International Journal of Education, Learning and Development
Vol. 8, No.5, pp.11-20, May 2020
Published by ECRTD-UK
Print ISSN: 2054-6297(Print), Online ISSN: 2054-6300(Online)

RESOURCE UTILIZATION AND INTERNAL EFFICIENCY OF SECONDARY SCHOOLS IN EKITI STATE, NIGERIA

[1]Kolawole, Adenike O. (Ph.D.) & [2]Ogbiye, Cornelius A.

[1]Department of Educational Management,
Faculty of Education, Ekiti State University, Ado-Ekiti
adenikekolawole@ymail.com

[2]Department of Social Science Education,
Faculty of Education, Ekiti State University, Ado-Ekiti
cornelius.ogbiye@eksu.edu.ng

ABSTRACT: *The study investigated resource utilisation and internal efficiency of secondary schools in Ekiti State. The research design was descriptive of the survey type. The population of the study comprised all the public secondary schools in Ekiti State, Nigeria. The sample consisted of 320 respondents comprising 300 teachers and 20 principals selected using multistage sampling procedure. At the first stage, simple random sampling technique was used to select nine local government areas in Ekiti State. At the second stage, 20 secondary schools were chosen from the selected local government areas using proportional stratified random sampling technique. The third stage involved random selection of 15 teachers from each of the selected schools, and purposive random sampling was used to select the principals of the selected schools. A validated instrument titled 'Resource Utilisation Questionnaire (RUQ)' and an inventory were used for data collection. Data collected were analysed using cohort analysis, simple percentage and frequency count. Pearson Product Moment Correlation statistic was used to test the hypothesis at 0.05 level of significance. The findings showed that the level of resource utilisation was moderate, while the internal efficiency was high in secondary schools in Ekiti State. The study revealed that there was a significant relationship between physical resource utilisation rate and internal efficiency of secondary schools in Ekiti State. Based on the findings, it was recommended that government should intensify frequent level of inspection (supervision) in schools, in support of the physical resources that appear to be readily sufficient in schools. Likewise, the schools should make optimal use of the physical resources provided, so as to ensure effective teaching and learning.*

KEYWORDS*:* internal efficiency, cohort analysis, physical resources, resource utilization.

INTRODUCTION

Education, in all its three domains (cognitive, affective and psychomotor), and types (formal, semi-formal and informal), has been perceived to be a veritable, virile and prolific tool in attaining and achieving personal and national development, social re-construction, gender equality, women and youth empowerment, administrative proficiency and increased human productivity. The list seems

to be endless. This perhaps has inspired and compelled nations of the world to adopt education as a working tool for the attainment of their goals and vision. In an effort to meet the demand of education, it is necessary to determine whether the resources in education function appropriately so as to be in line with the intended education objectives. Such resources fall in three categories; human resource, financial resources and instructional materials. It is therefore vital for educationists to always determine the expenses to be incurred on such resources (Magala, 2010). Educational resources are everything put into use in the school system that may enhance teaching and learning. Resources can also be referred to as the sum total of everything employed directly or indirectly to support the acquisition of knowledge, skill and competence and the state or condition of these resources goes a long way to determine the success of any educational programme. Nigerian secondary school education has primarily been the stepping stone to tertiary education which is expected to produce the required manpower for Nigeria. Secondary education seeks to prepare youths for higher education and useful life in the society. As it is contained in the Nigeria's National Policy on Education, the goals of secondary education include the following, among others: diversified curriculum to cater for the differences in talents, opportunities and future roles; provision of trained manpower in the applied science, technology and commerce at sub-professional grades; development and promotion of Nigerian languages, art and culture in the context of world's cultural heritage; inspiring students with desire for self-improvement and achievement of excellence; and provision of technical knowledge and vocational skill necessary for agricultural, industrial, commercial and economic development (FGN, 2014).

In spite of the role of secondary education, some researchers and authors (Ayodele, Odunlami & Busari, 2018) reported that productivity of secondary education has not been encouraging due to the fact that their outputs' (students) performance is declining in spite of high amount of financial resource vested on education. It is expected the secondary school system be efficient in a way that a given quantity of output is obtained with minimum input.

The utilisation of educational resources is very important because of its roles in the achievement of educational objectives and goals. The extent to which an educational institution attains her objective could be related to the educational resources utilised (Ayodele & Ogbiye, 2018). It is not how much resources are allocated, but also how well the available resources are effectively utilised to enhance the development of education. In this context, educational resources refer to time and forms of material resources (such as buildings: classrooms, laboratories, library, dormitories, and office space for staff; equipment: internet facilities, sources of power supply, visual and audio-visual gadgets, computers and printers; photocopier machines, etc). Every human activity has to start by considering the objectives or output expected. To achieve whatever set aim or objective, certain means or inputs or resources must be efficiently utilised. Investment in human capital has over the years been recognised to be the bedrock of increased productivity and hence enhanced economic development.

Resource utilisation is the level of use of the resource in an attempt to accomplish a specified goal or objective. Resource utilisation refers to the percentage of time that a component is actually used as compared with the total time that the component is available for use. It is the

degree or extent to which a resource is put into effective use (Oladimeji, 2014). Asiyai (2006) defined physical resources as the entire school plan or educational facilities such as blocks of classrooms, staff rooms, laboratories and laboratory equipment, workshops, libraries, consumables, audio-visual aids, electricity, water, furniture and fittings, stationeries, playgrounds, storage space and others which school administrators, teachers and students harness, allocate and utilise for the smooth and efficient management of any educational institutions, for the main objective of bringing about effective and purposeful teaching and learning experiences.

Time is one of the scarce resources known to man. Time utilisation, ordinarily, is synonymous with the use of time. According to Aghenta (2001), time utilisation is the proper allocation of time to the various stages of productive activities. In other words, time utilisation could be explained within the framework of doing the right thing at the right time in the workplace. Yolder (1987) defined time utilisation as the application of hours of duty to organisation activities. The essence of this is to ensure equal combination of time with other material resources. Time utilisation is a technical concept in the work setting and the management of time is a functional responsibility of technical experts.

According to Adeogun and Osifila (2008), time utilisation rate refers to the proportion of time of putting a room or facility to effective use. It is the number of hours teaching space that is available for use in a week divided by the average number of contact hours a student registers for, and multiplied by the number of work station in the teaching space. It is calculated as follows:

$$TUR = \frac{Actual\ number\ of\ hours\ of\ use}{Theoretical\ number\ of\ hours\ of\ use} \times \frac{100}{1}$$

According to *Dictionary.com* (2020), efficiency means state or quality of being competent in performance; ability to do a job with minimum expenditure of time and effort; and ratio of the work done or energy developed to the energy supplied. Efficiency is defined as the optimal relation between inputs into the system and outputs got from the inputs injected into the system. A system or an activity is said to be efficient if it can produce maximum output with a given quantity of input or a given quantity of output with minimum quantity of inputs. Efficiency is more concerned about the inputs and process of production. Ebhohimen (1989) asserted that the efficiency of the educational system (or its subsystem) lies in its ability in converting those resource inputs employed in teaching and learning to produce useful outputs and longer-term benefits.

Babalola (2003) explained that efficiency is concerned with the maintenance of a positive balanced of output over input. In Economics, efficiency is the optimal relations between inputs and outputs. An activity is being performed efficiently if a given quantity of outputs is obtained with a minimum of inputs or, alternatively, if a given quantity of inputs yield maximum outputs. The concept of efficiency is used to analyse production, which in economic terms is defined as a process of transformation in which a kind of goods or service is transformed into

another (Todaro & Smith, 2009). Efficiency could be measured in two ways, which are external efficiency and internal efficiency. External efficiency means the extent to which the educational system meets the broad social, economic, cultural and political objectives of the community of which it is a part. External efficiency compares the costs of education to the benefits of education that are external to educational production, such as higher productivity and earning in post-schooling work. It provides a measure of the profitability of investment in education (Babalola, 2003).

The concept of internal efficiency is of special interest to educational planners (Ekundayo, 2007). Internal efficiency is the relationship between the outputs and inputs of an education system. The internally efficient educational system is one, which turns out graduates without wasting any student-year or without dropouts and repeaters (Ayodele & Ogbiye, 2018). In the words of Ayodele (2005), internal efficiency of education measures the extent to which the resources allocated to the system are being utilised to realise the objectives for which the system has been established. This calls for the measurement of the inputs and outputs of the system; that is, measurement in real terms in relation to the resource cost of wastage or in terms of the flow of students through the system. According to Ajayi (2014), internal efficiency is the extent of the educational system's ability to minimise cost and reduce wastage resulting from repetition, drop-out and failures. Before internal efficiency of education can be measured, the outputs and inputs of the educational system must be measured. The ratio of the inputs to the outputs of the educational system determines the internal efficiency. The output of a given cycle of education is the number of pupils who complete this cycle i.e. the graduates.

The internal efficiency of education can be determined or measured using cohort analysis of the educational system (otherwise called coefficient of efficiency). Cohort Analysis shows the extent to which educational system is able to use its inputs in the production of set of students in a particular level to the time they leave that level of education. Internal efficiency is computed as:

$$E_t = \frac{Q_t}{X_{i,t}}$$

where: Q_t = educational output(s) in time t

$X_{i,t}$= inputs in time t

E_t = efficiency of the educational system in time t

If the system is able to see the students through the system in the shortest possible period, then the system is efficient. It is observed that where the resources are adequately utilised, the system may be efficient than where the resources are not adequately utilised.

The performance of senior secondary students in the final Senior School Certificate Examination (SSCE) despite the commitment of government and private resources to secondary education has implications for the efficiency of the system and therefore calls for investigation. Many concerned citizens have cried out, not only over the perceived level of students' performance against

expectations in public examinations, but also the rate of repetition and drop-out. The reason given for the observed level of performance, among others, is the resource utilisation factor which could impact greatly on the efficiency of the school system.

It is against this background that the study considered it necessary to examine how resource utilisation relates to the internal efficiency of secondary school education system in Ekiti State, Nigeria.

The following research questions have been raised in the study:
1. What is the level of resource utilisation in public secondary schools in Ekiti State?
2. What is the internal efficiency of public secondary schools in Ekiti State?

Research Hypotheses
The following research hypotheses have been formulated in the study:
1. There is no significant relationship between physical resource utilisation and internal efficiency of secondary schools in Ekiti State.
2. There is no significant relationship between time resource utilisation rate and internal efficiency of secondary schools in Ekiti State.

PURPOSE AND METHODOLOGY

The study examined the relationship between resource utilisation and the internal efficiency of secondary schools in Ekiti State. The study further investigated the relationship between physical resource utilisation as well as time resource utilisation rate and internal efficiency of secondary schools in Ekiti State, Nigeria.

The study adopted the descriptive research design of survey type. The population of the study consisted of 7,387 public secondary school teachers and principals in Ekiti State. Three hundred and twenty respondents (comprised of 300 teachers and 20 principals) were drawn from 20 secondary schools in Ekiti State, using multistage sampling procedure. The first stage involved the use of simple random sampling technique to select three Local Government Areas each from the three senatorial districts. The second stage involved the use of proportionate random sampling technique to select 20 public secondary schools. At the third stage, stratified sampling technique was used to select 15 teachers from each of the 20 schools. An inventory and an instrument titled 'Resource Utilisation Questionnaire (RUQ)' were used for data collection. Test-retest method was used to determine the reliability of the RUQ, and coefficient of 0.78 was obtained which was considered high enough for reliability. Cohort analysis was used to analyse the flow of students for a period of four sessions in public senior secondary schools, to determine the internal efficiency of each school. Data collected were analysed using descriptive (frequency counts and percentages) and inferential statistics (Pearson Product Moment Correlation) was used to test the hypothesis at 0.05 level of significance.

RESULTS

Research question 1: What is the level of resource utilisation in public secondary schools in Ekiti State?

Table 1: Level of resource utilisation in Ekiti State public secondary schools

Levels of resource utilisation	***Frequency***	***Percentage***
Low (33.3 – 44.14)	33	11
Moderate (44.15 – 87.95)	267	89
High (87.96 – 100)	-	-
Total	**300**	**100**

Table 1 revealed the levels of resource utilisation in public secondary schools in Ekiti State. The result showed that out of 300 respondents, 33 representing 11 percent agreed that there is low level of resource utilisation. Those who agreed that resource utilisation is at moderate level were 267 representing 89 percent while none of the respondents agreed that there is high level of resource utilisation. This showed that the level of resource utilisation in public secondary schools was moderate.

Research question 2: What is the internal efficiency of public secondary schools in Ekiti State?

Table 2: Internal efficiency in Ekiti State public secondary schools

Wastage ratio	***Frequency***	***Percentage***
2 – 3 (Low internal efficiency)	—	—
1.43 – 1.99 (Moderate internal efficiency)	—	—
1 – 1.42 (High internal efficiency)	20	20
Total	**20**	**100**

Wastage ratio was calculated for each school:

$$Wastage\ ratio = \frac{Actual\ input\ /\ Output}{Ideal\ input\ /\ Output}$$

$$Actual\ input\ /\ output\ = \frac{Actual\ Input}{Actual\ Output}$$

$$Ideal\ input\ /\ output\ = \frac{Ideal\ Input}{Ideal\ Output}$$

$$Coefficient\ of\ Efficiency = \frac{1}{Wastage\ ratio} \times 100$$

Table 2 revealed the internal efficiency in public secondary schools in Ekiti State as measured by the Wastage Ratio, between 1 and 1.42 (i.e. internal efficiency between 70% and 100%). The result

for the 20 sampled schools was used to generate the internal efficiency. This implies that internal efficiency in public secondary schools in the study area was high.

Hypothesis 1: There is no significant relationship between physical resource utilisation and internal efficiency of public secondary schools in Ekiti State.

Table 3: Physical resource utilisation and internal efficiency

Variables	***N***	***Mean***	***SD***	r_{cal}	r_{table}
Physical Resource Utilisation	20	73.16	18.30	0.588*	0.444
Internal Efficiency	20	89.95	6.13		

$* \rho < 0.05$

Table 3 showed the r_{cal} value of 0.588 is greater than r_{table} value of 0.444 at 0.05 level of significance. The null hypothesis is rejected. This shows that there was a significant relationship between physical resource utilisation and internal efficiency of public secondary schools in Ekiti State. Hence, physical resource utilisation has impact on internal efficiency.

Hypothesis 2: There is no significant relationship between time resource utilisation and internal efficiency of public secondary schools in Ekiti State.

Table 4: Time resource utilisation and internal efficiency

Variables	***N***	***Mean***	***SD***	r_{cal}	r_{table}
Time Resource Utilisation	20	76.42	20.10	0.614*	0.444
Internal Efficiency	20	89.95	6.13		

$* \rho < 0.05$

Table 4 showed the r_{cal} value of 0.614 is greater than r_{table} value of 0.444 at 0.05 level of significance. The null hypothesis is rejected. This shows that there was a significant relationship between time resource utilisation rate and internal efficiency of secondary schools in Ekiti State. This implies that as time utilisation resource is high, the internal efficiency increases (and vice versa).

DISCUSSION

The study showed that the level of utilisation of resources in Ekiti State public secondary schools was moderate. This meant that the utilisation of resources such as classrooms, laboratories, library, dormitories, and office space for staff, internet facilities, sources of power supply, visual and audio-visual gadgets, computers and printers, as well as photocopier machines among others were

moderately utilised. The finding supports the submission Afolabi (2006) that resources were moderately utilised in most public secondary schools in Kwara State. This is also in line with Kolawole (2018) who observed that effective classroom management plays a prominent role in high schools in Lagos State.

The study showed that the level of internal efficiency in Ekiti State public secondary schools was high. The observed reason for this was that most schools in Ekiti State had low repetition rate, low dropout rate and high progression rate. The progression rate increased steadily throughout the four sessions considered in this study. This may be due to the increased efforts of the present administration to revive the education industry in the State.

The study revealed there was significant relationship between physical resource utilisation and internal efficiency. The finding supports the submission of Afolabi (2006) and Adu (2010) who concluded that a significant relationship existed between physical resource utilisation and internal efficiency. They opined that adequate utilisation of resources will lead to high internal efficiency. This is in line with the submissions of Pitan (2012) and Akinsolu (2012) who found out that resource utilisation contributed significantly to the internal efficiency of secondary schools in Oyo State.
Likewise, the study revealed that there was significant relationship between time resource utilisation rate and internal efficiency. This finding implies that as time utilisation resource is high, the internal efficiency increases, and vice versa. Durosaro (1985) and Akinnubi (2010) asserted that proper utilisation of time resource enhance the internal efficiency of schools. They concluded that when there is poor time resource utilisation, it will adversely affect the internal efficiency of schools. However, the finding contradicted the findings of Afolabi (2005) who concluded that no relationship existed between time resource utilisation and internal efficiency.

CONCLUSION AND RECOMMENDATIONS

From the findings of this study, it can be concluded that resource utilisation is critical to the internal efficiency of secondary schools. Based on the findings of this study, the following recommendations were made:

1. Government should ensure adequate utilisation of resources, through supervision or inspection.
2. The school authorities should make optimum use of the physical resources provided, so as to improve the internal efficiency of the secondary schools.
3. School heads should make it a priority for all teachers to make use of available resources in teaching and learning processes.

REFERENCES

Adeogun, A. A., & Osifila, G. (2008). Relationship between educational resources and students academic performance in Lagos State Nigeria. *International Journal of Educational Management*, 5(6), 12-18.

Adu, E. T. (2010). *School-based variables and internal efficiency of colleges of education in Nigeria*. Unpublished Ph.D. Thesis, University of Ado Ekiti, Nigeria.

Afolabi, R. A. (2006). *Relationship between school facilities and internal efficiency of public and private secondary schools in Ogbomoso metropolis of Oyo State*. Unpublished M.Ed. Thesis, University of Ilorin.

Afolabi, S. O. (2005). *Influence of resource utilisation and organisational effectiveness in Kwara State government-owned tertiary institutions*. Unpublished Ph.D. Thesis, University of Ilorin, Ilorin.

Aghenta, J. A. (2001). *An overview of technical education in Nigeria: Issues and problems of technical education at the secondary school level in Nigeria*. Lagos: NERDC.

Ajayi, I. A. (2014). Managing the education system in a poverty-ridden economy: The unhealthy rivalry between efficiency and effectiveness. *Inaugural Lecture,* Ekiti State University, Ado-Ekiti. July.

Akinnubi, O. P. (2010). *Strategic plan implementation, resource utilisation and internal efficiency in Nigerian universities*. Unpublished Ph.D. Thesis, Department of Educational Management, University of Ilorin.

Akinsolu, A. O. (2012). Resource utilisation and internal efficiency in Nigerian secondary schools: Implications for socio problems of education. *International Journal of Sociology and Anthropology*, 4(1), 23-30.

Asiyai, R. I. (2006). *An appraisal of the adequacy of the physical resources utilisation for teaching Chemistry in secondary schools in Delta State*. Science Teachers Association of Nigeria. Proceedings of 47th annual conference. Ibadan; Heinemann Educational Books.

Ayodele, J. B., & Ogbiye, C. A. (2018). Resource availability and internal efficiency of secondary schools in Ekiti State, Nigeria. *International Journal of Educational Foundations and Management*, 12(1), 204-208.

Ayodele, J. B. (2005). *Fundamentals of systems analysis in education*. Lagos: Bolabay Publications.

Ayodele, J. B., Odunlami, A. A., & Busari, A. A. (2018). Declining quality of secondary education in Ife/Ijesa Education Districts of Osun State: The way out. *EKSU Journal of Education*, 8(2), 82-86.

Babalola, J. B. (2003). *Fundamentals of economics of education*. Education Series. Department of Educational Management, University of Ibadan, Ibadan.

Dictionary.com (2020). *Dictionary*. Available online at https://www.dictionary.com.

Durosaro, D. O. (1985). *Resource allocation and internal efficiency of secondary education in Bendel State, Nigeria*. Unpublished Ph.D. Thesis, Department of Educational Management, University of Ibadan, Ibadan.

Ebhohimen, P. (1989). The relative efficiency of two class cohorts: The case of Bendel State secondary school during 1979-1985 period. *Journal of Nigerian Educational Research Association*, 9(10), 1-14.

Ekundayo, H. T. (2007). A comparative analysis of private cost of higher education in Ekiti State, Nigeria. *Journal of Educational Foundations and Management (JEFAM)*, 4(1), 12-18.

Federal Government of Nigeria (FGN) (2014). *National Policy on Education (6th edition)*. Lagos: National Education Research & Development Council.

Kolawole, A. O. (2018). Classroom management and school connectedness in Lagos State secondary schools, Nigeria. *International Journal of Educational Foundations and Management*, 12(1), 158-163.

Magala, S. (2010). *Education resources and the internal efficiency of secondary schools in Rubaga Division, Kampala District*. Unpublished M.Ed. Thesis, Makerere University, Kampala.

Oladimeji, M. A. (2014). *Resource utilisation and internal efficiency of public secondary schools for students with special needs in South-West Nigeria*. Unpublished Ph.D. Thesis; University of Ilorin, Kwara State.

Pitan, O. S. (2012). Analysis of Internal Efficiency in the Utilization of Human Resources in Selected Secondary Schools of Oyo State, Nigeria. *Journal of Emerging Trends in Educational Research and Policy Studies (JETERAPS)*, 3(5), 748-752.

Todaro, M. P. & Smith S. C. (2009). *Economic development (10th edition)*. Harlow, England: Addison Wesley (Pearson Education).

Yolder, E. A. (1987). *Personnel management in Nigeria*. Lagos: CBN Publication House.