objectives are to:

1. Identify the planning strategies needed for proper management of material resources in teaching and learning in tertiary education.
2. Examine the organisational strategies that will help in the management of material resources for effective teaching and learning in tertiary education
3. Determine the controlling strategies needed for proper management of material resources for effective teaching and learning in tertiary education.

Research Questions

The study answered to the following research questions.

1. What are the planning strategies needed for proper management of material resources in teaching and learning in tertiary education?
2. What are the organizational strategies that will help in the management of material resources for effective teaching and learning education?
3. What are the controlling strategies needed for proper management of material resources for effective teaching and learning tertiary institution?

Hypotheses

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

- Ho₁:** There is no significant difference in the mean responses of lecturers and instructors of higher education, on the planning skills needed for proper management of material resources.
- Ho₂:** There is no significant difference between the means responses of lecturers and instructors of higher education, on the organization skills that will help in management of material resources for effective teaching/learning in tertiary in education.
- Ho₃:** There is no significant difference between the mean responses of lecturers and instructors on the controlling skills needed for management of material resources for effective teaching and learning in higher education.

Conceptual Framework

Tertiary Education in Nigeria

In the current National Policy on Education according to Federal Government of Nigeria (2004), defined tertiary education to include, universities, colleges of education, polytechnics and monotchnics. According to the Nigerian National Policy on Education, the major objectives of tertiary education were: a)To contribute to national development through high-level relevant manpower training. b)To develop and inculcate proper values for the survival of the individual and society. c)To develop the intellectual capability of individual to understand and appreciate their local and external environment. d)To acquire both physical and intellectual skills which will enable individuals to be self-reliant and become useful members of the society. e)To promote and encourage scholarship and community services. f)To forge and cement national unity; and g)To promote national and international understanding and interaction. Basically, in Nigeria, higher education is synonymous with the universities, the colleges of education and the polytechnics. Higher education in the country is currently provided by both private individuals and agencies such as religious organizations and the states and the federal governments. The scope and importance of tertiary education have changed significantly. Over40 years ago tertiary education, which was more commonly referred to as higher education, was what happened in universities. This largely covered teaching and learning requiring high level conceptual and intellectual skills in the humanities, sciences and social sciences, the preparation of students for entry to a limited number of professions such as medicine, engineering and law, and disinterested advanced research and scholarship. Teaching and learning at this level of education is more effective with special materials resources different from those of the primary and secondary schools.

Material Resources for Tertiary Education

Instructional materials are needed to convey ideas to the children to enhance their understanding (Caples, 1996). Instructional materials are the basic components in teaching at all levels of education, especially higher education. They help the students to understand what is being taught when they see and handle the object itself Shankar (2008). The materials resources provide opportunities for students to broaden and deepen their knowledge by providing a variety of firsthand, developmentally appropriate experiences and by helping students acquire symbolic knowledge through representing their experiences (Allison, 1999). According to Croft (2000) a visual presentation of an idea or a concept using pictures, charts and models helps the students to develop mental images of the object that the lecturer is talking about. Material resource management has a great role for the achievement of educational goals by providing quality service and optimizing profitability through effective and efficient utilization of it. According to Edoze [9], effective and efficient materials functions contributes to the improvement of performance, leads to a significant reduction in the total materials cost, and helps to enhance the profitability of schools.

Concept of Management of School Materials Resources

The material management concept is based on the potential advantages to be obtained from controlling the flow of materials and goods from supplier through stores and production to dispatch. The overall control would thus embrace purchasing, stores, Inventory control, production planning, and physical distribution [1]. UNESCO (1994) also affirmed that material resource management in schools is a specific activity of school administration to achieve positive end results. The material resources in the higher education are the instructional materials such as writing materials, the tables, chairs, boards, books, indoor and outdoor games, the classrooms, the play field and other infrastructural facilities in the school. Material resources management in higher education involves a coordinated effort to effectively manage the available material resources in the school to promote learning through careful planning, organizing, controlling and evaluation of available material resources in the school. Ehiamentor (2003) identified the required material resources in higher education to include equipment, buildings, money and instructional materials. The application of appropriate management techniques in material resource management would assist in taking care of all available facilities (Aigboje, 2007). In other words, facilities which might have suffered neglect as a result of carelessness, ignorance, lack of commitment and lack of resources for management of the preschool teachers would be pruned to damage. Also, material resources which are well managed are likely to be durable (Ojedele, 2004). This will save us the cost of replacement within a short period of procurement. In addition, there would be safety from danger, disaster and theft when material resources in schools are well managed. Key concepts in material resource management in schools according to Abdulkareem and Fasasi (2013) include provision, utilization, maintenance and improvement of educational facilities and material resources. According to Raymond (2003), it is important to achieve organizational goal with acquisition and utilization of the right quality and quantity material resource used to deliver service. Material resource management is common to all types of organization. It is basic, because no organization can operate or survive without it. Thus, the success or failure of any organization depends on the material resource management and utilization. Material resource management is said to be that, process of management, which coordinated, supervises and excites the tasks associated with the flow of materials to, through and out of an organization in an integrated fashion

Maintenance of Educational Material Resources

The school administrator is often charged with the responsibility of maintenance and replacement of most school facilities depending on the availability of fund. Okafor (2006) noted that material resource management is as important as the human resource management. Material resources in higher education tend to depreciate as soon as they are provided and put into use. Therefore, there is need for maintenance through repair and servicing of components in order to restore their physical condition and sustain their working capacity. Maintenance of the material resources by school administrators in the tertiary education setting enhances performance and durability of the materials for teaching the students. The maintenance of the material resources according to Adebeyeje (2000) are preventive, corrective, breakdown and

shutdown maintenance services. Preventive maintenance occurs regularly by checking and rechecking the available material resource use for educational purposes (Abdulkareem and Fasasi, 2013). Prevention is not only better: it is also cheaper than any other measures, it is proactive in nature. Corrective maintenance involves reactivation or replacement of material resource in order to normalize their performances. When a material or equipment breaks down completely, a major repair or replacement may be needed by the school management (Adeboyeje, 2000).

Material Resource Management Skills

Management according to Tarig (2008) is defined as a process of coordinating work activities so that they are completed efficiently and effectively with and through people. He went further to say that management is a process of planning, organizing, leading and controlling all activities of the organization in pursuit of pre-determined objectives. Davis (2007), listed management functions to include: planning, organizing, leading or motivating, coordinating and controlling. Management in the context of this study is the act of planning, organizing, controlling and coordinating the activities in tertiary education in order to achieve its objectives. Material resources for teaching and learning in tertiary institutions cannot be effectively utilized to achieve objectives without proper planning, organization, coordination, and controlling.

Planning Skills

Planning skills are central to the improvement of our educational development strategies, tasks and schedules to ensure that stated objectives are achieved. Wanda (2013) stated that planning skills equip the teachers to think ahead and accomplish educational goals. Material resource management in schools starts from the planning for such resources. At the inception of a school, certain basic materials stipulated by government must be available at the school. These facilities must be adequately planned for. The facilities include the impermanent properties and physical infrastructure. The infrastructures are assets rooted in and located on the land belonging to an educational institution and used for educational purposes.

Organizing Skill

According to Olaitan, *et al* (1999) the following guides are suggested for organizing new and existing facilities: review the occupational objectives and goals of the programme; list and arrange the learning activities which are meant to take place; examine the equipment and materials necessary for the projected learning activities; determine and arrange the approximate boundaries of each materials desired for the learning activities among others. Nwachukwu (2006) pointed out that the teacher decides which organizing element among those within the chosen system will be most relevant, most meaningful and most useful materials for the specific students who should work and gain experiences using the materials. In order to facilitate progress in classroom instruction, the course of study has to be organized as well. The organization of course of study will enhance students' appreciation of the programme and help in their career choice. The main contribution of organization is that it ensures proper utilization of available materials. It therefore becomes imperative that material resources in tertiary education be effectively organized for instructional delivery through the acquisition of the relevant resource management skills by the administrator.

Arranged to facilitate instructional delivery in such a way that it will be easy for the teacher to teach and the students to learn. The classroom must be arranged in a manner that it will assist the teacher to effectively manage the class. This is important because, time required for instruction will be wasted for class reorganization if the classroom is not well organized. 3. Instructional materials in the classroom have to be organized in such a manner to facilitate easy accessibility to use for instructional delivery. Logical sequences of activities are required in order to effectively organize a preschool classroom and materials for effective instructional delivery.

Control skill

Controlling involves seeing that the action is according to specification and taking remedial actions when needed to prevent unsatisfactory results. Movement of materials in school workshop or laboratory should be controlled to avoid loss of materials. Uwaifo and Uwaifo (2009) observed that these materials suffer pilferation in the hands of teachers and students. This is an indication of poor management of material

resources and as rightly stated by Adebisin (2003) that mismanagement of available material resources in tertiary education has aggravated its inadequacy. This implies that effective supervision should be adopted to control the use of materials resources.

Coordinating Skill

Coordination is a management function, which results in the integration of the activities of people in the use of facilities and materials and handing the asset of the enterprise to accomplish unified approach to pre-determined goals and objectives. Nwachukwu (2006) stated that coordinating is the task of management whereby the plans and organization are kept under continuous surveillance so that operating efficiency is monitored and difficulties are foreseen. Effective coordination ensures smooth running of a set up. Effective coordination of material resources for teaching/learning in tertiary education will create enabling environment and ensures that all materials are put to use for students acquisition of skills. Oliatan, Nwachukwu, Igbo, Onyemacchi, and Ekong (1999) stated that when tools and equipment are effectively coordinated, the result will be the production of efficient, effective and employable graduates. But Okafor (2007) observed that the university final year students have not acquired enough psychomotor skills needed for self-reliance. The implication is that material resources have not been effectively coordinated to result to the production of employable graduates.

METHODOLOGY

The study adopted a survey research design. This design was suitable since this study educe information on strategies or skills for management of material resources for effective teaching in tertiary education. The study was carried out in South-South states of Nigeria. The states include; Abia, Akwa Ibom, Cross-River, Delta, Edo, Bayelsa and River States. The study involved tertiary education in these States. The population of the study comprised of 42 respondents (27 lecturers and 15 instructors) in higher education in the South-South states. The population was based on information collected from personnel service unit of each school. The entire population was studied, hence there was no sampling. The data obtained were analyzed by finding the variance of each item of the instrument and variance of the total number of items in each section of the instrument. The variances were used to calculate the alpha co-efficient of the instrument. The result is a co-efficient of his value represented the reliability coefficient of the instrument. The researcher with five research assistants administered and collected the questionnaire. The research assistants were instructed on how to administer questionnaire to ensure high percentage return. Mean was used to answer the three research questions. In calculating the Mean the response categories was assigned numerical values of 5-1 from strongly agree to strongly disagree. The mean of the response category is 3. The lower limit is 2.50 and the upper limit is 3.50. Therefore, any item with the mean of 3.50 and above will be considered agree while those with mean below 3.50 will be considered disagree. This is because 3.50 is the true lower limit of agreeing in the response continuum. The hypothesis was analyzed using t-test at significant level of 0.05 and 40 degree of freedom. The null hypothesis was rejected for items with t-calculated greater than the table value and accepted for t-calculated values less than t-table values.

RESULTS

Research Question One: *What are the planning skills needed for proper management of material resources in teaching/learning in education?*

Table 1: Mean responses of lecturers and instructors on planning skills needed for proper management of material resources in teaching/learning in tertiary education.

Item	The planning strategies should involve	x	Remark
1.	Providing adequate funds for the purchase of consumable materials and maintenance of existing facilities.	4.48	Agree
2.	Workshop facilities should be planned based on current students' enrolment	3.57	Agree
3.	Adequate number of tools and equipment should be provided in the workshops and laboratories.	4.45	Agree
4.	Materials and equipment should be located appropriately in the classroom.	4.31	Agree
5.	Equipment and tools should be planned based on the school curriculum.	4.38	Agree
6.	Equipment, tools and materials used in teaching /learning of courses should be planned yearly.	4.21	Agree
7.	Shop stores should be provided for safety of consumables	4.36	Agree
8.	Infrastructures should be located for convenience and safety.	4.21	Agree
9.	Planning the workshop to cater for students practical work in areas of construction of appliances.	4.26	Agree
10.	Deciding the method of storage required for each material used in tertiary education.	4.02	Agree
11.	Material management committee should be set up to comprise of lecturers and instructors	4.33	Agree
12.	Borrower-loss replacement system should be adopted to check losses.	4.00	Agree
13.	Stores should be planned with adequate ventilation, illumination and artificial lighting	4.36	Agree
14.	Maintenance schedule should be developed for regular maintenance of tools and machines	4.36	Agree
15.	Develop and operate within constraints of a budget.	4.19	Agree

Table 1 above revealed that all items on planning skills were rated by the respondents with their means scores ranging from 3.37 to 4.48. This signifies that all the items on planning skills are effective in management of material resources for effective teaching/education.

Research Question 2: *What are the organizational skills that will help in the management of material resources for effective teaching in tertiary education?*

Table 2: Mean responses of lecturers and instructors on organizing skills that will help in the management of material resources for effective teaching/learning in tertiary education.

Item	Organization of material resources should involve	x	Remark
18	Equipment should be arranged to facilitate teaching and learning	4.33	Agree
19	Arrangement of tools and materials before and after use.	4.33	Agree
20	Proper records of all the shop equipment and tools should be kept.	4.33	Agree
21	Tools and equipment should be used for activities they are designed for	4.36	Agree
22	There should be regular supervision of material inventories to check losses	4.43	Agree
23	Safety inspections should be conducted regularly and hazardous condition corrected.	4.48	Agree
24	Develop a procedure to insure proper laboratory clean up.	4.21	Agree
25	Equipment in school workshop should be well arranged to enhance safety efficiency, and learning.	4.24	Agree
26	Procedures to facilitate storage, checkout, and security of tools and equipment should be developed	4.24	Agree
27	Work stations should be designate and equipping for each skill area such as installation, repairs, maintenance, design and construction.	4.21	Agree
28	Professional service person should be invited to make major equipment repairs.	4.33	Agree
29	Storing the materials in a lockable cabinet.	4.07	Agree
30	Minor repairs (predictive maintenance) of the facilities should be made to avoid breakdown.	4.38	Agree
31	Equipment should be organized to facilitate movement of people in the workshop.	4.26	Agree
32	Students should be grouped during practical to enhance mastery.	4.19	Agree

Table 2 showed that all the 15 items on organizing skills had their mean scores between 4.07 to 4.48. This indicated that respondents agreed to all the items as important organizing skills for management of material resources for effective teaching/learning in tertiary education.

Research Question 3: *What are the controlling skills needed for proper management of material resources for effective teaching in tertiary education?*

Table 3: Mean responses of lecturers and instructors on controlling strategies needed for proper management of material resources for effective teaching in tertiary education.

Item S/N	Controlling strategies should involve	\bar{X}	Remark
33	Selecting, storing, and maintaining material for student use.	4.26	Agree
34	Promoting material and environmental safety by colour coding equipment, marking safety zones, and posting appropriate safety signs.	4.38	Agree
35	An identification system should be used to deter material theft.	4.26	Agree
36	Students should be guided in the use of appropriate tools, equipment and machine in the school.	4.24	Agree
37	Lecturer and workshop staff should prepare directives for the use of machines, tools and materials.	4.31	Agree
38	Maintaining a complete inventory of tools at the end of each class.	4.21	Agree
39	There should be a competent storekeeper who should be responsible for the security of tools and equipment.	4.31	Agree
40	Tool loan slips should be given to students and staff who want to borrow any tool/equipment.	4.88	Agree
41	Accurate inventory of materials in stock should be kept.	4.31	Agree
42	There should be adequate check to avoid careless loss of material due to pilferation and vandalization.	4.31	Agree
43	Maintenance and storage material t should be well supervised.	4.29	Agree

Table 3 indicated that all the 11 items on controlling strategies are needed in management of material resources for effective teaching/learning in tertiary education. All the items were rated agree with their mean scores ranging between 3.88 to 4.38.

Hypothesis 1: There is no significant difference in the mean responses of lecturers and instructors on the planning activities needed for proper management of material resources.

Table 4: T-test analysis of mean rating of respondents on planning skills needed for proper management of material resources for effective teaching in tertiary education.

$N_1 = 27$

$N_2 = 15$

- -2 - -2

$x_1 s_1$ $x_2 s_2$

S/N	Planning strategies	Lecturers		Instructors		t-cal	t-tab	Remark	
1	Providing adequate funds for the purchase of consumable materials and maintenance of existing facilities.	4.25	0.26	4.33	0.24	1.19	2.02	Not Significant	
2	Workshop facilities should be planned based on current student' enrolment	4.19	0.85	4.13	0.12	0.30	2.02	Not Significant	
3	Adequate number of tools and equipment should be provided in the workshop and laboratories	4.52	0.26	4.40	0.26	0.73	2.02	Not Significant	
4	Materials and equipment should be located appropriately in the school	4.41	0.25	4.27	0.21	0.92	2.02	Not Significant	
5	Equipment and materials should be planned based on the curriculum.	4.52	0.26	4.27	0.21	1.64	2.02	Not Significant	
6	Equipment, tools and materials used in teaching/learning courses should be planned yearly.	4.52	0.26	4.47	0.41	0.26	2.02	Not Significant	
7	Shop stores should be provided for safety of consumables.	4.48	0.26	4.40	0.40	0.42	2.02	Not Significant	
8	Infrastructure should be located for convenience and safety.	4.26	0.43	4.33	0.24	-0.39	2.02	Not Significant	
9	Planning the workshop to cater for students practical work in areas of construction of appliances.	4.30	0.29	4.33	0.24	-0.18	2.02	Not Significant	
10	Deciding the method of storage required for each material used in the school.	4.19	0.55	4.00	0.14	1.10	2.02	Not Significant	
11	Material management committee should be set up to comprise of lecturers.	4.41	0.33	4.33	0.24	0.48	2.02	Not Significant	
12	Borrower –loss replacement system should be adopted to check losses.	4.19	0.29	3.60	1.11	2.03	2.02	Not Significant	
13	Stores should be planned with adequate ventilation, illumination and artificial lighting.	4.48	0.26	4.27	0.35	1.16	2.02	Not Significant	
14	Maintenance schedule should be developed for regular maintenance of materials.		4.52	0.26	4.33	0.38	1.02	2.02	Not Significant
15	Develop and operate within constraints of a budget.	4.04	0.50	4.47	0.27	-2.25	2.02	Not Significant	
Overall		4.38	0.32	4.26	0.36	0.63	2.02	NS	

Degree of freedom = 40; prob of 0.05, t-table = 2.02.

The data presented on table 5 showed that of 15 items in the table, there was no significant difference on all the 15 items, while item 12 showed significant difference on the responses of lecturers and instructors. The overall t-cal for the table is 0.63, which is less than t-table value. Hence the null hypothesis was upheld.

Hypothesis 2: There is no significant difference in the mean responses of lecturers and instructors on the organization strategies that will help in management of material resources for effective teaching/learning in tertiary education

$$N_1 = 27 \quad N_2 = 15$$

$$\frac{-}{x_1 s_1} \quad \frac{-2}{x_2} \quad \frac{-}{s_2} \quad -2$$

Table 5: T –test analysis on the mean responses of the respondents on the organization strategies for proper management of material resources.

S/N	Organizing strategies	Lecturers	Instructors	t-cal	t-tab	Remark		
18	Equipment should be arranged to facilitate teaching and learning.	4.41	0.25	4.27	0.21	0.92	2.02	Not Significant
19	Arrangement of tools and materials before and after use.	4.44	0.26	4.20	0.17	1.66	2.02	Not Significant
20	Proper records of all the shop equipment and tools should be kept.	4.48	0.26	4.27	0.21	1.37	2.02	Not Significant
21	Tools and equipment should be used for activities they are designed for.	4.44	0.26	4.27	0.21	1.11	2.02	Not Significant
22	There should be regular supervision of inventories to check losses.	4.41	0.25	4.47	0.41	-0.37	2.02	Not Significant
23	Safety inspections should be conducted regularly and hazardous condition corrected.	4.52	0.26	4.47	0.27	0.30	2.02	Not Significant
24	Develop a procedure to insure proper laboratory clean up.	4.30	0.22	4.13	0.55	0.90	2.02	Not Significant
25	Equipment in school workshop should be well arrange to enhance safety, efficiency, and learning	4.41	0.25	4.33	0.24	0.50	2.02	Not Significant
26	Procedures to facilitate storage, checkout, and security of tools and equipment should be developed.	4.30	0.22	4.13	0.41	0.90	2.02	Not Significant
27	Work stations should be designate and equipping for each skill area such as installation, repairs, maintenance, design and construction.	4.19	0.39	4.27	0.50	-0.37	2.02	Not Significant
28	Professional service person should be invited to make major equipment repairs.	4.52	0.26	4.33	0.24	1.19	2.02	Not Significant
29	Storing the materials in a lockable cabinet.	4.30	0.37	3.73	1.07	-1.47	2.02	Not Significant
30	Minor repairs (predictive maintenance) of the facilities should be made to avoid breakdown.	4.37	0.32	4.47	0.27	-0.58	2.02	Not Significant
31	Equipment should be organized to facilitate movement of people in the workshop.	4.33	0.46	4.20	0.31	0.67	2.02	Not Significant
32	Students should be grouped during practical session to enhance mastery.	4.37	0.55	4.20	0.31	0.8	2.02	Not Significant

Table 5 showed that all the items had their t-calculated less than t-table. This indicated that there was no significant difference on the mean responses of the two groups. Therefore, the null hypothesis of no significant difference was upheld.

Hypothesis 3: There is no significant difference between the mean responses of lecturers and instructors on the controlling skills needed for management of material resources for effective teaching in education.

Table 6: T-test analysis on the mean responses of respondents on controlling strategies for proper management of material resources.

S/N	Controlling strategies	Lecturers	Instructors	t-cal	t-tab	Remark		
		x_1S_1	x_2S_2	-	-2			
				-	-2			
33	Selecting, storing, and maintaining materials. for student use.	4.33	0.23	4.20	0.31	0.76	2.02	Not Significant
34	Promoting material and environmental safety by colour coding equipment marking							

safety zones ,and posting appropriate safety signs.	4.48	0.34	4.33	0.24	0.89	2.02	Not Significant
35 An identification system should be used to deter material theft.	4.33	0.23	4.20	0.17	0.92	2.02	Not Significant
36 Students should be guided in the use of appropriate tools, equipment and machine in the school.	4.52	0.26	4.20	0.46	1.59	2.02	Not Significant
37 Lecturer and workshop staff should prepare directives for the use of machines, tools and materials.	4.41	0.25	4.13	0.27	1.70	2.02	Not Significant
38 Maintaining a complete inventory tools at the end of each class.	4.07	1.07	4.13	0.98	-0.57	2.02	Not Significant
39 There should be a competent storekeeper who should be responsible for the security of tools and equipment.	4.41	0.33	4.13	0.27	1.63	2.02	Not Significant
40 Tool loan slips should be given to students and staff who want to borrow any tool/equipment.	4.33	0.31	4.13	0.41	1.02	2.02	Not Significant
41 Accurate inventory of materials in stock. should be kept.	4.41	0.25	4.27	0.21	0.92	2.02	Not Significant
42 There should be adequate check to avoid careless loss of materials due to pilferation and vandalization.	4.48	0.26	4.20	0.17	1.93	2.02	Not Significant
43 Maintenance and storage of materials should be well supervised.	4.44	0.26	4.13	0.27	1.86	2.02	Not Significant
Overall	4.38	0.35	4.19	0.33	1.02	2.02	NS

Data presented on table 6 revealed that all the items had their calculated t-value less than table value at 0.05 level of significance. This showed that there was statistically no significant difference on the mean responses of the two groups. The table also revealed that the overall t-calculated is 1.02, which is less than the t-test of 2.02. Therefore the null hypothesis was upheld

DISCUSSION OF FINDINGS

Based on the findings it was revealed that all the 15 items on planning skills for proper management of material resources were rated agree by respondents. This may be as a result of the importance attached to planning in any management. Planning skills of material resource management are foundation of management for the attainment of objectives in tertiary education at any reasonable cost. The findings agree with national policy on education (2004) which stated that the success of any system of education is hinges on proper planning. Therefore lecturers and instructors in tertiary education should have good knowledge of planning of resources and activities carried out in the school. Such plans from the findings of the study include plans for purchase of tools, machines and other consumable materials that would be needed for developing course outline, unit lessons, learning activities, methods to be used for particular lesson and time required for unit lesson.

The findings of the study was also in tandem with the view of Tarig (2008), who opined that planning provides direction, reduces uncertainty minimizes waste and redundancy and sets the standards for controlling educational activities. To this, teachers and instructors should adopt and implement these skills on planning for the material resources for effective teaching/learning in tertiary education. The experts' opinion cited above helped to justify the findings of the study on planning skills needed in management of material resources for effective teaching/learning in tertiary education. From the study it was found out that 15 items on the organizing strategies were rated agree by the respondents to be effective for proper management of material resources. The findings among others include; arrangement of tools and materials before and after use; students should be grouped during practical sessions to enhance mastery; materials should be stored in cabinet; proper records of all the materials should be kept etc. The findings were in agreement with opinion of Nwachukwu (2006) who stated that organizing represents the way resources connect together to achieve objectives. He elucidated the responsibilities of workshop teacher/instructor in organizing materials resources to include; to arrange all resources in the laboratory in conformity with safety regulations store the materials in a lockable cabinets or open pigeonhole boxes; arrange students into groups for instructions and demonstrations in a small and comfortable area or around a piece of machine; arrange facilities that will enhance security of the laboratory users. Similarly, the finding was in conformity with the view of Okorie (2002) who considered the following principles important for effective organization of material resources, they include: machine and tools should be organized in reference and accountability; proximity to users should be high priority; lost or damage tools should be replaced for continuity of the programme.

The findings also agree with submission of Everard and Geoffery (1985) who stated resources actually present in the school are known and that there is need for keeping up to date inventories which are periodically checked. The implication is that lecturers and instructors should keep up to date inventories of materials that will help to minimize lost and enhance effective teaching and learning in tertiary education. The opinions of the experts cited above helped to justify the findings of the study on organizing strategies needed in management of material resources for effective teaching and learning. The findings of the study on controlling strategies showed that the respondents agree to all the 11 items as needed in management of material resources for effective teaching in tertiary education. The findings among others include; an identification system should be used to deter material theft; students should be guided in the use of appropriate materials in the schools; lecturers and instructors should prepare directives for the use of tools, equipment and materials; there should be a competent storekeeper who should be responsible for the security of instructional materials.

The findings was in consonant with view of Momoh (1998) who stated that managerial responsibilities of controlling resources in teaching/learning involves providing instruction and guiding the use of materials and enhance their maintenance .The findings on controlling strategies was also in conformity with view of Ogbonna (1988) who maintained that someone should be clearly responsible for the control and maintenance of each equipment. The implication from the findings was that the lecturers need the knowledge and skill of controlling to be able to manage material resources effectively and to improve the quality of teaching and learning .The opinions of the experts cited above helped to justify the findings of the study on the controlling skills needed in management of materials resources for effective teaching in tertiary education. From the study it was found out that there was no significant difference in the mean ratings of the responses of lecturers and instructors in higher education on the planning, organizing, controlling and coordinating skills needed in management of materials resources for effective teaching and learning in higher education. Therefore, the null hypotheses of no significant difference in the mean ratings of the respondent were upheld. The implication of this finding is that it helped to validate the findings on sections B, C, and D and also it implied that the qualifications and professional experiences of the two groups of respondents had no significant influence on their opinion of the planning, organizing, and controlling skills needed in management of material resources for effective teaching and learning in tertiary education.

CONCLUSION.

The scope and importance of tertiary education have changed significantly. Many years ago tertiary education, which was more commonly referred to as higher education, was what happened in universities. This largely covered teaching and learning requiring high level conceptual and intellectual skills in the humanities, sciences and social sciences, the preparation of students for entry to a limited number of professions such as medicine, engineering, law, etc. and disinterested advanced research and scholarship. Teaching and learning in tertiary education is heavily dependent on availability and proper utilization of material resources. Education activities cannot be carried out effectively without material resources which must be adequate in number and quality. The available material resources are poorly managed and this hampers deserved teaching/learning activities in the school. Effectiveness could be achieved in teaching/learning if there should be judicious management of material resources. To make contribution in this direction, the study explore at material resource management strategies for effective teaching in higher education. The study therefore, made the following contribution to knowledge and management of material resources:

1. It has provided information to lecturers and instructors on management strategies for effective teaching in tertiary education.
2. It has provided information on material resource management to different state government in South-South of Nigeria. The information could be package into lecturers and instructors to enhance their effective teaching in higher education.

From the findings that also emanated from the study, it was concluded that the acquisition of the identified skills in planning, organizing, controlling and coordinating the use of material resources in teaching /learning in tertiary education in the state will enhance the achievement of the stated objectives tertiary education in the state

RECOMMENDATIONS

Based on the findings of the study, the following recommendations were made.

1. State governments through the ministry of education should package the management strategies in managing material resources into workshop materials and organize workshop on them for classrooms and workshop in order to impart skills on students.
2. Lecturers and instructors should implement the knowledge gained in the resources material management skills for improving the competencies of teachers and instructors
3. The curriculum planners should emphasize management of material resources in the curriculum of tertiary education through accreditation
4. The educational administrators in the state implement the knowledge gained in the resources material management skills for improving should ensure that lecturers are skilled in planning, organizing, controlling and coordinating of the use of material resources tertiary education in the state.
5. School administrators should be encouraged to develop methods of prudent material resource management to increase their efficiency in tertiary education.

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