

RELATIONSHIP BETWEEN PRINCIPALS COST REDUCTION TECHNIQUES AND THEIR ADMINISTRATIVE EFFECTIVENESS IN PUBLIC SECONDARY SCHOOLS IN RIVERS STATE

¹Okorji Perpetua (Ph.D) & ² Okafor, Mudline Nkiruka

^{1&2}Department of Educational Management and Policy

^{1&2}Nnamdi Azikiwe University, Awka, Anambra State, Nigeria

Abstract

The study determined the relationship between principals cost reduction techniques and their administrative effectiveness in public secondary schools in Rivers State. The study was guided by three research questions and three hypotheses were tested at 0.05 level of significance. Correlation research design was adopted for the study. The population of the study consisted of all the 7,150 teachers in 276 public secondary schools in Rivers State. The sample size for this study comprised 850 teachers drawn using multistage sampling procedure. Two sets of researcher-developed instruments titled “‘Principals’ Cost Reduction Techniques Questionnaire (PCRTQ)” and “‘Administrative Effectiveness Questionnaire (AEQ)” were used for data collection. The instruments were validated by three experts comprising two lecturers from the Department of Educational Management and Policy, and the other a specialist in Measurement and Evaluation all from the Faculty of Education, Nnamdi Azikiwe University, Awka. The internal consistency of the instruments were ascertained using Cronbach Alpha which yielded reliability co-efficients of 0.78, 0.78 and 0.78 for Parts A, B and C respectively and the overall coefficient of the entire instrument was 0.78 and 0.79 was obtained for AEQ. The researcher together with 4 research assistants collected data for the study and 97% return rate was recorded. The data collected were analysed using Pearson Product Moment Correlation (PPMC) co-efficient to answer research questions and t-test of correlation to test hypotheses. The findings of the study showed among others that there was strong positive relationship between the scores in budgeting technique and principals’ administrative effectiveness in public secondary schools in Rivers State. It was also found out that there is significant relationship between the scores in overhead cost control technique and principals’ administrative effectiveness in public secondary schools in Rivers State. Based on the findings, it was recommended among others that Rivers State Secondary Education Management Board should develop budgetary manual for guiding and serving as benchmark for the principals in estimating, monitoring and evaluating income and expenditure of school funds for attainment of administrative effectiveness.

Keywords: Principals, Cost Reduction, Techniques, Administrative Effectiveness

1. Introduction

Education has been recognized as the bedrock of development all over the world. It is believed that the way out of the series of problems plaguing nations and individuals is through education (Olurunsola and Belo, 2018). The series of problems plaguing nations and individuals that education could solve include poverty, development, gender inequality and religious conflict amongst others. This is because it helps individuals to acquire useful knowledge and

economically viable skills. This is perhaps why education has been designated as a right to every child under Universal Declaration of Human Rights in 1948 (Akaranga, 2011). It is therefore of no wonder that many African countries had since their independence invested heavily in basic, secondary and higher education as part of alleviating the adversities ignorance, and underdevelopment.

Secondary education prepares basic school leavers for useful living and higher education Federal Republic of Nigeria (FRN) (2013). Furthering, Federal Republic of Nigeria (FRN) stated that the goals of secondary education aims at preparing individual for useful living within the society and for tertiary education. Thus, these goals are meant to be facilitated by the school principal who is the chief executive officer of a secondary school.

The principal is the chief administrator of secondary schools who uses various school resources to achieve set goals. The principal as a school leader occupies a unique and strategic position of providing leadership and accountability in a secondary school. This implies that for secondary schools to fulfil their roles in bringing about changes in areas of knowledge, skills and attitudes of their students, a lot has to be done by the principal of such schools for the attainment of educational goals Olorunsola and Belo (2018). The school principal also needs financial, material and time resources to run the affairs of secondary education.

However, when these resources are released to the principal there is also need for them to be used prudently in order to achieve the objectives of the secondary education (Nwune, Nwogbo & Okonkwo cited in Ezeugbor & Akinfolarin, 2018). This is because one of the biggest challenges of secondary school management and administration is insufficient funding (Ogba and Igu cited in Ikegbusi 2016). Also Ikedigwu (2016) asserted that in the current economic climate, resources for education have become scarcer and this has brought a rising increase for the use of cost reduction in management of educational resources and projects. This implies that cost reduction will make funds available thereby curtailing issues of poor financial motivation all in the name of non- availability of funds (Adu & Abor, 2012).

Cost reduction is a term used to describe planned and positive finance management approaches geared towards minimizing the expense incurred in running school operations, without eroding the quality of teaching and learning. It can also be viewed as rational processes of cutting-down expenditures in provision of education to increase profitability and productivity without undermining the quality of teaching and learning rendered (Egbide, Adegbola, Bamidele, Sunday, Olufemi & Ruth, 2019). It is a systematic, coordinated, and long- term approach of eliminating unnecessary costs that may accrue from labour services, raw materials, costs of laboratories and machineries used in running a school in a way that it does not affect the progress of such school.

School principal takes control of school when the activities of a school are accomplished with the available resources Donley (2019). However, this could be achieved through systematic identification, classification of costs and using a rational approach that performs cost reduction. In order to achieve this, secondary school principals have to look for alternative ways of accomplishing a given task in the school using appropriate cost reductions technique.

Principals and educational resources are necessary inputs in secondary education without them no school can function. This brings them into a special relationship; Ikediugwu (2016) opined that there is need for school principal to apply useful cost reduction techniques to ensure that these resources are used effectively because education is cost intensive. In the context of this study cost reduction technique is management procedure or practice adopted and applied by principals in order to reduce excess costs that continue to accrue in the process of managing school facilities, equipment, staff and other educational resources.

There are several cost reduction techniques. Akeem (2017) defined cost reduction techniques as the various methods applied in managing expenses in and organisation. Furthermore, Akeem identified cost reduction techniques as follow: budgeting, labour cost control, overhead cost control, accounting, market research, material control, quality measurement, standardization, and auditing techniques, can be adopted by principals to enhance effective administration of their respective organizations. In the same vein the Institute of Management Accountant London (IMAL) (2020) also stated that cost reduction techniques such as; budgetary control, standard costing, simplification and variety reduction, planning and control of finance, cost benefit analysis, value analysis, contribution analysis, job evaluation and merit rating, improvement in design, material control, labour control, overhead control, market research can be used to reduce cost in an organization. The cost reduction techniques adopted in this study are budgeting, labour cost control and overhead cost control. There are two main reasons for selecting these techniques for cost reductions. Firstly, they are very strategic to cost management and reduction in school administration. Secondly, some school principals appeared to be sloppy and inefficient in resources management and utilization. The cost reduction techniques that are adopted in this study are discussed below starting with budget.

Budget is a blueprint of revenue and expenditures plan of organizations. It guides the organization in financial management and control. A School that is managed well financially is likely to have a better external and internal image than a school with budgetary problems. Budgeting ensures that limited resources are judiciously used. Kimani (2014) asserted that budgeting technique entails predetermined goals versus actual performance results duly evaluated to highlight any variation for actions after. Budgeting technique requires that a principal monitors the task performances activities and applies control mechanism in order to achieve set targets. It could aid in cost reduction, future projections, control expenses, assists in planning both short term and long term cash flows. Effectively, the principal could use budgeting technique to plan, coordinate, direct and control school resources towards the attainment of set targets and objectives. The principal however, make effective use of Budgeting technique to provide comprehensive management platform for efficient and effective allocation of resources. Effectively, budgeting technique could help to keep the school in check by enabling the principal to spend based on available income in order to achieve the objectives of secondary school. Several budgeting techniques that can be used in secondary schools include; zero budgeting, outcome based budgeting. However, the types of budgeting technique applied by principals may also give them insight on how to control the costs of labour in school.

Labour costs are amount of expenditure incurred by the schools for hiring or employing personnel in exchange of services for the attainment of school goals (Young and Shields, cited in Vambe, 2018). It forms a significant portion of expenditures in most schools (Tonkins, 2016).

Labour cost constitutes an important element of the total cost of production because human contribution is represented by labour. Increased labour cost increases the cost of managing a school and this cost is transferred to users. Labour cost control helps to obtain better quality output with the effort and time of works. The principal however, make effective use of labour cost control to reduce cost of education by scheduling the appropriate staff to serve the school needs and demands through delegation of duties. Principal being knowledgeable enough to know the staff that will accomplish a given task determines to a great extent the successful achievement of educational objectives Donley (2019). Undoubtedly, principals' performance is analysed and scored on the basis of his relationship with human and use of material resources. Principal's ability to motivate and rally teachers and non-teaching staff to maximize their productivity is an integral part of administrative responsibility of the principal. Young and Shields cited in Vambe (2018) posited that the best way school reduces labour cost is by using strategic cost control measures or strategies. Cost control measures that could be applied by principal in order to control labour cost includes; contract services or outsourcing, cooperative purchasing, adopting a school programme for business, collective use of facility, adopting technology as a means of communication, and time keeping. However, Principal's inability to control labour cost could have a lot of implications on overhead costs.

Overhead cost control technique is another management and reduction technique that can be used by principals to reduce cost. Overhead cost control could be seen as a process where every cost incurred in education is controlled or monitored in order not to drain school funds. Leuken (2017) posited that overhead cost includes purchasing (or renting) and maintaining a building, facilities, equipment, utilities; amortization of debt service (e.g. bonding for pension or capital); and land purchases. The Institute of Chartered Accountants of India (ICAI) (2017) stated that overhead cost refer to the total indirect material, indirect labour, indirect expenses. ICAI classified overhead cost into fixed, variable and semi-fixed overhead. Semi-fixed overhead are certain expenses that neither remain fixed for all levels with change of output; it includes; repairs, and operation and maintenance, building and equipment depreciation (ICAI, 2017). The importance of controlling overhead expenses cannot be over emphasised perhaps, that is why Amadi and Eleonu (2018) stressed that large capital can be squandered when building and equipment deteriorate. The principal however, could make effective use of overhead cost control technique to aid efficient planning and proper management of facilities. Effectively, when facilities and equipment are properly managed by the principal this could also enhance students' performance, student flow, protect capital investment, and provide safety school Takwate (2018). Several variable or semi-fixed overhead cost control techniques applied or practiced in secondary schools are facility and equipment maintenance, facility master plan, fuel evaluation, reduction of paper usage, energy auditing, timely payment of supplies and installation of a school asset management software.

Effectiveness is the capability to develop plans, hire effectively, coach, motivate and develop employees so as to produce desired output (Sullivan, 2011). It could also be seen as a situation in which a purposive activity is producing the desired outcome. For instance, when a principal is managing the school properly using technical, conceptual and interpersonal skills among other expertise in the management of the school, resulting in high performance of teachers and students, as well as the achievement of education goals, the school principal is said to be effective. Administrative effectiveness in school context involves managing the

implementation of curriculum through prudent application of instructional resources to teaching and learning activities and the school. This involves ensuring that teachers perform their instructional duties effectively in areas of students' assessment and evaluation and discipline staff appraisal, rational resource allocation using appropriate costing technique to entrench efficient administration.

Administrative effectiveness is when the principal is able to sustain friendly educational climate, ensuring accountability, managing person and influencing decision that guarantees success in the education system, (Aja-Okorie; 2016; Igbokwe, Okorji and Asiegbu, 2016). Principals' cost reduction technique could correlate with their administrative effectiveness. It means principals ability to adopt or apply budgeting technique in planning, coordinating, directing and controlling school resources towards the attainment of set targets and objectives. Nwafukwa, Onele and Anigbo (2019) posited that the ability of the school principal to effectively co-ordinate educational resources for meaningful teaching and learning in the classroom is a demonstration of principal's administrative effectiveness. Furthering, Nwafukwa, Onele and Anigbo stressed that management and maintenance of these educational resources also calls for prudent management of school funds, effective co-ordination of materials resources and proper management of student personnel.

In Rivers State, there is need for principals in secondary schools to be aware of how to plan, coordinate and control school resources using strategic cost reduction technique to avoid any administrative effectiveness problems. Owmondah (2020) observed that neglect of budgetary procedures in the raising and spending of funds in secondary schools in Rivers State has become a problem. This has produced reckless administrators without purpose and direction. Furthering Owmondah stressed that most secondary school equipment and facilities are left unmaintained and uncared for. Therefore, posing a serious threat to the achievement of the goals of education. Boma (2018) lamented that principals in Rivers State do not realize that mismanagement and reckless spending of available funds could hinder the goals and objectives of secondary education. Titus and Ukaigwe (2018) observed that some principals have failed in methods of generating internal revenues released by stakeholders so that their schools can be fully effective and efficient. Louse and Igbozuruike (2018) stressed that there is cost management problems in most secondary schools in Rivers State due to mismanagement of funds. Wordu and Nleremchi (2019) added that some teaching equipment are not supplied adequately in most schools in Rivers State due to principal's inability to manage insufficient or small funds released by the government. This is why awareness is of great importance in school setting for principals to know how to apply strategic cost reduction technique in the course of carrying out their administrative functions.

To this end, it could be obvious that there is failure on the part of the principals in adopting or applying cost reductions in managing educational projects, resources and programs. Administrative effectiveness is a strong instrument for enhancement of educational objectives. If the principals are able to adopt or apply cost reductions in the management of school resources, projects and programs by using cost reduction techniques such as budgeting, labour cost control, overhead cost control, auditing and accounting, this could really reduce the cases of negligence of budgetary procedures, poor infrastructural development, misappropriation and mismanagement of funds and unaccountability of funds expended in secondary schools.

1.2 Statement of the problem

The principal is the chief executive of school who has multifarious tasks to accomplish for administrative effectiveness of the school. One of the responsibilities of the Principal is to apply different cost reduction techniques to reduce accruing costs that may rise in the management and administration of educational resources, projects and programs. These techniques range from applying budgeting, labour cost control and overhead costs control which are geared towards administrative effectiveness.

There are increasing number of school problems that have to do with principals' incompetency in sorting for alternative ways of managing insufficient or small funds released by government in managing school resources, projects and program in Rivers State. This ranges from misappropriation and mismanagement of funds, poor infrastructure, and neglects of budgetary procedures and methods of collecting revenues. Cost reduction technique could help principals to prudently manage, utilize and maintain school facilities, keep school records and other things that augment conducive teaching and learning process. Also principals cannot play their role effectively if not adequately equipped with essential cost reduction technique because the process of effective utilization of available resources needs management procedure or ability for administrative effectiveness. It becomes necessary to investigate principals' cost reduction technique as correlate of their administrative effectiveness in public secondary schools in Rivers State. Some principals charged with the task of administrative functions to attain the secondary school objectives are not competent in using cost management technique. The main problem is that some principals seem to neglect the adoption of cost management technique in carrying out their administrative duties. This may account for cases of negligence of budgetary procedures, misappropriation and mismanagement of funds, poor infrastructural development, and unaccountability of funds expended in the school.

There are also speculations that the insufficient funds or small funds released by government to schools in Rivers State jeopardize the administrative effectiveness of the schools. No meaningful organization can achieve administrative effectiveness without adopting techniques of managing the available resources released by its stakeholders because resources are scarce. Hence, administrative effectiveness is considered to be very crucial in the achievement of educational goals and objectives. Cost reduction techniques could contribute to prudent or judicious use of insufficient or small funds released by government thereby curtailing the issues of insufficient funds. It becomes necessary to investigate principals' cost reduction technique as correlates of their administrative effectiveness in public secondary schools in Rivers State.

1.3 Purpose of the Study

The purpose of this study was to determine the relationships between principals' cost reduction technique as correlates of their administrative effectiveness in public secondary schools in Rivers State. Specifically, the study sought to find out the;

1. Relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State.

2. Relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.
3. Relationship between the scores in overhead control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

1.4 Research Questions

The following research questions guided the study.

1. What is the relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State?
2. What is the relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State?
3. What is the relationship between the scores in overhead cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State?

1.5 Hypotheses

The following hypotheses were tested at 0.05 level of significance.

1. There is no significant relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State.
2. There is no significant relationship between the scores in labours cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.
3. There is no significant relationship between the scores in overhead cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

2. Method

Correlational research design was adopted for the study. The design is appropriate since the study sought to collect data from respondents to investigate the relationship between principals cost reduction techniques and their administrative effectiveness in public secondary schools in Rivers State. The study was carried out in Rivers State, Nigeria. The population of the study consisted of all the 7,150 teachers in 276 public secondary schools in the 23 Local Government Areas (LGAs) in Rivers State. The sample size for this study comprised 850 teachers drawn using multistage sampling procedure.

The researcher-developed two instruments titled "Principals' Cost Reduction Techniques Questionnaire (PCRTQ)" and "Administrative Effectiveness Questionnaire (AEQ)" were used for data collection. PCRTQ contains 30 items grouped into three parts respectively namely A, B, and C served as instrument for data collection on Principals' Cost Reduction Techniques. Part A contains ten items on budgeting technique, Part B has ten items assessing labour cost control technique and Part C contains ten items on overhead cost control technique. AEQ contained twenty one items arranged to collect data on Administrative Effectiveness of Principals. Copies of the instrument is attached as Appendix B, page 114. These items were structured on four-point rating scale of Very High (VH), High (H), Low (L) and Very Low (VL) and weighted 4, 3, 2 and 1 respectively. The face validation of the instruments were determined by presenting the title,

purpose of the study, research questions and hypothesis with copies of the questionnaires to three expert who are lecturers; two from Department of Educational Management and Policy, and one from Measurement and Evaluation in the Department of Educational Foundations, all in the Faculty of Education, Nnamdi Azikiwe University. The comments, corrections and suggestions made by the experts were taken to consideration in drafting the final copies of the respective instruments. Cronbach alpha was used to determine the reliability of the instruments and coefficients obtained for (PCRTQ) were 0.78, 0.78 and 0.78 for budgeting, labour cost control, and overhead cost control respectively and 0.79 was obtained for AEQ.

The researcher together with four trained research assistants administered the instruments to the respondents, in 15 L.G.As in Rivers State. A total of 850 copies of the questionnaires were distributed to teachers. Out of these, total of 827 copies of questionnaires were properly filled and successfully retrieved, indicating 97 percent return. At the end of the exercise, 827 copies of questionnaires that were properly completed and retrieved were used for data analysis. The data collected were analysed using Pearson Product Moment Correlation (PPMC) co-efficient to answer research questions and t-test of correlation to test hypotheses at 0.05 level of significance. When the exact probability value is less, than Alpha level the null hypotheses was rejected but where the exact probability value is above the Alpha value the null hypotheses was not rejected. For the research questions the coefficient r and the size of the relationship was interpreted using the correlation coefficient recommended by Schober, Boer and Schwarte (2018), as follows

Coefficient	Relationship
.00- .10	Negligible correlation
.11- .39	Weak correlation
.40- .69	Moderate correlation
.70- .89	Strong correlation
.90- .1.00	Very strong correlation

Results

Research Question 1: What is the relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State?

Table 1: Pearson r on Relationship between Budgeting Technique and Administrative Effectiveness

Variables	N	Budgeting Technique	Administrative Effectiveness	Remarks
Budgeting Technique	827	1.00	.774	Strong
Administrative Effectiveness	827	.774	1.00	

Results on Table 1 showed a Pearson's correlation coefficient (r) of .774. This shows that there is strong positive relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Research Question 2: What is the relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State?

Table 2: Pearson r on Relationship between Labour Cost Control Technique and Administrative Effectiveness

Variables	N	Labour Cost Control Technique	Administrative Effectiveness	Remarks
Budgeting Technique	827	1.00	.550	Moderate
Administrative Effectiveness	827	.550	1.00	

Data presented on Table 2 showed a Pearson's correlation coefficient (r) of .550. This shows that there is moderate positive relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Research Question 3: What is the relationship between the scores in overhead cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State?

Table 3: Pearson r on Relationship between Overhead Cost Control Technique and Administrative Effectiveness

Variables	N	Budgeting Technique	Administrative Effectiveness	Remarks
Budgeting Technique	827	1.00	.580	Strong
Administrative Effectiveness	827	.580	1.00	

Results on Table 3 showed a Pearson's correlation coefficient (r) of .580. This shows that there is strong positive relationship between the scores in overhead cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Hypothesis One: There is no significant relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Table 4: The t-test of Correlation Summary of Relationship between Budgeting Technique and Administrative Effectiveness

	N	Budgeting Technique	Administrative Effectiveness	p-value	∞ .	Remark
Budgeting Technique	827	1	.774			
				0.00	0.05	Rejected
Administrative Effectiveness	827	.774	1			

As shown by data presented on Table 4, the p-value of 0.00 is less than the stipulated 0.05 level of significance. Thus, the null hypothesis is rejected. Thus, there is no significant relationship between the scores in budgeting technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Hypothesis Two: There is no significant relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Table 5: The t-test of Correlation Summary of Relationship between Labour Cost Control Technique and Administrative Effectiveness

	N	Budgeting Technique	Administrative Effectiveness	p-value	∞ .	Remark
Labour Cost Control Technique	827	1	.550			
				0.00	0.05	Rejected
Administrative Effectiveness	827	.550	1			

Result presented on Table 5 reveals that the p-value of 0.00 is less than the stipulated 0.05 level of significance. Thus, the null hypothesis is rejected. Thus, there is no significant relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State.

Hypothesis Three: There is no significant relationship between the scores in overhead cost control technique and principals’ administrative effectiveness in public secondary schools in Rivers State.

Table 6: The t-test of Correlation Summary of Relationship between Overhead Cost Control Technique and Administrative Effectiveness

	N	Overhead Cost Technique	Administrative Effectiveness	p-value	α	Remark
Overhead Cost Control Technique	827	1	.580	0.00	0.05	Rejected
Administrative Effectiveness	827	.580	1			

Result presented on Table 6 indicates that the p-value of 0.00 is less than the stipulated 0.05 level of significance. Thus, the null hypothesis is rejected. Thus, there is no significant relationship between the scores in overhead cost control technique and principals’ administrative effectiveness in public secondary schools in Rivers State.

Discussion of Findings

The finding of this study shows that there was strong positive relationship between the scores in budgeting technique and principals’ administrative effectiveness in public secondary schools in Rivers State. This is in line with the finding of Okon, Akpan and Ukpong (2011) which revealed that there was strong positive relationship between budgeting measure and enhancement of principals’ administrative effectiveness in secondary schools. This also agreed with the finding of Ugoani (2019) which reported that budgeting management has positive relationship with organizational effectiveness. The studies were conducted in geographical location where similar budgeting practices are adopted in school system which may account for the agreement in the findings. The possible reason for this finding is that budgeting promotes rational allocation of resources to enhance administrative effectiveness. Budgeting technique is probably applied by principals to prevent reckless spending by compelling members of staff to follow the approved estimates of expending funds.

It was also reported that there was significant relationship between budgeting technique and principals’ administrative effectiveness in public secondary schools in Rivers State. This also supported the finding of Okon, Akpan and Ukpong (2011) which revealed that there was significant relationship between budgeting measure and enhancement of principals’

administrative effectiveness in secondary schools. This is also in consonance with the finding of Ugoani (2019) which reported that budgeting management has significant relationship with organizational effectiveness. Budgeting technique has significant relationship with administrative effective probably due to it serves as an instrument of control and coordination of school activities by giving financial direction for attainment of set objectives.

The finding of this study shows that there was moderate positive relationship between the scores in labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State. This is in line with the finding of Akeem (2017) who revealed that labour cost control moderate positively correlates organization effectiveness. The similarity in findings is probably due to the fact that labour cost control is probably geared toward setting limit in expenses incurred in formal operation of labour and also increase in efficiency of their services. The labour cost control technique probably correlates with administrative effectiveness probably due to the fact that it sets a standard for the services of some labourers to reduce expenditure in the school. The labour cost control technique is adopted by principals in Rivers State to ensure the cost of hiring labour for certain services like maintenance of school facilities does not go beyond a certain amount. Labour cost is controlled through hiring workers on a contract basis and thereby eliminating certain expenses from full-time staff.

It was also reported that there was significant relationship between labour cost control technique and principals' administrative effectiveness in public secondary schools in Rivers State. This also affirmed the finding of Akeem (2017) who revealed that labour cost control significantly correlates organization effectiveness. The labour cost control significantly correlates to administrative effectiveness probably due to the fact that it curb necessary expenditure while ensuring maximum use of scarce human resources to create conducive school environment.

The finding of this study shows that there was moderate positive relationship between the scores in overhead control technique and principals' administrative effectiveness in public secondary schools in Rivers State. This refuted the finding of Novák, Dvorský, Popesko and Strouhal (2017) who reported that there was low correlation between overhead cost management behavior and organizational effectiveness. The possible explanation for the finding is that overhead cost control technique of principals reduce expenses by negotiating lower rates from supplies and workers in school. The administrative effectiveness usually stem from overhead cost technique of bulk purchase of material resource, purchase of only necessary and durable facilities probably due to discount associated with large procurement.

It was also reported that there was significant relationship between overhead control technique and principals' administrative effectiveness in public secondary schools in Rivers State. This contradicted the finding of Novák, Dvorský, Popesko and Strouhal (2017) who reported that there was no significant correlation between overhead cost management behavior and organizational effectiveness. The contradiction in the findings may be explained in different in geographical location and the participants of the two studies.

Conclusions

Based on the findings, it is concluded that there was positive and significant relationship between principals' cost reduction technique and their administrative effectiveness in public secondary schools in Rivers State. The principals probably apply costs re-education techniques to regulate

and reduce unwanted expenses which improve the administrative effectiveness in secondary schools. Fraudulent practices of staff in school, especially as it relates to financial transactions are controlled by cost reduction technique to minimize the expenses incurred in running the daily affairs of the school system. Cost reduction technique of principals lie at the administrative effectiveness due to the fact that eliminate mismanagement and reckless spending and thereby facilitate the procurement of essential resources and completion of require projects for smooth functioning of the school.

Recommendations

Based on the findings, it was recommended among others that

1. Rivers State Secondary Education Management Board should develop budgetary manual for guiding and serving as benchmark for the principals in estimating, monitoring and evaluating income and expenditure of school funds for attainment of administrative effectiveness.
2. School principals should constitute and supervise the activities of labour cost control committee to ensure strict adherence to the budgetary guideline in spending the school funds with respect to hiring labour for administrative effectiveness.
3. The State Ministry of Education should organize annual in-service training, workshops and seminars on overhead cost control for principals to enable them acquire their knowledge and skills in managing overhead cost for administrative effectiveness.

7. References

- Adu, K. A., Andoh, C. and Abor, J. (2012). Evaluating the cost efficiency of insurance companies in Ghana. *Journal of Risk Finance*, 13(1), 61 -76.
- Aja-Okorie, U. (2014). Personnel management in school administration. In G. O. Unachukwu and P. N. Okorji (eds.) *Educational management-a skill building approach*, pp.366-384.
- Akeem (2017). Cost control and cost reduction techniques in organizational effectiveness. *International Business and Management*, 4(3), 19-26.
- Amadi, N. and Eleonu L. A. (2018). Maintenance of facilities in secondary schools in Port-Harcourt metropolis. *International Journal of Innovative Development and Policy Studies*, 6(1), 27-32.

- Boma, I. (2018). Financial management and practices for principals on quality service delivery in secondary schools in Rivers State. *International Journal of Innovative Finance and Economics Research*, 6(2), 62-69.
- Donley, J. (2019). *The effective practices briefs as well as ranked the practices*. Philadelphia: Centre on Innovations in Learning, Temple University.
- Egbide, A., Adegbola, L. Bamidele, O. Olufemi, S. and Ruth, O. (2019). Cost reduction strategies and the growth of selected manufacturing companies in Nigeria. *International Journal of Mechanical Engineering and Technology*, 10(3), 305-312.
- Ezeugbor, C. O. and Akinfolarin, A. V (2018). Administrator's managerial competencies for sustainable human resources management in secondary education in Enugu State Nigeria. *European Journal of Education Studies*, 4(3), 21-31.
- Federal Republic of Nigeria (2013). National policy on Education: Federal Ministry of Information.
- Ikediegwu, N.P. (2016). *Educational finance and school business management* Enugu: Cheston Agency Press Ltd.
- Ikegwusi, N.G. (2016). Management of contemporary needs of principals' for effective administration of secondary schools in Nigeria. *International Journal of Advance Research in Education and Technology*, 3(3), 61-67.
- Kimani, R. N. (2014). *The effect of budgetary control on effectiveness of non-governmental organisations in Kenya*. (Unpublished Masters' Thesis), Department of Finance and Accounting. University of Nairobi.
- Novák, P., Dvorský, J., Popesko, B., and Strouhal, J. (2017). Analysis of overhead cost management behavior and organizational effectiveness: Case study on decision-making approach. *Journal of International Studies*, 10(1), 74-91.
- Nwafukwa, P. O., Onele, A. A., and Anigbo, I. (2019). School Plant Maintenance as a Determinant for Principals Effectiveness in Administration of Secondary Schools in Nigeria; Focus on Ebonyi State. *Journal of Research & Method in Education*, 9(5) 16-21.
- Okon, F.I., Akpan, E.C. and Ukpong, O.U. (2011). Financial control measures and enhancement of principals' administrative effectiveness in secondary schools in Akwa Ibom State. *African Journal of Scientific Research*, 7(1), 335-342.
- Olorunsola, E.O. and Belo, F. A (2018). Administrative challenges and principals' managerial effectiveness in Ogun State public secondary schools *International Journal of Educational Administration and Policy Studies* 10(5), 48-56.

- Owohomdah, S.N. (2020). Budgeting procedures and principals' financial management of public secondary schools in Rivers State. *British International Journal of Education and Social Sciences*, 7(2), 58-68.
- Schober, P., Boer, C. and Schwarte, L.A. (2018). Correlation coefficients: Appropriate use and interpretation. *Anesth Anaig*, 126(50), 1763-1768.
- Sullivan, J. (2011). Increasing employee productivity: the strategic role that HR essentially ignores, Retrieved on 24/02/2021 from <http://www.ere.net/increasing-employee-productivity-the-strategic-role-that-hr-essentially-ignores/>
- The Institute of Chartered Accountants of India ICAI (2017). *Cost and Management Accounting Module -2*. India: SahityaBhawan Publications)
- Tonkins, A. (2016). Leading schools for innovation and success: five case studies (2019, December05).Retrieved from <https://www.minerva-access.unimelb.edu.au/handle>
- Ugoani, J.N.N. (2019). Budget management and organizational effectiveness in Nigeria. *Business, Management and Economics Research*, 5(2), 33-39.
- Vambe, G. (2018). *Cost control measures and their impact on profitability of manufacturing companies. A case study primeseed. co.* (Unpublished Bachelor dissertation) Summited to Department of Accounting Midlands State University
- Wordu, H. and Wehiuzo, W. N. (2018). School plant management for effective instructional delivery in public senior secondary schools in Port Harcourt Metropolis. *International Journal of Education and Evaluation*, 4(8), 67-76.