APPLYING TOTAL QUALITY MANAGEMENT IN EDUCATION INDUSTRY

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Abstract. The paper focuses on Applying total quality Management in Education Industry. It looks at the definition of the terms, key elements of Total Quality Management i.e (TQM). Its main objectives are:- To apply Total Quality Management (TQM) to proffer solution to Japan's economy around in five years, if they wanted to turn Japan's economy around in five years, they should attend Dr. Deming's lectures on using statistics to achieve quality at a reduced cost. It must be noted that any discussion of total Quality Management Operation must start with a description of Dr. Deming's universal fourteen points of quality management. It highlights the historical background of Total Quality Management the concept of Quality Education, total quality management and education, total quality management and Education, the Comparative Analysis: Nigeria and South Africa, two schools, one with total quality management. It considers the way forward and the parting word. i.e conclusion.

1 INTRODUCTION

All over the world, the concern for quality education has been at the core of the motivating forces for reforms to have sustainable development. The quality of education being prouded in Nigeria has been a source of great concern to all and sundry.

Oguntimehin and Nwosu (2010) observed that in recent years, the Academic Staff Union of Universities ASUU has on many occasions expressed concern about poor state of Nigerian Universities in terms of the quality of graduates which is a consequence of poor input and process. The situation is even worse at secondary and primary levels of education.

Olayemi (2001) the emergence and proliferation of private institutions at all levels are some of the results of poor quality in education system in Nigeria Quality Management (TQM) is a raw management approach. It is both a philosophy and methodology for managing organisations. It includes a set of principles, tools and procedures that provide guidance in the practical affairs of running an organization in controlling and continuous improving on how work is done.

Total Quality Management is an approach to improving the competiveness, effectiveness and flexibility of an organisation for the benefit of all the stakeholders. It is a way of planning, organizing and understanding each activity, and of removing all the wasted effort and energy that are routinely spent in organisation. Total quality management is based on internal, or self-control which is embedded in each unit of the work system (technology and people). It is an integrated system of principle methods and best practice that provides a framework for organisation to strive for excellence in decision-making. One tenet of this management philosophy which many organisation have adopted as a fundamental business strategy is the concepts of continuous improvement. No organisation can afford to be competitive if it does not continuously improve on its products/services, process and people.

1.1 Classification of Quality

Quality Management in higher education is taken to mean a systematic examination to determine whether quality activities comply with planned arrangements and whether the educational process is implemented effectively and is suitable for achieving objectives.

Total quality management in education has the following four major components:

- Total commitment to quality;
- Total commitment to student's satisfaction;
- Total commitment to continuous quality improvements that is always striving for programme; and
- Total commitment of both the programme and teacher to each other. The implications of this are as listed below:

The programme meets the expectation of the students:

- Things are done right the first time, on time and at all times;
- Clientele and clientele value are gives preminence;
- Continous improvement of programme;
- Process and system that is process input to add to the output and system;
- Commitment to student's satisfaction and
- Increased productivity and overall organisation benefit.

Total Quality Management is a quality control technique. Unlike the traditional quality control techniques which focus on identifying mistakes, TQM focuses on preventing mistakes. TQM is a management philosophy that builds customer – driven organisation dedicated to total customer satisfaction with continous improvement in the effectiveness and efficiency of the organisation and its processes.

Total Quality Management is a strategic commitment to improving quality by combining statistical quality control measures with a cultural commitment to seeking incremental improvements that increase productivity and lower costs. Total Quality Management which is sometimes referred to as Total Quality (TQ) involves all employees, the supply chain, and the customer chain. Total Quality management is a reorganization of the organisation as a whole and towards providing quality to the customer.

Total Quality Management (TQM) is a concept introduced by business and industry to establish standards and techniques that ensure the quality of products learning and reaching firms through continous action rather than through one fiscal inspection. It relies on the expensive expertise and commitment of all members of an oragnisation to improve the processes by which customers are served.

Characteristics / key element of (TQM). Total Quality Management (TQM) as management system functions through certain essential principles, characteristics or key elements which include the following:-

- Consistent pursuit of perfection;
- Skills are in a state of constant removal;
- Clear vision for future;
- Effective and continous communications'
- System improvements;
- Total staff commitment
- Assessment and release of the potential of employees
- Customer /client requirements identified consistently

- Theories, principles and models

1.2 Edward Deming's Quality Theory

An American, W. Edward Deming, developed the concept of (TQM) after world war II for improving the production quality of goods and services. He was of the opinion that "the quality that comes out of a process is affected by quality of what goes in and what happens at every step along the ways". It follows that we must build quality into every step process and system to produce quality in the outcome.

Deming developed what is known as the Deming chain reaction as quality improves costs will decrease and productivity will increase, resulting in more jobs, greater market share, and long term survival. Although, it is the worker who will ultimately produce quality products, Deming stresses worker pride and satisfaction rather than the establishment of quantifiable goals. His overall approach focuses on improvement of the process, in that the system rather than the worker is the cause of process variations.

To operationalize this concept in educational institutions, a number of implementation models and strategies have been developed. It must be noted that any discussion of total quality management operation must start with a description of Dr. Deming's universal fourteen points of quality management. These goals have been reviewed and updated to the school's programme.

1. Create and maintain a constancy of purpose towards improvement of students and service.
2. Embrace the new philosophy of quality. Educational Managers must awaken to the challenge, must learn that responsibilities and take on leadership for change.
3. Work to abolish grading and harmful effects of rating people's school must focus on the learning process, not the rating process
4. Cease dependence on testing. To achieve quality, eliminate inspections on a mass bases (standardized achievement test).
5. Work with the educational institutions from which students come. Minimize total cost of education by improving the relationship with students sources and helping to improve the quality of student coming into your system. TQM does not have an end, it is continous process, the phrase continual improvement must become common language within the organisation (schools)
6. Improve constantly and forever the system of student improvement and service to improve quality and productivity in personal life and community
7. Institute continous training on the job for students and administrators for all people connected to the human organisation or community.

1.3 Historical background of total quality management

The quality of revolution was launched in Japan by two Americans W. Edwards Deming and J.M Juran defined quality as "fitness for use" a phrase that refers to how a product or service satisfied a customer's real or perceived needs

Dr. W. Edward Deming who at the time was an advisor in sampling at the Bureau of census and later became a professor of statistics at the New York University Graduate School of Business. Administration developed Total Quality management (TQM) in the mid 1940s. He had little convincing American business to adopt (TQM) but his Management methods did gain success in Japan.

After world war II, General Mac Arthur took 200 scientists and specialists including Dr. Deming to Japan to help rebuild the country while working on the Japanese census, Dr. Deming was invited by the Japanese union of scientists and Engineers to give lectures on his statistical quality techniques. One of the attendees was past professor to many of Japan's CEOs i.e Chief Executive officer. After attending the lectures, the professor told his CEO students that if they wanted to turn Japan's economy around in five years, they should attend Dr. Deming's lectures on using statistics to achieve quality at a reduced cost. Many of the CEO's took the professor's advice and attended the lectures. Eventually, Japanese manufacturing companies adopted Dr. Deming's theory and were able to produce quality products at reduced costs. This is exactly what our country Nigeria needs at this crucial time. While the Japanese business world was concentrating on producing, quality products, business in the United States were more concerned with producing large quantities of products. Their emphasis on quantity at the expense of quality let the Japanese with their inexpensive, high quality products; gain a substantial food hold in American markets. In the 1970s and 1980s, many American companies, including Ford, IBM and Zeros, began adopting Dr. Deming's principles of total quality management. This gradually let to their regaining some of the markets previously lost to the Japanese. Although Total Quality management gained its prominence in the private sector, in recent years, it has been adopted by some public organisations.

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From the foregoing, TQM appears to be a comprehensive and intensive management approach for seeking all-round quality. All the characteristics/principles/key elements of TQM, which include those stated above are however, centred on three core considerations, which aver (1) integration (2) continous improvement (3) customer satisfaction.

Within the foregoing, TQM aims to get everyone in the organisation committed to quality. It plants the 'seed' of total quality on the mind of everyone in the organisation and this promotes appropriate behaviour and actions by everyone at all times. Everyone at every level in the organisation therefore genuinely believes in quality becomes quality conscious and acts on that belief and consciousness. The organisation's philosophy now has quality as its nucleus with a commitment to reducing product/service defects to zero level and raising the quality of products services to the highest level possible or to perfection.

TQM policy may be introduced into an organisation through the following major steps:

1. Formulation of a TQM policy
2. Determining Quality Standards or the yardsticks for measuring quality
3. Measuring quality for the purposes of control and improvement
4. Determining the cost of quality e.g during internal and external appraisal
5. Planning for quality: This involves among other things how the generation of the required resources, the best utilization of the resources and their consideration would be worked out.

1.4 Concept of Quality Education

A definition of a quality education must recognize any education as a part of a system. The word quality connotes the degree of excellence of product or services (Olagboye, 2000).

Quality Education is relative and exists in degree or standards. The quality of education like relevance of education varies from one system to another and it is not static as it changes with time and societal expectation.

Oguntimehin and Nwosu (2010) opined that quality of education cannot be totally divorced from the objectives set out for education in any particular country, based on the needs of the people of the country. Quality is a sense of appreciation that something is better than something else. Quality in education deals with issues of relevance, validity, functionalism, excellence, and efficiency in the achievement of education goals and priorities. All the above quality indices must be monitored to ensure that the expected standards are not maintained but also improve upon. The education development process can be systematically engineered to work towards quality because:

- Quality is observable and tangible and its effects can be easily felt
- Quality is not something you wait till the end of the process to see, but something which is (or should be) built into all phases of the development of an education programme
- Quality is not a one dimensional construct but a tripartite affair with its input, process and output dimension.
- Quality in education can be specifically targeted (Obon Anya 2002).

Educational managers/administrators should explore different ways of ensuring that the output of education conform to the expected standard by paying attention to the quality of inputs in education. The attention paid to the input explains the quality control in education

1. **Quality Teachers:** With consideration for every qualifications, socialization, course duration, pedagogical skill, motivation, curriculum offerings, promotion, remunerations, number (percentage and ratio) specification.
2. **Quality Learners:** Healthy, well nourished, motivated to learn, supported by family and communities
3. **Quality Context:** Relevant curricular, adequate and appropriate materials for literacy, quality textbooks, numeracy and the essential knowledge and skills for life. Number of textbooks/journals/periodicals library in schools at each grade level and library use by both the teacher and student.
4. **Quality Teaching:** With child centred and skill based approaches and technology applications to reduce disparities and promote learning.
5. **Quality Learning Environment:** Child friendly schools with policies and practices which prohibit harassment, humiliation, violence, corporal punishment substance abuse, provision of adequate classroom with required furniture clean water supplies and sanitation facilities, gender sensitiveness, regular monitoring evaluation cordial interaction teacher/teachers/pupils, school/community
6. **Quality Outcomes:** Well defined learning outcomes/knowledge attitudes and skill and suitable ways to access them within the school and outside the school.
7. **Capital Expenditure by the owner:** The amount made available by the owner for the execution of capital projects and other financial expenses important devolvement of education quality, because it influences the provision of facilities needed for educational delivery as well as the maintenances of the school plant (Delta Subeb and U.I 2009)
8. **Input:** Process and output

Afenikhe (2007) describes the input, process and output factors in education as: Curriculum, content, textbooks and learning materials, teachers, parents and the community-students' characteristics such as aptitude, previous knowledge, ability, school readiness.

Community and household characteristics like parental attitudes, household income. The process factors include school climate and teaching/learning encounter which include expectation leadership, teachers' attitude and environment that is safe and gender sensitive and autonomy. The outcomes are not only cognitive but includes affective and skills acquisition.

It follows that the input-process-output components of the educational system have to be considered within the existing contextual factors. This consideration will assist in examining the quality of the educational system with a view to making it better.

Problems of Quality in Education:

- Research evidence of several decades e.g lawal (2003) shows that the poor quality of the graduate of the Nigeria education system is attributable to a number of factors. These factors include inadequate teaching (WAEC 1998) inadequate funding of the education system (lawal 2003), Large class size (Babalola 2005), corruption (Samuel, 2006) inefficient study habits (Abdullahi 1996), Poor curriculum development and evaluation (Emeka, 1996) and improper assessment (Afemikhe, 2007).
- Poor quality of education also shows up in output indicators. These Include inability of products from school (primary and secondary) to read and Write efficiently, Non-Suitability of products of tertiary institution for available vacancies and their poor relevance to the country 's development needs. Other indicators are the need for post graduate education relevance to the labour market, and the poor results of students in internationally Comparable tests.
- APPLYING TQM TO SOME ISSUES IN EDUCATION: TQM AND EDUCATIONAL VALUES.
- Assessing the situation in Nigeria, one may be tempted to say that education has not entrenched the expected values in the citizenry. The level of corruption and indiscipline is admirably alarming given the incidents of examination malpractice, drug abuse and trafficking, armed robbery, certificate racketeering, get rich- quick Syndrome and laziness at work. In fact the few Individuals who attempt to do things are seen oddity.

To Put the Nigerian Society in the right perspective of the values, It is pertinent to highlight some of the qualities, attitudes and virtues which citizen of a country are expected to exhibit if the nation as well as the citizen within it are to survive and progress such qualities includes Honesty, tolerance and corporation, national Consciousness, Patriotism, Obedience to the laws(Including Payment of taxes in Particular). Consciousness of and respect for fundamental human rights and freedoms, justice and fair play in inter-group activities among others.

1.5 Comparative analysis: Nigeria and South Africa. Education in South Africa

Education in South Africa is governed by two national departments, namely the Department of Basic Education (DBE), which is responsible for primary and secondary school, and the department of Higher Education and Training (DHET), which is responsible for tertiary education and vocational training prior to 2009, these two departments were represented in a single Department of education.

The DBE department deals with public schools, private schools (also referred to by the department as independent schools), early childhood development (ECD) centers, and special needs schools. The public schools and private schools are collectively known as Ordinary schools, and comprise roughly 97% of school in south Africa.

The DHET department deals with further education and training (FET) colleges, adult basic education and training (ABET) centers, and higher education (HE) institutions.

1.6 Learner ratios in South Africa

According to the DBE's 2010 statistics report (published in 2012) on average there are 30 learners per teacher, 480 learners per school, and 16 teachers per school. The ratio of learners per teacher is roughly the same in all provinces, but the ratio of learners per school varies per province. For example, in Gauteng there are 800 learners per school and 28 teachers per schools. Whereas in the Eastern Cape there 350 learners per school and 12 teacher per school.

Learners ratio in Nigeria. The learner ratios vary from Nursery/Primary to tertiary institutions. In Nursery and primary schools the ratio on average there are 40 or 50 learners per teacher ditto in secondary schools but in tertiary institutions on an average there are 100 0r 200 learners per teacher or lecturer.

In line with the national development objectives, the Transformation Agenda of President Goodluck Jonathan identifies the strategic goals of Nigerian education as access and quality. Wike (2014:7) submitted that Federal Government programmes in promoting access are aimed at addressing;

- The high number of out-of-school children which is estimated at over 10 million
- The challenge of low enrolment of girls in schools
- Drop-out of boys from school
- High rate of adult and youth literacy
- Low carrying capacity of tertiary institutions

The implication of Total Quality Management on Education in South Africa and Nigeria. The Department of Basic Education (DBE) deals with public schools, private schools, early childhood development (ECD) centers and special needs schools. In Nigeria, this is not so, the federal government deals with the public schools either primary, secondary and tertiary institutions not with private school. Hence, total quality management can be achieved in South Africa.

Again, in South Africa, the development of Higher Education and Training (DHET) deals with further education training (FET) colleges, adult basic education training (ABET) centers and higher education (HE) institution. In Nigeria, we have similar goals but not as expected.

The early childhood care and primary education has suffered a lot in Nigeria due to high number of out-of-school children which is estimated at over 10 million. The challenge of low enrolment of girls in schools. Drop-out of boys from school.

- High rate of adult and youth illiteracy
- Low carrying capacity of tertiary institutions Adult education too has suffered a lot in Nigeria due to mis-conception of what adult education is all about.

Total Quality Management has eluded early childhood care primary Education and Adult education in Nigeria.

2 THE WAY FORWARD

Good politics, good policy, good programmes, good process and good products – high achieving and functional students.

2.1 What to do – Focused implementation

Curb corruption, reorientate teachers, indigenous language, regular monitoring and evaluation, educative schools, innovative curriculum, effective C.A, implement policies gender equality, invest in education, statistics database.

3 THE DEPARTING WORDS

Total quality management is not a private sector concept but management concept that is necessary anywhere management is required.

Total quality management is a commitment to excellence by everyone in the organisation. It is quite possible that organisations that fail to pick up the quality baton and run with it will become second – class players in our rapidly changing global environment.

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