



Perceptions of the application of balanced scorecard in the administration of secondary schools in rivers state

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Abstract

The study examined the perceptions of the application of balanced scorecard in the administration of secondary schools in Rivers State. Two research questions and two hypotheses guided the study. The study was hinged on The General Systems Theory propounded by Ludwig von Bertalanffy in 1950. The research design is descriptive survey. The population of the study was 1,657 of public and private secondary school teachers in Rivers State. Using Taro Yamane's formula, the sample size drawn was 322 teachers. Data were collected using a self-structured questionnaire titled: Perceptions of the Application of Balanced Scorecard in the Administration of Secondary Schools Questionnaire (PABSASSQ). Three experts from the Departments of Educational Management and Measurement and Evaluation validated the instrument. The reliability index was obtained using Cronbach's alpha. Data was analysed using the mean score and standard deviation to answer the research questions while the z-test analysis was used to answer the research hypotheses. Some findings of the study were that the perceptions of the application of balanced scorecard enhances the increase of income over expenditures and that the application of balanced scorecard identifies an improvement of students' performance in secondary schools when teachers check the notebooks/assignments and engage students in field trips. Based on the findings, recommendations were made thus: The public and private school administrators can design and apply the balanced scorecard to enhance the increase of income over expenditures by providing performance enhancement tools for effective administration; and also, to ensure students academic performance, school administrators and teachers in both public and private secondary schools should design and apply balanced scorecard for effective monitoring and evaluation of students for them to acquire basic skills and trainings to empower them achieve organizational goals and to identify areas within the school that needs to be improved upon.

Keywords: perception, application, balanced scorecard and administration of secondary schools

Introduction

The development of a nation can be accessed on the basis of the quality of education obtainable at every level of learning. For the provision of quality educational services stakeholders of private and public educational institutions must work together by contributing towards the advancement of the sector to meet the needs of the society. These contributions could be human, financial, time and physical resources needed for effective school administration which makes it important that the activities of administrators are constantly monitored to ensure that the set goals and objectives of the educational system are met. In recognition of the above, the need for checks and balances in the educational sector becomes a strong point to consider. This gives rise to the creation of a universally acceptable standard of performance appraisal that combines both financial and non-financial values to determine the productivity of schools.

In an attempt to realize this, the concept of balanced scorecard that the steps to develop one, its dimensions and application by the private and public educational sector is the main focus of this study. The balanced scorecard is designed as a framework for measuring organizational performance using a more balanced set of measurement variables which include: both financial and non-financial strategic components. Balanced scorecard is a strategy performance measurement tool that can be used by administrators to keep track of the execution of activities by the staff within their control and monitor the consequences

arising from these actions. It is used to attain objectives, measurements, initiatives and goals that result from the administration of a business while focusing on managing the implementation of a strategy or operational activities (Brent, 1999) [3].

This evaluation mechanism was first introduced by an accounting academic called Robert Kaplan and a business executive David Norton in 1992. Both built on the work of Art Schneiderman at analogue devices. Both scholars desired to create a format that would enable managers to measure the performance of the organizations that include: non-financial information for proper evaluation of the attainment of set goals and objectives. In their work, it was proposed that a company can easily identify factors hindering business performance and outline strategic changes tracked by future scorecards (Lim, 2019, Kaplan and Norton (1996) [7, 5]. The financial evaluation of a business was not enough for guiding the journey of the organization but with the use of a balanced scorecard which include both financial and non-financial outcome, an organization can create a more concrete future through proper investments in customers, suppliers, employees, processes, technology and innovation.

The balanced scorecard can also be used to reinforce good behaviour in an organization by analysing four areas separately. These four areas are often referred to as the four perspectives of a Balanced Scorecard. Namely, learning and growth, business processes, the customs and financial perspectives. These four perspectives of Balanced Scorecard

encompass the vision and strategy of any organization and require active administration to analyse the data collected (Chang & Huang, 2011) ^[4]. The learning and growth perspective emphasizes on staff performance and demonstrated practices, the perspective of business processes are concerned with the improvement of productivity by the services rendered. The customer perspective is centred on increased quality service and promotion of the organizations' image and the financial perspective covers cost structure, resource allocation, asset utilization and revenue opportunities (Smith in Oluwuo & Asodike, 2016) ^[9].

The Balanced scorecard also has more advantage over traditional measurement system in linking long term strategy with short term targets which allows a better budgeting process that result to a better resource allocation (Norrekit, 2000) ^[8]. The scorecard provides executives with a comprehensive framework that translates a company's strategic objectives into coherent set of performance measures. It represents a fundamental change in the underlying assumptions about performance measurements and helps focus on the strategic vision. The balanced scorecard is called one of the most important innovations in strategic management in the twenty century. It is a strategic management approach to performance measurement and evaluation which is primarily derived from an organizations vision and strategy (Steele, 2001) ^[10].

By the application of a Balanced Scorecard in organizations, information can be provided as a whole while viewing its objectives. Thereby making the implementation of strategic mapping easy and identifying where value is to be added within an organization. A Balanced Scorecard can also be utilized to develop strategic initiatives and objectives of organizations. This is why the balanced scorecard is often referred to as a management tool rather than a measurement tool. Once a balanced scorecard has been developed successfully and implemented, performance information can be utilized because the right people and materials can be used at the right time. This would add structure and discipline to the organization (Steele, 2001 & Kohlar, (2005) & Norrekit, 2000) ^[10, 6, 8]. Application of the Balanced Scorecard through the development of information and communication technology within organizations help to transform disparate data into knowledge and aids effective communication among staff.

Simply put, about 64% of educational institutions in the world have implemented the Balanced Scorecard and it can be widely adopted and consistently found to be a framework used widely adopted and consistently found to be a framework used widely as an annual survey (Kurtzman in Wikipedia, 2018) ^[12]. Balanced Scorecard can be considered as a cybernetic control measure where actual performance value is compared to a reference value. The difference between the two values aid the corrective intervention to be made as required. Factors needed for effective application of a balanced scorecard in educational institutions is the choice of data, the reference value and the ability to make corrective intervention when necessary. These factors often reflect the ability of the observer to conduct frequent performance appraisals and subsequently make changes where necessary (Aguba (2009) & Amaewhule, Abraham & Asodike (2017) ^[1, 2].

The ability of the administrator to effectively execute his/her duties leads to a relief on the head teachers which

help them to concentrate on teaching the students for better intellectual outcome to create a balance in the school system (Oluwuo & Asodike, 2016) ^[9]. The main mission of educational institutions is to provide benefits and create values for the society by bringing a comprehensive system to performance measurement of students and tutors. In this regard, the application of Balanced Scorecard may become beneficial to the educational institutions to motivate and evaluate the organizational performance directly. Before the invention of the Balanced Scorecard, educational institutions used quality assurance operations and information technology programmes to measure how well they performed. These measures are on course and needs continuous reviews if these are to contribute to educational goals and objectives.

However with the understanding of the basic principles of a Balanced Scorecard, educational institutions will be better governed because the resources provided can be easily measured as it is common knowledge that measurements bring about motivation in people. In our opinions, the educational sector in Nigeria will benefit immensely by understanding the appropriate application of the Balanced Scorecard just as the American association for school administrators were able to the American association for school administrators noted that the balanced scorecard dramatically improved Atlanta's public schools when it came to students academic performance and it also led to a decrease in the students absences (Wikipedia, 2017) ^[11]. The key for appropriate application of balanced scorecard by educational administrators is not only to create a strategy but to also put this strategy as a core factor in leading and managing the educational sector in Nigeria.

Educational institutions can meticulously apply the basic perspectives of the Balanced Scorecard in creating a strategy focused administration. This can be achieved by pushing changes with strong leadership, turning strategies into practice and making it a continuous process. By the application of Balanced Scorecard, administrators in schools will be able to analyze the cause – effect relationship behind a strategy and improve it from the top to the bottom. Also by prioritizing certain goals and motivating every member of staff to understand what and how they can fulfil the overall plan to attain educational goals and objectives. A noteworthy example is the Atlanta public school system which proves that the Balanced Scorecard can help with the attainment of laid down educational goals and objectives anywhere in the world (Wikipedia, 2017) ^[11].

Statement of the Problem

The lack of tangible improvement in the level of service delivery and the consistent academic degradation recorded in the educational system of Nigeria over the years has given rise to the desire to measure the performance level and efficiency at various facets of educational institutions by stakeholders in education and administrators in both private and public secondary schools across the nation. Although the Ministry of Education has set up several agencies and executive boards to look into ways of providing and designing the appropriate performance measurement tools but none has proven to have much efficacy. This has led to negligence of certain areas such as curriculum development, teacher's appraisal, academic performance of students and resource utilization of schools which require prompt attention by administrators.

This brings to mind the following questions, "Is there any known suitable application or measurement tool that can be best suited for the educational sector to achieve its set goals and objectives? Can any performance measurement tool provide the needed appraisal of various aspects peculiar to the educational sector? Is the Balanced Scorecard one of such performance measurement tools that can enable educational administrators to effectively checkmate the utilization of resources at their disposal and also measure both financial and non-financial components of the schools? It is against this backdrop that the researchers intend to investigate the application of the balanced scorecard for the effective administration in private and public secondary schools found in Rivers State.

Aim and Objectives of the Study

The main aim of the study was to investigate the perceptions for application of the Balanced Scorecard in the administration of secondary schools in Rivers State. More specifically, the objectives of the study were:

1. Examine the school financial outcome by the application of Balanced Scorecard for effective administration of secondary schools in Rivers State.
2. Examine students' performance by the application of balanced scorecard for effective administration of secondary schools in Rivers State.

Research Questions

To achieve the objectives of this study, the following research questions were used to guide the study:

1. What is the financial outcome of the school by the application of Balanced Scorecard for effective administration of secondary schools in Rivers State?
2. What is the level of students' performance by the application of balanced scorecard for effective administration of secondary schools in Rivers State?

Hypotheses

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

1. There is no significant difference between the mean scores of public and private secondary schools on the financial outcome of the school by the application of Balanced Scorecard for effective administration of secondary schools in Rivers State.
2. There is no significant difference between the mean score of public and private secondary schools on the level of students' performance by the application of Balanced Scorecard for effective administration of secondary schools in Rivers State.

Significance of the Study

The findings of this study provides beneficial information to the educational sector stakeholders, ministry of education, educational planners and administrators, policy makers, principals of public secondary schools and proprietors of private schools, Supervisors in both schools' Board as well as those inspectors in the ministry of education and lastly, educational researchers will also find this study very useful in the area of literature review of related materials among others.

Theoretical Framework

This theory was hinged on the Expectancy theory of Motivation. It was propounded by Vroom in (1964). The

expectancy theory was defined as a monetary belief concerning the likelihood that a particular act will be followed by a particular outcome. The theory states that "The motivational force to perform is a function of the expectancies that individuals have concerning future outcome and the value they place on these outcomes". This theory assumes that people consciously direct their energy in a way that will lead to satisfaction. Thus, performance is related to the expectations of achieving outcomes that will fulfil desired needs. Vroom commenting on the implications of the theory stated that these expectancies serve as guidelines by which an individual can plan to fulfil his personal needs.

Therefore, if educational administrators are being provided with an environment that will drive their performance and with the necessary facilities that can enhance the teaching and learning process, this would lead to an improved method of impartation and it will be evidenced in the students' performance. The theory of motivation is relevant to the application of the balanced scorecard by administrators' of secondary schools as it serves as an instrument for explaining and highlighting the need for motivation for the achievement of educational goals and objectives. Measurement of the performance of students through appropriate techniques of assessment of teaching and learning process will lead to healthy competition between the students and ultimately improve the overall image of the school.

The administrators with the aid of the balanced scorecard designed especially for their institutions will acknowledge the types of tools of motivation that is best suited for the teachers and students of the school. This theory clearly shows that individuals will be willing to go the extra mile whenever they are sure of job security, increased income and recognition but all these are not achievable without proper appraisal on the areas that need improvement and can be done by the application of balanced scorecard. The four perspectives of the balanced scorecard can enable the administrators to spot out the aspects within the educational institution that require more supervision. It can also pinpoint the causes and effects of challenges experienced by teachers in the institution and how they can be inspired to achieve more.

Methodology

This study adopted the descriptive survey design. Answers were sought to research questions and efforts were made to test hypotheses on the variables of the study and their results inferred on the population of the study. The population of the study consisted of teachers in public and private secondary schools in Rivers State. This consists of 735 public senior secondary school teachers and 922 private secondary school teachers (1657 teachers) in all. The sample of the study consisted of 322 teachers made up of 161 public and 161 private secondary school teachers drawn from the entire population size using the Taro Yamen's formula to determine the least number of respondents that was appropriate. The simple random sampling method was adopted to achieve the sample size. The respondents of the study responded to a 15 instrument titled: Application of Balanced Scorecard for effective Administration of Secondary Schools Questionnaire (ABSASSQ) designed by the researchers in the modified 4-point Likert scale model, and which had its reliability index of .772 and .738

respectively at 0.05 level of significance. The instrument was validated by experts in Educational Management and Measurement and Evaluation.

The instrument had two sections, A and B. Section A was the bio-data section while section B was subdivided into 2 other sections to elicit information on variables on application of balanced scorecard for effective administration of secondary schools. Mean scores and

aggregate weighted mean scores were used in answering the research questions while z-test statistics was used in testing the null hypotheses at 0.05 alpha level.

Results

Research Question 1: To what extent does balanced scorecard enhance financial outcome in secondary schools?

Table 1: Mean and standard deviation on the responses of teachers in public and private secondary school on balanced scorecard to enhance financial outcome

S/N	Items Financial Outcome Variable	VLE	LE	HE	VHE	Total	\bar{x}	SD	Remarks
1	Financial outcome is enhanced when income increases over expenditures.	23	107	86	72	288	2.72	.930	High Extent
2	Financial outcome is enhanced when principals invest in profit generating programmes.	18	152	64	54	288	2.53	.867	Moderate Extent
3	When principals are accountable for funds meant for school projects, financial outcome is enhanced.	17	115	98	58	288	2.68	.860	High Extent
4	Principals generate funds from vocational training of students to enhance financial outcome.	30	90	103	65	288	2.70	.933	High Extent
5	Financial outcome is enhanced when new sources of income are identified by the principals.	75	47	101	65	288	2.54	1.107	Moderate Extent
	Aggregate							2.63	High Extent

Legend

\bar{x} Mean: Teachers in public and private secondary schools
SD Standard Deviation

Scale

Very Low Extent (VLE) = 1
Low Extent (LE) = 2
High Extent (HE) = 3
Very High Extent (VHE) = 4
Criterion mean = 2.50 ($x \geq 2.50 =$

High Extent, $x < 2.50 =$ Low Extent)

The table is evident that the mean of the stated items were above the criterion mean of 2.5. Hence, the stated items have a high degree of assertive responses that Balanced Scorecard enhances financial outcome in secondary schools in Rivers State.

Research Question 2: To what extent does balanced scorecard enhance student performance in secondary schools?

Table 2: Mean and standard deviation on the responses of teachers in public and private secondary schools on balanced scorecard to enhance students' performance.

S/N	Items Students' Performance variable	VLE	LE	HE	VHE	Total	\bar{x}	SD	Remarks
6.	There is a cordial relationship between students and teachers when students' performance is enhanced.	75	47	101	65	288	2.54	1.107	Moderate Extent
7.	Principals take students on field trips to enhance students' performance.	0	42	192	54	288	3.04	.577	High Extent
8.	There is adequate provision of instructional materials to enhance students' performance.	24	97	88	79	288	2.77	.946	High Extent
9.	Student's performance is enhanced when teachers check the notebooks and assignments of students.	29	27	121	111	288	3.09	.936	High Extent
10.	Students' performance is enhanced when given assessments on regular basis.	25	24	216	21	288	2.80	.703	High Extent
	Aggregate Mean							2.85	High Extent

* The legend and scale for Table 1 apply

Table 2 shows the mean and standard deviation of the responses to research question two. The table evident that the mean of the stated items were above the criterion mean

of 2.5. Hence, the stated items have a high degree of assertive responses that Balanced Scorecard enhances student performance in secondary schools in Rivers State.

Table 3: Summary of z-test between two sample for means of H_0

	Private Secondary Schools	Public Secondary Schools	Decision
Mean	2.961842	2.273529	
Known variance	0.270058	0.264183	
Observations	152	136	
Hypothesized mean			
Difference	0.00000		
Z calculated	11.28652		
P(Z<=z) two-tail	0.00000		
z critical two-tail	1.959964		
Z cal > Z crit			Reject

Result: Z calculated (11.28652) > Z critical (1.959964)

Decision

The null hypothesis which states that significant difference does not exist between the mean scores of public secondary schools and private secondary schools on the financial

outcome of the school by the application of Balanced Scorecard for effective administration of secondary schools in Rivers State is not retained.

Table 4: Summary of z-test between two sample for means of H0₂

	Private Secondary Schools	Public Secondary Schools	Decision
Mean	3.128947	2.525735	
Known variance	0.119951	0.250057	
Observations	152	136	
Hypothesized mean			
Difference	0.00000		
Z calculated	11.76721		
P(Z<=z) two-tail	0.00000		
z critical two-tail	1.959964		
Zeal > Zcrit			Reject

Result: Z calculated (11.76721) > Z critical (1.959964)

Decision

The null hypothesis which states that there is no significant difference between the mean scores of public secondary schools and private secondary schools on the level of students’ performance by the application of balanced scorecard for effective administration of secondary schools in Rivers State is not retained.

Discussion

The first finding of the study drawn from answers to research question one is that application of balanced scorecard showed that when income increases over expenditures and funds are generated from vocational training of students has the highest contribution in enhancing financial outcome initiatives in the administration of secondary schools in Rivers State. Also, the corresponding third finding from hypothesis testing has it that there is no difference between the mean ratings of teachers in public and private secondary schools on how balanced scorecard enhanced financial outcome of schools in Rivers State.

These findings agree with Kochlar (2005) [6], Aguba (2009) [1], Oluwuo and Asodike (2016) [9] and Amaewhule, Abraham and Asodike (2017) [2] who in their expositions found improved cost structure, increase asset utilization and expansion in revenue opportunities as the hallmark of every good administration. It is no wonder that the scholars emphasize on the financial perspective to provide the best value to customers and stakeholders as well as addressing the issue of cost minimization and efficiency of current financial policies. These activities are designed to bring about effective operations of the schools and to engender accountability in the school system.

It is important to note that success or failure of the school system would depend on the efficient management of funds, collection and protection of school fund, direction of school assets and indebtedness. The balanced scorecard allows assessment at every level; administrators of various secondary schools will be provided with a systematic and consistent method of assessing financial performance within the different units of the school. On an individual level, the balanced scorecard provides the opportunity to checkmate ones financial prowess and make the necessary adjustments that will contribute to the success of the educational institution.

The second finding of the study from answers to research question two is that the application of balanced scorecard identifies an improvement of students’ performance in secondary schools when teachers check the notebooks/assignments and engage students in field trips. Also, the corresponding fourth finding from hypothesis testing has it that there is no significant difference between the mean ratings of teachers in public and private secondary schools on how balanced scorecard enhanced students performance of schools in Rivers State. The findings agree with Kaplan and Norton (1996) [5], Chuang, Shiu and Huang (2011) [4], Oluwuo and Asodike (2016) [9] and Brent (1999) [3], Steele (2001) [10], Norrekit (2000) [8], who in their research reports and theoretical expositions established that the school administration’s main goal is to ensure satisfaction to its customers (stakeholders is education). This may be explained in the fact that the balanced scorecard enables the administrator to make decisions that will lead to improved student performance on a regular basis by highlighting areas that such as: continuous assessment, vocational training, field trips, character building programmes and industrial training that the students may indulge in to empower them. This implies that with the existence of these programmes and initiatives, the administrator will be able to illuminate the schools’ image and provide satisfaction to the parents and other stakeholders in the schools. This will lead to positive effects on student enrolment, school funding, job security of teachers and administrators and the viability of educational institutions as the introduction of the balanced scorecard to schools will ensure that there is equilibrium between the performance of students and efforts of the school administration.

Conclusion

Based on the findings, the study concluded that the application of the balanced scorecard for effective administration of secondary schools in Rivers State will bring about positive improvement in both public and private secondary schools in terms of financial outcome of schools and students academic performance.

Recommendations

1. To achieve accountability in the financial outcome, the government, ministry of education, proprietors and

administrators in both public and private secondary schools should key into implementing the balanced scorecard to ensure efficiency in the educational system.

2. To ensure students academic performance, school administrators and teachers in both public and private secondary schools should design and apply balanced scorecard for effective monitoring and evaluation of students for them to acquire basic skills and trainings to empower them achieve organizational goals and to identify areas within the school that needs to be improved upon.

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