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REVIEW OF SCIENTIFIC MANAGEMENT THEORY AND PRODUCTIVITY ON TERTIARY EDUCATION.

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ABSTRACT

This paper is aimed at contributing to the topic of scientific management theory and productivity on tertiary education. topic the study aimed to determine the impact of the best way/ method (science of work) on academic performance, determine the impact of division of labour on academic performance and to determine the impact of Scientific selection of workmen on academic performance. The study concluded base on the evaluation of other empirical works that Tertiary institution should adopt some of the scientific management theory in order to achieve the much-needed improvement/ productivity. In the quality of graduate produce yearly. When Tertiary institution adopts the scientific management principle of scientifically selecting the best methods, best lecturers and students. The study therefore suggest that tertiary institutions should follow the tradition of scientific management approach which will enable high product outcome of perfect efficiency through application of Science in management if school. There should be an established procedure or lay down principle to be followed by workers in executing task, The best qualified staff should be selected and place accordingly, there should be cordial and mutual understanding between the management, staff, and students.

KEYWORDS: Scientific Management, theory, productivity, Tertiary Education, Nigeria.

1.0 INTRODUCTION

1.1 Background of the study

The need for improve performance in organization has always been a source of concern for management in the public and private sector. The impact of scientific management theory on education management is evident in practices still found in many schools and school system.

the change in the routine function and operations of schools, innovative curriculum and teaching techniques entrance and exit examination for students. National standard for students and teachers enhances professional preparation and accountability Rose (2011). Changing the physical structure of schools and classrooms, new content for student and more rigorous teacher evaluation are a few of the change to be considered.

Productivity is therefore, Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output. Productivity is considered a key source of economic growth and competitiveness and, as such, is basic statistical information for many international comparisons and country performance assessments. For example, productivity data are used to investigate the impact of product and labour market regulations on economic performance. Productivity growth constitutes an important element for modelling the productive capacity of economies. It also allows analysts to determine capacity utilization, which in turn allows one to gauge the position of economies in the business cycle and to forecast economic growth. In addition, production capacity is used to assess demand and inflationary pressures. There are different measures of productivity and the choice between them depends either on the purpose of the productivity measurement and/or data availability.

1.2 Statement of Problem:

The organizational performance improvement is always a concern for management in both public and private sector. The quality of today's graduate of tertiary institution post a challenge in our daily academic life. Most who have been gainfully admitted non the higher institution of learning terms to perform averagely and below standard as they are tested by the lecturers via examination. The productivity of students is measured in the ability of the student’s comprehension of social world. read and write and solve Academic and societal problems.

Achievement of high productivity depends on how effective the management of tertiary institution. JOHN (1967) has observed that, management is the way employees are managed in order to facilitate the accomplishments of organizational objectives. The object of tertiary education is to produce well knowledgeable graduate who are capable of thinking about their environment and proffering solutions to our societal problems.

1.3 Objective of the Study:

The objective of this research is to examine the workability of scientific management theory in managing Tertiary institutions for effective and efficient productivity. specifically, the study seeks to:

1. Determine the impact of the best way/ method (science of work) on academic performance.
2. Determine the impact of division of labour on academic performance.
3. Determine the impact of Scientific selection of workmen on academic performance

2.1.1 Scientific Management Theory (SM)

Frederick Winslow Taylor (1856 - 1915) propounded the scientific management theory which emphasized job efficiency by searching for the ' one best way' to every job. Taylor developed on array principle to enhance improved productivity in organizations as well created a mental revolution between workers and employees. Some of the principle he developed include various wages and bonus incentive plan and techniques for measuring work input and output, ideology of authority in the organization. He developed ways of increasing, productivity by motivating the workers to take advantage of new management devices. Tylor's theory of scientific management was concerned with increasing productivity and discovery of the best method of achieving efficiency in the use of human and material resources.

2.1.2 Principles of Scientific Management Theory and Applications to Tertiary Institution of Learning.

According to Tylor, these principles are determinants for achieving organizational goals and objective. The goals of every Tertiary institution is to produce skilled and qualified graduates capable of proffering solution to societal problems, the acquisition of appropriate skills and competence as equipment for the individual;

To live and contribute to the development of a society,

To enable a just and egalitarian society,

To enhance a free and Democratic society e.t.c

The principles propounded by Taylor are

1. Develop a science of work: The science of work would be achieved by measuring output and performing detailed studies of time and human movement with these studies, improvement could be made to the tools and workstation designs used by workers which would increase effectiveness. There should be a systematic observation, a study and

recording of work process in our organization. The head of Tertiary institution (V.C, Provost) should break each task down into various component elements.

2. Scientific selection of workmen: Taylor believed that much better result could be obtained by first analyzing the requirements of job and trying to match the qualities and abilities of the applicants with the result that firm's efficiency would increase. Carefully select the most qualified lectures who are academically proficient in their field of specialization. The students before their enrolment in the school should be properly screened selected. some student with the emergence of Exam malpractice smuggled their way you're of secondary school with good grade I WAEC and neck. They should be tested again to ensure that only qualified student is selected. And admitted.

3. Progressive Training and development of workers: the workers should be trained and some who are more advance should develop their skill to the fullest. the management can develop the skill of their employees through seminars, workshop etc. Lecturers should be placed on scholarship to further their studies locally and abroad in other to deliver effectively and efficiently.

4.Division of the work of the establishment between the workmen and the management into two almost equal parts namely the thinking, supervision and evaluation.

5. Proper supervision: The supervisors who will oversee the way work is done usually the Dean or head of departments performed supervisory function non the faculty/ colleges and departments respectively as a way the lecturer to the students, the head of department ensure that lecturer perform their job in accordance with the lay down curriculum or course synopsis for the semester, lectures also as they teach, ensures evaluation of their student to ensure comprehension not what has been taught.

6. Reward for performance: the lecturer, students should be rewarded appropriately, the lecturer should be paid for performance while the student should be rewarded with the appropriate grades as they have been examined.

7. Establishment of constant and intimate cooperation between the management and workers: the head of departments and the lecturers, lecturer and students need to cooperate if they must achieve their set goals and objective.

Benefit of Scientific Theory:

1. The principle of exception as become part of modern management.

2 The production Management techniques help in management of organization.

3.personal management techniques enable managers to rightly select workers, evaluate and place them accordingly

4.He emphasized management responsibility for planning how work should be done. Thus, workers are not left to choose their own methods at random and which method may be inappropriate.

2.1.3 Shortcomings of Scientific Management Theory:

As identified by Dr Lawal metal (2011) Scientific theory has its shortcomings in as much it is very good in management of tertiary institution.

1. It make an employee a mere order taker, it neglects the emotional nature. Of workers.
2. It assume quite wrongly that man work purely to make money. For Taylor, money is a prime motivator of workers.
3. It enable employees from participating in management.
4.Taylor terms to forget that excessive division of labour between the management band the labourers can counter productivity and that too much task specialization can easily lead to dull alienating Job.

Productivity

According to Paul Krugman (1994) productivity is commonly defined as the ratio between the output and input such as labour and capital are being used in an economic growth and the result of organizational goals and objective.

Productivity = output / input.

Productivity is commonly defined as a ratio between the output volume and the volume of inputs. In other words, it measures how efficiently production inputs, such as labour and capital, are being used in an economy to produce a given level of output. Productivity is considered a key source of economic growth and competitiveness and, as such, is basic statistical information for many international comparisons and country performance assessments. For example, productivity data are used to investigate the impact of product and labour market regulations on economic performance. Productivity growth constitutes an important element for modelling the productive capacity of economies. It also allows analysts to determine capacity utilization, which in turn allows one to gauge the position of economies in the business cycle and to forecast economic growth. In addition, production capacity is used to assess demand and inflationary pressures.There are different measures of productivity and the choice between them depends either on the purpose of the productivity measurement

and/or data availability. One of the most widely used measures of productivity is Gross Domestic Product (GDP) per hour worked. This measure captures the use of labour inputs better than just output per employee. Generally, the default source for total hours worked is the OECD Annual National Accounts database, though for a number of countries other sources have to be used. Despite the progress and efforts in this area, the measurement of hours worked still suffers from a number of statistical problems. Namely, different concepts and basic statistical sources are used across countries, which can hinder international comparability. In principle, the measurement of labour inputs should also take into account differences in workers' educational attainment, skills and experience. Accordingly, the OECD has started to develop adjusted labour input measures. To take account of the role of capital inputs, an appropriate measure is the flow of productive services that can be drawn from the cumulative stock of past investments (such as machinery and equipment). These services are estimated by the OECD using the rate of change of the 'productive capital stock', which takes into account wear and tear, retirements and other sources of reduction in the productive capacity of fixed capital assets. The price of capital services per asset is measured as their rental price. In principle, the latter could be directly observed if markets existed for all capital services. In practice, however, rental prices have to be imputed for most assets, using the implicit rent that capital goods' owners 'pay' to themselves (or the 'user costs of capital'). After computing the contributions of labour and capital to output, the so-called multi-factor productivity (MFP) can be derived. It measures the residual growth that cannot be explained by the rate of change in the services of labour, capital and intermediate outputs, and is often interpreted as the contribution to economic growth made by factors such as technical and organizational innovation. Against this background, a broad overview of productivity indicators is presented in four areas. International comparisons of economy-wide indicators of productivity growth are first presented followed by international comparisons of income and productivity levels, including a measure of productivity heterogeneity by enterprise size classes. Thirdly, productivity growth indicators by industry and services are examined. Finally, the impact of labour productivity on unit labour costs is discussed.

2.2 Empirical Review:

Adullahi Muse (2007) carried out research on " scientific management theory and its implications for library and information service". He came out with the conclusion that, libraries should adopt scientific management theory in other to achieve the so much needed improvement in service.

Yusuf teal (2018). In his research on ' Application of Scientific management principle for effective management of higher institution in Nigeria "the result of their finding brought up the conclusion that management is a life blood of an organization management of higher institution endowed with discretionary decision-making power and thus have competitive advantage over other similar higher institution and the forefront in the production of capable human resource base of the economy.

Maduakulan et al (2016). Research on 'scientific management still endure in education'. He came out with the conclusion that, the success of effort that are aimed at Reenforcing the mission of public education depends greatly on the quality of leadership and team work manifested by school administration and teachers. management of schools is more of a technical exercise or the manipulation of human and material resources to achieve certain predefined and predictable outcomes; and the quest for the one best way of doing work still finds responsive chords. To a great extent, administrative practices in such school systems are replete with principles and philosophies reminiscent of Frederick W. Taylor's scientific management

Mbinu Zakuken metal (2016) Research on " scientific management and Education in Tanzania" in their findings, he concluded that scientific management theory has made a great improvement in organizational efficiency by systematically improving the efficiency of the task completion by utilizing scientific and mathematical analysis. Scientific control measures designed to measure teacher efficiency at the state, local, and district levels have done no more than create adversarial relationships between teachers and school administrators. While scientific management made us believe that management was an increasingly complex science that required managers of high intellect, it also forced management to pay little or no attention to the importance of workers contributing to decisions concerning what they do: their role was simply to follow the rules established by management. The division of labor implied by scientific management quickly became a fundamental paradigm that structured the expectations educators had for the increasingly diverse student population. The theory has made great changes by it implication in educational institutions in Tanzania.

CONCLUSION:

It is inferred base on the evaluation of other empirical works that Tertiary institution should adopt some of the scientific management theory in order to achieve the much-needed improvement/ productivity. In the quality of graduate produce yearly. when Tertiary institution adopts the scientific management principle of Scientifically selecting the best

methods, best lecturers and students, this is in line with the findings of Maduakulan et al (2016). Reward performance, established good management workers relationship, there would be some significant changes in the quality and productivity of lecturers and students.

Recommendations:

The study therefore suggest that tertiary institutions should follow the tradition of scientific management approach which will enable high product outcome of perfect efficiency through application of science in management if school.

1. There should be an established procedure or lay down principle to be followed by workers in executing task. Also work should be splinted into workable units. This is in line with the findings of Mbinu Zakuken metal (2016) The division of labor implied by scientific management quickly became a fundamental paradigm that structured the expectations.
2. The best qualified staff should be selected and place accordingly. Maduakulanetal (2016) also postulated that the best way of education should be determined. They should be monitored to ensure efficient and effective delivery of their duties in other to achieve the institutional objectives.
3. There should cordial and mutual understanding between the management, staff and students. Just like is is said in a lay man language ' na cooperation the man rice full port'. This is in contrast with the findings of Mbinu Zakuken metal (2016) ‘it forced management to pay little or no attention to the importance of workers contributing to decisions concerning what they do: their role was simply to follow the rules established by management’.
4. Scholarship for lecturers to further studies abroad should be appreciated. This will enable them developed their academic skills as better knowledge is acquired from foreign environment.

REFERENCE

1. Abudullahi J.A (2007). Improving performance in public sector
2. John Gaus M (2001). A theory of organization in public administration.
3. Kliebard, H.M., 2004. The struggle for the American curriculum, 1893–1958. New York, NY: RoutledgeFalmer.
4. Lipman, P., 2004. High stakes education: Inequality, globalization, and school reform. New York, NY: Routledge.
5. Maduakolaireh PhD (2016). scientific management still endures in education.
6. Okumbe J.A (2000) Management of higher Distance Education.

7. Paul Krugman (1994) The age of Diminishing expectations.
8. Rival Gull (2017) Scientific Management concept principles and relevance.
9. Rowan, B., 2002. The ecology of school improvement: Notes on the school improvement industry
10. Shepard, L.A., 2000. The role of assessment in a learning culture. Educational Researcher,
11. Spender J.c (1996) Scientific management; Frederick Winslow Taylors Gift to the world.