Available online at http://www.journalcra.com

International Journal of Current Research
Vol. 4, Issue, 11, pp.001-007, November, 2012

INTERNATIONAL JOURNAL OF CURRENT RESEARCH

ISSN: 0975-833X

RESEARCH ARTICLE

PERFORMANCE INDICATORS APPLIED IN THE MANAGEMENT OF SECONDARY SCHOOLS

[1]Peter Otieno Odhiambo, [2]Francis Chisikwa Indoshi and [3]John Agak

[1,2]Department of Educational Communication Technology and Curriculum Studies, Maseno University, Kenya
[3]Department of Educational Psychology, Maseno University, Kenya

ARTICLE INFO

Article History:
Received 19th August, 2012
Received in revised form
21thSeptember, 2012
Accepted 22th October, 2012
Published online 21th November, 2012

Key words:
Performance,
Indicators,
Management.

ABSTRACT

One of the concerns in education sector today is developing effective performance indicators in terms of level of application and importance. The purpose of this study was to establish the performance indicators applied in the management of secondary schools. Its objective was to identify key performance indicators perceived as critical in secondary school management and the level of application and importance in their use. The study population consisted of 200 secondary school managers out of which180 were selected by saturated sampling technique after using 20 for a pilot study. Data were collected using questionnaire. The instrument was constructed by the researchers and validated by three experts in research methods from Maseno University. Secondary school managers demonstrated use of wide range of performance which was financial and non – financial in nature. On financial indicators, revenue achieved (0.76) in level of importance and composite mean of (0.65). In non – financial indicators, enrolment growth was highly ranked and had composite mean of (0.72) and ranking in level of importance was (0.880, followed by parent satisfaction which had composite mean of 0.77 and level of importance was 0.72. The implication is that secondary school management needs to focus more on determinant result indicators.

Copy Right, IJCR, 2012, Academic Journals. All rights reserved.

INTRODUCTION

Performance indicators or measures were developed as standards for assessment. It is the generic term encompassing the quantity basis by which the objectives were established and gauged (Dewaal, 2007 & Cole, 2004). It was also used to develop information about critical aspects of activities, including their effect on the public. It was about analyzing the success of a program and the effects of comparing data on what actually happened and what was planned (Kathrine, 1997). We need performance indicators for control, self assessment, continuous improvement and management assessment. Ideal measure of an indicator should be understandable, applied broadly, economical to apply, reflect customers need and provide agreed upon basis for decision making among others. The critical elements of a good performance measurement activity must be focused on several management strategies, appropriate staff involvement, simple measurement and evaluation, control, motivation, dictatorship, organizing, supervision and adoption of sound managerial practices among competing based measure result measures and determinants. The popular measurement approaches among many which has been adopted by various institutions is the balance score card approach. Balance score card, unlike other approaches such as pyramidal, recognize the limitation of pure financial measurement of an institution which is normally short term measurement. It has several measurement perspectives: financial, customer, internal business and innovation and learning perspective. The key goals that are identified as being critical to scores of an institution as part of performance measurement framework include financial results and none financial results e.g. customer result, employee result and societal result (Dewal, 2007).

Despite the development of performance measurement systems in education sector, various researchers(Atkinson & Brander – Brown, 2001; Lippit, 2003) have pointed to the reluctance in the education sector to use balanced measures and rely solely on financial measures of performance. Such measures are associated with a number of fundamental weaknesses, including limitations in their accuracy and neutrality; a dominance of result over determinant measures; emphasis on the short term often at the expense for strategic issues; little appreciation of the links and relationships between key areas and aspects of school, and an overall lack of balance (Lambert L, 2003; Fitzgerald *et al*., 1991; Kaplan and Norton, 1992). The overview of performance measurement literature has led to the conclusion that non-financial measures have more advantage and that non-financial measures are more directly traceable to the strategy of any firm, Shank and Govindarajan, (1993). Furthermore, Leight (2002) argue that where performance reports are dominated by financial measures, performance evaluation is weakened by the inherent limitations of financial information. The measures are typically too irrelevant due to the accounting period delay, and too summarized due to the length of the accounting period. There is a concern that in using inappropriate measures, school managers may be ignoring

***Corresponding author:** findoshi@yahoo.com

issues, which really matter, potentially to the serious detriment of their schools' performance, Brander-Brown and Mcdonnell, (1995). In fact, (DeWaal, (2007) contends that overall lack of management skills and expertise often makes it not viable for developing countries to develop complex structures such as sophisticated performance management systems. They concentrate more on introducing and copying tools and systems from the western world, which are not always the best suited to local circumstances. This raises the question whether key performance indicators developed for the western schools are suitable for developing countries and specifically in the Kenyan education sector context.

The above scenario leads to the question: What are the key performance indicators specifically used in the Kenyan education sector? It is important to find out if the Kenyan school managers are using financial and non-financial performance indicators to measure institutional performance and the level of importance they attach to each performance indicator. Most of the previous studies in the western countries have either looked at level of application alone or level of importance alone. Indeed, DeWaal (2007) argues that performance management studies in Africa add to the growing body of literature, as many of these studies are currently not found in the management literature. However scientific and professional literature specifically on implementing performance management in developing countries is scarce. The popularity of the balanced score card (BSC) is gradually changing this, mainly in Asian countries, but it is still a relatively new concept for developing countries. The managers take future actions based on the results achieved. Furthermore, school managers apply diverse management roles to achieve both financial and non-financial performance. Baum and Sparrow (1992) suggest that one of the main factors that have led to the dominance of a competency – based approach is a growing linkage between school performance and management skills such that sustained school performance can only be achieved through improved management capability.

Therefore it is important to link management roles and competencies and performance measurement. In future, such competencies can be reinforced through training and management development programs in order to improve school performance. Few past studies have investigated the linkage between management roles and performance measurement by managers, yet this provides the best opportunity for schools to improve their performance. Chrisau, (2002) indicates that there are large discrepancies between formal training and work demands in the education sector. It is apparent that there is a gap between requisite management competencies acquired during formal training and education sector expectations in Kenya. As such, education sector stakeholders have concerns regarding the school manager's managerial performance. It is important for performance measures to direct attention to such non-financial factors as service quality and customer satisfaction, Fitzegerald *et al*., (1991). Indeed, Bittlestone (1994) argues that the primary drivers of performance are often non financial in their nature. Atkinson and Brander Brown (2001), in their study of UK schools found that the majority of these schools display a short-term financial target whilst paying little attention to the process driving the results. It is also widely considered essential that school's performance measures are linked to its strategic intent, its competitive environment, revenue management, market orientation and service delivery process within schools, Fitzgerald *et al*., (1991); Leithwood *et al*, (1998); Kaplan and Norton, (1996); Brander-Brown and Harris, (1998). Furthermore, there has been an increasing recognition within the schools of the importance and value of people; such as teaching staffs and students in the service delivery process, which has led to suggestions that schools need to develop better performance in information relating to such key areas as teaching staff morale and customer satisfaction, Fwaya, (2006); Irungu, (2006); Fitzegerald *et al*., (1991) In addition, Brander Brown and Harris (1998) and Harris and Mangiello (2001) point out a diversity of activities and differing cost structures. It is argued that the school encompasses two different types of institutional activities, (curricular and co-curricular) which exhibit different management orientations. These two orientations call for a diverse set of indicators.

In this respect Hefferman *et al*., (2000) emphasize that departments and sections should know how they are contributing separately and together in meeting their strategic mission. Consequently, it is suggested that an appropriately balanced collection of performance measures needs to be developed combining, non-financial as well as financial aspects, together with more strategic and externally focused indicators. Thus, in relation to the above discussion, this study will identify performance indicators of the following performance dimensions; competitiveness, financial performance, service quality, resource utilization, flexibility and innovation, supplier performance, and community/environmental perspective in the Kenyan education sector. The quantification of the contribution of products, processes service and more generally all the business functions are defined in terms of measurement. A measurement can concern an attribute that receives distinguishable prices and is usually expressed as a percentage or as rate of chance or as a variable representing continuous sizes demonstrating the degree of conformity with predetermined requirements. An indicator is used for measurements that are not direct or exclusively used for measurement of performance.

The indicator that eventually a company, unit, department or section evaluates as the most representative to successfully describe its need of measuring its performance constitutes the key performance indicators (Walsh, 1996). 'Key performance indicators' is the collective term for performance measures used to monitor performance of individuals, sections, departments and schools. Key performance indicators are a set of quantifiable measures that a company or industry uses to gauge or compare performance in terms of meeting their strategic and operational goals. A company must establish its strategic and operational goals and then choose the KPIs which best reflect those goals (Beatham, *et al*., 2006; Shahin and Mahbod, 2007). Key Performance Indicators provide vital information to the school for tracking and predicting institutional performance against strategic objectives in a way that compliments financial measures. By measuring and monitoring operational efficiency, teaching staff performance and innovation, customer satisfaction, as well as financial performance long-term strategies can be linked to short term

actions (Beatham, *et al*., 2006). The Key Performance Indicators for the eight performance dimensions will be identified using modified results and determinants model (Fitzgerald *et al*., 1991). They are only indicators that measure progress towards the achievement of certain goals. Performance indicators that have been emphasized in the past are majorly ranking in the national exams, number of students posted to the university and quality of grades scored in the national exams. The focus has been more on curriculum where the national goals of education focus on the holistic development of the child. Secondly, existence of schools of varied sizes and categories such as provincial schools, district schools, pure boarding, and mixed day make it difficult to measure the performance of the schools on equal footing. There is need to identify a more uniform parameter to identify performance indicators that will accommodate both curriculum and non-curriculum factors. The research was motivated by a desire to identify key performance indicators applied in the management of secondary schools and those emerging from the review of relevant literature. The purpose of the study was to establish performance indicators applied in the management of secondary schools; and its objective was to identify key performance indicators perceived as critical in secondary school management and level of importance and application in their use.

METHODOLOGY

Research Design

The researcher used both descriptive and correlation research designs to gather the primary data. Gall *et al* (1996) showed that correlation research design is majorly used to predict scores of one variable from the predictor variable. It was possible to predict the output (performance) from the level of education and years of experience of the secondary school managers. The justification for the use of multiple regression analysis is that it assisted in measuring the influence of other factors. This research design was further chosen because the data was collected quickly and inexpensively compared to the other research designs. Furthermore the results obtained from the co-relational research design can be generalized to the entire population of education managers in Kenya. In addition the characteristics of variables to be measured had not changed much due to the short period of data collection. Therefore this involved administering a questionnaire once to a sample of education managers in Kenya yielding data on the measured characteristics, such as demographics, key performance indicators used in the education sector and their perception on important management competencies, as they existed at the time of the survey.

Population

The population of the study was composed of 200 secondary school managers in Siaya District. All school managers were critical in measuring school performance as they used diverse managerial roles to achieve the desired level of school performance. In addition they utilized different key performance indicators to measure school performance Frankfort (2008).

Sample and Sampling Procedure

A saturated sampling technique was used to arrive at 180 school secondary school managers who were chosen to give information. 20 managers who represent 10% of the schools were randomly selected without replacement from the overall school classification list for purposes of pilot study (Kerlinger, 1983& Frankfort, 2008).

Data Collection Instrument

In this study, a questionnaire was employed in data collection that captured information on secondary school managers' performance indicators and performance measurement. Lead (1980) argues that a questionnaire is preferred in data collection because it is easy to administer to a good number of respondents, who respond in private settings. The advantage of using open-ended questions is that there is a wide range of answers available to the respondents, which may not be fully anticipated by the researcher. It is equally important to note that closed questions restrict the limits within which respondents may respond.

Validity and reliability of the instrument

Reliability

Reliability refers to the consistency with which an instrument produces stable scores of comparable results (Cohen & Manion, 1994). Pilot study is a stage in development of the questionnaire to assist with the determination of the effectiveness of the instrument (Bailey, 1978, Bryman, 2000). Pilot study was used to refine the questionnaire design and identify errors, which may only be apparent to the population concerned, for example meaning of words. The pilot study involved 20 secondary schools and a reliability of coefficient of 0.7 was established. Reliability coefficient Cronbach's alpha values of 0.7 were considered criteria for internal consistency.

Validity

Validity of an instrument is based on how an instrument fulfils the function it is supposed to perform (Kerlinger,1983 & Mugenda and Mugenda, 1999). To ensure that the instrument used in the research were valid, the face validity was carried and the advice of the research specialists from the faculty of education was sought. Different scholars in Maseno University were consulted and modifications made made on the questionnaire on the basis of their advice.

Data Collection Procedure

After getting permission from Maseno University School of Graduate Studies and issued with research permission letter from the National Council of Science and Technology to carry out the research, the researcher made a familiarization tour to the Siaya District Education Office to enlist their corporation and brief them on the intended research. The date for visiting the schools was then fixed with the concurrence of the District Education Office. From Siaya District Education office the researcher obtained the list of secondary schools within the region of the study. Among the 200 secondary schools, 20 schools were randomly selected and set aside for the pilot study. In each of the remaining 180 secondary schools, the school manager was purposively selected for data collection. Open and closed questionnaires were used to solicit information from the 180 selected secondary school managers. The closed and open questionnaire was used to obtain

information on performance indicators being used and performance measurement system used in their respective secondary schools.

Data Analysis Procedure

Data analysis was done in two levels, namely: descriptive statistics and inferential statistics. Descriptive statistics included means, standard deviations, medians, frequencies, and percentages and were used to investigate how the individual set of observed variables measured leadership competencies and related with those that measure performance indicators. Inferential statistics were further applied in two levels: use of Pearson Product moment (rho) to establish the degree of relationship between the two variables namely, that is management role and performance indicators. Structural equation modeling was used to investigate the linkage between managerial role and performance measurement. This was possible since salient variables of the two models being used in the study had already been subjected to confirmatory factor analysis by other researchers (Quinn *et al*, 1996 & Fitzgerald *et al*, 1991). The product of the level of importance and the level of application of salient performance indicators was calculated to get the actual measure of performance indicators. Actual measures of performance indicators from each performance dimension was summed and integrated to give a measure of each performance dimension. Finally, structural equation modeling using statistical package for Social Science software was used to test a series of equations at once while adjusting for personal characteristics and school characteristics. Structural equation modeling was used to: Test a set of regression equations indicating the relationship between managerial role and performance indicators all at once. Test if the model is a good fit for the data that is obtained, (Agak 1995). The data was presented in tables and figures using descriptive statistics cross tabulation and comparison of management categories. The results were displayed comparatively in tables of individual variables, indicating the importance /unimportance, levels of significant disagreements and standard deviations.

RESULTS AND DISCUSSION

School managers were asked to indicate their level of use and importance of each performance indicator by responding to 44 performance indicators contained in the survey instrument. The levels of the used and importance scores were averaged and composite mean scores for the performance ranged from 4.63 down to 2.77. These results indicated that the managers in this study demonstrate reasonable use and value of a wide range of performance indicators. The two key indicators identified were financial indicators and non financial

Financial performance indicators

The respondents indicated that monitor total revenue and operating costs. These two indicators scored highest in relation to composite mean scores with total revenue receiving by far the highest rating school fees and government budget. The results were consistent with literature and previous studies (Fitzgareld *et al*, 1991; Atkinson & Brander- Brown, 2001; Kaplan & Narton 1992) particularly given the previously suggested revenue-oriented nature of school operations (Fitzgerald *et al*.,1991; Lippit,2003). While the research findings supported this expectation, they also demonstrated quite a varied response in relation to level of use and level of importance of each performance indicator. For instance, Kaplan and Narton (1992) highlight those financial measures that were not enough to explain the school trend or decision effectiveness. The fundamental point, however, was that whatever happens in a school it is the effect of a variety of different causes such as competitiveness, quality of products and service and resource utilization and that these cause are prompted by customers (internal and external), teachers (whose behavior affect the school) and other stakeholders (e.g. parents, community, suppliers). Information regarding end result of operations was traditionally provided by financial performance measures which are largely based on the total revenue and costs. This focus was driven by the need to meet the needs of the shareholders, ignoring other internal and external stakeholders. Further, where performance report were dominated by-financial measures, performance evaluation was weakened by the inherent limitations of financial information.

Non-financial performance indicators

With regard to non-financial performance indicators, the research findings exhibited a noticeable different pattern compared to the financial indicators. The non-financial performance indicator that was rated most highly was enrolment growth. Also, student and parent satisfaction was highly rated by the school managers. However, the two top non-financial performance indicators were essentially result measure of competitiveness. It is important to note that generally school managers appear to pay significantly less attention to a non-financial indicators than to financial indicators. Indeed, it is also worth noting that the; mean score of most community/environment perspective indicators were below the 3.0 score. Although the measures scored poorly in current study, these measures are now viewed as being important to providing school managers with valuable information to control the operations on a daily, weekly and annual basis. Non-financial measures are important as they provide feedback about the school activities that may directly or indirectly affect the school results. By measuring and monitoring operational efficiency, teacher performance and innovation, student/parent satisfaction as well as financial performance, long term strategies can be linked to short term actions (Beathm *et al*, 2004). This does not mean that non-financial measures should replace financial measures. Instead, the non-tradition approach to performance measurement, which combines both non-financial activities, provides a number of benefits. Shank and Griffin (1996) strategic cost management concept represented a significant step in the literature leading to the conclusion that non-financial measures have many advantages and that "Non-financial measures are more directly traceable to the strategy of the firm" (Ibid). The limitations in using only financial measures of performance are that they are lagged indicators which are the result of management action and organizational performance and not the cause of it (Brittlestone 1994). Over time, the importance of non-financial measures has emerged as it is acknowledged that the traditional performance measures could not provide the information for the development of the strategy. It has become apparent that the improvement efforts cannot be quantified in money terms particularly if they relate to the

Table 1: Ranking of Key performance indicators by mean score

Peformance indicator	Level of use M* (SD)** Rank	Level of importance M (SD) Rank	Composite mean M (SD) Rank
RESULTS INDICATORS			
Competitiveness			4.21 (0.68)
Student enrollment level/customer base	4.16 (1.03) 14	4.52 (0.88) 8	4.34 (0.72) 12
Customer satisfaction survey	4.16 (1.12) 14	4.48 (0.72) 12	4.32 (0.77) 14
Increase in library record	4.10 (1.26) 20	4.35 (0.98) 24	4.23 (0.81) 18
Customer base	3.77 (1.37)	4.10 (0.94) 36	3.94 (1.01)
Provision of bursary scholarship	4.81 (0.45) 2	4.45 (0.72) 14	
Financial performance			
Total revenue achieved	4.45 (0.88) 6	4.58 (0.76) 2	4.10 (0.62)
Cost reduction	4.58 (0.84) 4	4.42 (0.71) 20	4.63 (0.51) 2
Utilization of located fund saving	4.42 (1.08) 8	4.45 (0.88) 14	4.52 (0.75) 4
Total operating cost	4.35 (0.83) 10	4.52 (0.72) 8	4.50 (0.65) 6
Development Index	4.32 (1.10) 12	4.03 (1.21) 44	4.44 (0.88) 8
Debt quality ratios	4.06 (1.14) 22	4.19 (1.04) 28	4.44 (0.64) 8
Compliant with set budgetary levels	3.77 (1.19)	4.16 (0.18) 32	4.18 (1.07) 24
Paying workers income	3.84 (1.38)	4.03 (1.27) 44	4.13 (0.91) 30
Income generating activities	3.68 (1.32)	4.19 (0.83) 28	3.97 (0.87)
Paying suppliers and creditors on time	3.52 (1.20)	4.13 (1.02) 34	3.94 (1.25)
Capital	3.61 (1.35)	3.97 (1.19)	3.94 (0.88)
Enhance resource mobilization & utilization	3.26 (1.33)	3.97 (1.29)	3.82 (0.94)
	3.32 (1.24)	3.71 (1.23)	3.71 (1.14)
DETERMINANT INDICATORS			
Service quality			4.08 (0.72)
School category rating	4.13 (1.27) 18	4.39 (0.91) 20	4.26 (0.93) 18
Interaction quality	4.00 (1.02) 24	4.45 (0.72) 14	4.23 (0.73) 19
Quality passes / grade	3.71 (1.18)	4.23 (0.88) 26	3.96 (0.90)
Service environment quality	3.71 (1.15)	3.97 (0.94)	3.84 (0.97)
Flexibility			4.19 (0.53)
Modernized teaching methodology	3.74 (0.99)	4.68 (0.65) 1	4.21 (0.65) 22
Curriculum delivery quality assurance mechanism	3.97 (1.13)	4.39 (0.84) 20	4.18 (0.77) 24
Establishment of merit award scheme	3.81 (0.90)	4.55 (0.72) 6	4.16 (0.62) 28
Resource Utilization			3.58 (0.50)
Employee training & development programs	3.29 (0.96)	4.06 (0.81) 38	3.68 (0.68)
Information communication technology usage	2.94 (0.81)	4.06 (0.88) 38	3.50 (0.69)
Repair & maintenance	2.87 (0.98)	3.90 (0.82)	3.39 (0.70)
Staff turnover surveys	3.16 (1.09)	4.13 (0.88) 34	3.65 (0.79)
Staff performance appraisal ratings	3.35 (1.10)	4.06 (0.88) 38	3.71 (0.81)
Innovation			3.27 (0.91)
Performance of the innovation process	3.00 (1.23)	3.81 (1.16)	3.40 (1.02)
Performance of individual innovators	2.81 (1.16)	3.48 (1.20)	3.15 (0.98)
Supplier performance			3.27 (0.91)
Delivery time	3.65 (1.13)	3.68 (1.21)	3.66 (0.98)
Standard purchasing specification	3.55 (1.42)	3.65 (1.16)	2.85 (0.83)
Community/environmental perspective			2.84 (0.83)
Repair & maintenance	2.55 (1.30)	3.26 (1.05)	2.90 (0.94)
Environmental conservation schemes and schemes	2.55 (1.05)	3.19 (1.01)	2.98 (0.84)
Cooperate sponsorship	2.29 (1.06)	3.26 (1.02)	2.77 (0.90)
Health & safety measures	2.45 (1.05)	3.10 (1.04)	2.77 (0.84)

student/parent satisfaction and product or service quality, Evans, 2000). It is now understood that organizational success is a multi-dimensional concept (Evarald 1996) and that the key to success is dependent on design, management, marketing and delivery of the product or service, often within a complex and dynamic environment. Therefore, sole focus on the financial indicators in public secondary school characteristics may lead to failure to adopt to the new competitive environment. The result of this study support the business orientation concept proposed by previous studies (Evans, 2000; Fitzgerald *et al*, 1991, Harn, 2002). Thus when reviewing performance indicators, it is critical to recognize the fundamental business orientation and industry context of school (1; Goodman *et al* 1999, Haktanir & Harris 2005). The results indicated that total revenue achieved and total revenue achieved operating costs were highly ranked by the managers. This may be due to the revenue driven business orientation of the public secondary schools. Evans (2005) argue that business that tend to exhibit high proportion of fixed costs to total costs such as service organizations are said to be market oriented, i.e. revenue driven. Also, education managers in Kenya are highly sensitive to the external environment (seen in indicators such as student/parent and to an extent enrolment growth indicator). The key performance indicators in the public secondary schools were drawn from both the quality of passes and competitive cause of evidence among public secondary schools. The operational measures of success, such as student/parent satisfaction, seemed to be the favoured indicators by the management. This is an explicit symbol of the customer focused approach of the public secondary schools in Kenya that can capture the necessary information in all performance dimensions. As discussed earlier, financial performance indicators were highly ranked compared to non-financial performance indicators. The observed ranking of the key performance indicators in public secondary schools can easily be explained by both development phase of the performance management in Kenya, which still lacks

sophistication especially in secondary institutions. De waal (2007). Predominant management style in the Kenyan secondary schools has not yet reached a high level of modernization and adoption of scientific methods and techniques. De waal (2007) contends that poor management practices, beaurocratic inefficiencies, and low productivity levels in many secondary schools of developing countries create considerable pressure for school managers to adopt speedy, ready-to-implement strategies including performance measurement practices. Further more, most Kenyan secondary schools are yet to enroll comprehensive management information systems. The objective was to find out what managers regarded as the most important performance indicators they use to manage their schools; that is to determine the indicators that school managers regularly draw upon to determine their performance. Although there were some expectations, the empirical research results clearly indicate that the majority of the respondent school managers almost exclusively monitor results measures such as competitiveness and financial dimension of performance. Modest attention was being paid to non-financial or determinant dimensions such as resource utilization innovation, supplier performance; community/environment perspective. Key performance indicators provide vital information to the organization for tracking and predicting school performance against strategic school objectives in a way that complements financial measures. An indicator is used for measurements that are not direct or exclusively used for measurement of performance. The indicator that eventually a company, unit, department or section evaluate as the most representative to successfully describe its need of measuring its performance constitute the key performance indicators (Walsh,1996).

Conclusion

School managers in Siaya District demonstrated wide range of performance indicators which were both financial and none financial in nature. In the financial indicators, revenue achieved and operational cost were highly rated while in the none financial indicators student enrolment and customer satisfaction (student and parents) were ranked highly.

Implication

The finding of this study have important implications for identifying key performance indicators applied in the management of secondary school. Stakeholders in the education need to be sensitized on the broader goals of education and specifically the key performance indicators critical in secondary school management. For school managers in particular, need to focus more on determinant measurement indicator as opposed to result measurement indicators

REFERENCES

Agak J. O. (1995). 'Reading literacy in relation to pattern of achievement in Kenya." Umea; Umea University Press.

Albanese, R. (1989). Competency – based management Education. Journal of Management development, 8 (2) 66-79

Apiyo, J. (2003). Administrative Competencies of Secondary School Headteachers in Nandi North District." Unpublished M.Ed. Rresearch Project. Kenyatta University.

Aray-Ai. (1990). "Selection, Training of Secondary School Head teachers in United Arab Emirates." Unpublished Thesis of Doctor of Philosophy, London, Cardiff University

Atkinson, H., & Brander, B. J. (2001). 'Rethinking performance measures', Assessing progress in UK hotels. International Journal of contemporary Education Management, 13 (3(, 128-35.

Bailey, K. (1978) Methods of social Research. New York: Free Press

Behn Robert D. "Why measure performance? Purposes require different measures". Public Administration Review Vol. 63 (September 2003) P2 586-606

Bittlestone, R. (1994). Just how well are we doing. Director, 47 (12), 44-7.

Boam, R. & Sparrow, P. (1992). Designing and Achieving competency. London: McGraw-Hill

Brander Brown, J. & Harris, P. (1998). 'Relating business orientation and performance measurement design in a service industry context: theoretical and empirical perspectives from the hotel industry' . Performance Measurement Conference, Cambridge,

Christou, E. (2002). Revisiting Competencies for Hospitality Management:

Cohen,.and Maniom, L(1994). Research Methods In Education, Society And Development: New Perspective from Kenya, Nairobi, Oxford University Press.

Cole, C.N. (2004). 'The seven habits of highly effective people, Sydney; Pocket books Foundation Commonwealth Secretariat. (2000). Educational

Management: Monitoring School Effectiveness'. Nairobi : Jomo Kenyatta Foundation

Dewaal, A. (2007). Is Performance management applicable in developing countries?: The case of a Tanzanian College: International Journal of Emerging Markets, 2 (1), 69 – 83.

Dixon, J., Nanni, A., & Vollmann, T. (1990). The New Performance Challenge: Measuring Operations for World – Class Competition. Burr ridge, Illinois: Business-One Irwin.

Evans, N. (2005**).** Assessing Balanced Scorecard as a management tool for hotels. International journal of contemporary hospitality management, 17, (5), 376-390.

Everard, K., & Morris, G. (1996) Effective School Management 3rd Edition. London: Paul Chapman Ltd.

Fitzgerald, L., Johnston, R., Brignall, s., Silvestre, R. & Voss, C. (1991). 'Performance measurement in service businesses'. London: CIMA

Frankfort, C. (1992). Research Methods in social sciences, London: Edward

Fwaya, E. (2006). Human Resource systems and competitive strategies Unpublished MSc. Thesis, Maseno university, Kisumu. In hospitality organisational performance in Kenya.

Gall, D.M. *et al*, (1996): Educational Research, An Introduction. London, Longman Publishers.

Griffin, G., G (1996). School Mastery: A Straight talk about Boarding Schools Management, 2nd Edition. Nairobi: Lectern Publications Ltd.

Harris Alma (2002): Effective leadership in schools facing challenging context. London: Carfax Publishing.

Heffernan, F. & Flood, P. (2000). 'An exploration of the relationships between the adoption of managerial competencies, organizational characteristics, human

resource sophistication and performance in Irish organizations. Journal of European Industrial Training, 24 (2/3/4), 128-36.

Irungu, S. (2006). "Employee turnover and human resource management in the Kenyan education sector, " unpublished MSc. Thesis, Maseno university: Kisumu.

Kaplan, R. & Norton, D. (1992). The balanced score card: measures that drive performance. Harvard Business Review, 70 (1), 71-9.

Katherine E. Newcomer (1997). 'Using performance measurement to improve program. New direction for evaluation'; Fall

Kerlinger, F. (1973). Foundation of Behavioral Research 2nd Edition. New York: Holt Rinehart and Winston Incorp.

Kimbrough, R, & Charles, W. (1990). The Principal ship: Concepts and Practice. New York: Practice Hall Incorp.

Koontz, W.D. (2005). Management, a global perspective, New Delhi; Tata McGrawHill Books.

Lambert, L. (2003). Leadership Capacity for Lasting Schools Improvement. New York: Association for Supervision and curriculum Development.

Leads, (1980). Practical Research planning and Design: New York, Macmillan Publishers, Inc.

Leight, A. & Maynard, M. (2002). Leading your Team: How to involve and inspire Teams 2nd Edition. London: Nicholas Brealey Publishing Publishers.

Leithwood, K, & Duke, D. (1998), Defining Effective Leadership for Connecticut schools. Connecticut: Boston Incorp. Ltd

Lippit, M, B. (2003). The leadership Spectrum. Business Priorities that get results. Mumbai: Magna Publishing Co. Ltd.

Lynch, R. & Cross, K. (1995). Measure Up! Yardsticks for Continuous Improvement. Oxford: Blackwell. integration of analytical hierarchy process and goal

Malinga, G. (2004). "State and future developments of performance management in Kenya." Paper Maastricht School of Management, Maastricht.

Shahin, A. & Mahbod, A. (2007). Prioritization of key performance indicators; An setting. International journal of productivity and performance management, 56 (3), 226-240.

Shank, J. & Govindarajan, V. (1993). 'Strategic Cost Management: The New Tool for competitive advantage'. New York. The Free Press.

Walsh, P. (1996). 'Finding key performance drivers: some new tools. Total quality management', 7 (5), 509-520.

Wilson, R. & Chau, W. (1993). 'Managerial Accounting. Methods and Meaning. London: Chapman and Hall.

****