

Total Quality Management Effects in Private Tertiary Institutions in Gauteng Province, South Africa

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Abstract: *This article is designed to bring into cognisance the importance of Total Quality Management (TQM) in the private tertiary institutions in South Africa. TQM is mainly used in the industry but the education sector has however embraced this important philosophy in order to increase the quality of education. An acknowledgement for the need of TQM from the industry, parents and other stakeholders has necessitated schools to embrace the TQM phenomenon in order to produce the best academic required results by channelling out graduates who are ready for the job market. The research methodology adopted to write the article is the quantitative approach, a sample size of 50 respondents comprising of 10 principals, 10 heads of department, 10 lecturers, 10 parents, and 10 industry representatives was selected. The respondents were selected using the simple random sampling technique from the private tertiary institutions in Gauteng Province. The research instrument used was a self-administered questionnaire. Data collected was analysed using both inferential and descriptive statistical tools. Results obtained from the study revealed that TQM is not fully practiced in private tertiary institutions in the Gauteng Province. The article recommended the application of TQM in private schools in order to enhance the quality of education.*

Keywords: Quality Circles; Quality Management; Total Quality Management and Total Quality Control

1. Introduction

Total quality management (TQM), formerly known as “Total Quality Control” (TQC) was largely developed from the lessons learned from Japanese organisations. TQM is a broad philosophy and applied process of implementing a formalised structure of management education and activities for dealing with quality issues.

It is based on the assumption that the majority of quality issues can be handled by focused management activity, leading to improved quality of work and greater levels of quality in the whole organisation. This will in turn lead to higher levels of distinctive quality at an acceptable and competitive cost. TQM is a philosophy that enhances the improvement, furtherance and transformation of the entire services that are provided to the students in the education sector. TQM is meant to upgrade every aspect whether it is teaching, learning, curriculum or infrastructure. There is a need to enhance, expand all the aspects ranging from the management of the infrastructure up to the classroom teaching. Weinstein (2009) postulates the need for the school administrators to spearhead holistic TQM programmes in their institutions. Empirical evidence at hand support that the use of TQM in education improves the quality and the delivery systems as well as bringing of satisfaction to the stakeholders in the education sector. Kristensen (2010) adds that a balance must be struck between internal and external quality assurance as well as quality improvement. The success of external evaluations is based upon the effectiveness of the internal quality assurance strategy, aimed at fulfilling the set organisational objectives. Toremén (2009) alludes that there needs to be an

effective change in the management of the institution, educating staff members by fully utilising the human resource base for the attainment of quality improvements. In order to achieve high quality education systems as a result of the application of TQM principles. Manoharan et al. (2012) is of the view of coming up with a model that focuses on the improvement of employee performance by engaging the employees through employee continuous training programmes. Quality improvement is a continuous process that should be taken from operational level up to senior management levels. For the TQM programmes to be effective in the education sector there is a need for top management to lead and direct the TQM processes. All the employees need to participate. A well-orchestrated TQM will lead to improved employment participation, improved increased enrolment of students, improved satisfaction of students and other stakeholders. This would eventually lead to institutional competitive advantage of the institution over other institutions of learning.

Department of Trade and Industry (1986) summarised the TQM philosophy as: “Quality equals delighting the customer”. The distinctive approach of TQM can be summarised as comprising seven basic principles:

- The Approach Management
- The Scope Company-wide
- The Scale Everyone is responsible
- The Philosophy Prevention not detection
- The Standard Right-first-time
- The Control Cost of quality
- The Theme Continuous improvement

2. Literature Review

According to Kruger and Ramdass (2011) the merger of private and public academic institutions in South Africa has resulted in inefficiency, and ineffectiveness in the academic and administrative processes of the education system in South Africa. The students are deprived of quality service by the private academic institution processes. The employers who absorb the graduates from these private education institutions are uncertain of the quality of the end product; whether the quality of the end product would be worthy employing. Employers measure the qualified students to certain quality standards. The final product from the private academic institutions does not meet the industry's expectations. There is a raging debate on how the academic institutions could utilise TQM to their best advantage (Kruger & Ramdass 2011).

Barnabe and Riccaboni (2007); Srikanthan and Dalrymple (2007) are of the view that assessments instruments and quality assurance interventions are critical tools that have to be applied during the process of TQM implementation. Barnabe and Riccaboni (2007) note that academic institutions can either make use of self-evaluation to assess their quality assurance interventions or they can employ external peer review. Srikanthan and Dalrymple (2007) assert that academic institutions guard their academic freedom jealously; there is a need to address governance and management of academic and administrative processes.

Students have a mammoth task of paying the ever-increasing tuition fees, whilst the subsidies are dwindling at a terrific pace (Clayson & Haley 2005). Eagle and Brennan (2007) refer to students as customers as they are paying fees for the education services that are rendered by the academic institutions. Despite the fact that the students are paying fees, they however, do not receive the quality service that is equivalent to the fees that they pay for their education. The quality of education received is far below the expected levels the industry and the customers who are the students and other stakeholders who are the parents of the students as well as the industries that employ the graduates.

2.1 Core Concepts for TQM

Successful implementation of TQM in the private education sector requires the formation of quality circles. Quality circles are small groups of people who have the mandate to hold regular meetings, to brainstorm and discuss TQM issues with a view of finding solutions to the identified problems affecting the organisation. They work together with management to solve the problems that affect the quality of work at the organisation. In the education sector, quality focuses on the monitoring and identification of areas that have a bearing on the levels of teaching. According to Bensimon and Neuman (1993) considerable time and effort should be dedicated to the pioneering of work on educational leadership. Leadership entails with the examination of senior management as well as the creation and sustenance of customer relationships and crafting of clear organisational objectives. Improvements in quality of products, services processes and people are a means of generating additional profits without necessarily increasing

sales. Quality improvements greatly enhance levels of customer satisfaction and can lead to greater sales and increases in market share.

Teamwork among the employees should be encouraged by management. Total involvement by management in TQM programmes will motivate the employees. A sense of authority and responsibility will be generated among the employees. Employee recommendations and contributions should be taken seriously whenever they are deemed to be relevant. It gives the employees a sense of responsibility and also engages the employees to take a participative role. Schmidt (1998) notes the importance of the four TQM principles and these are: customer satisfaction, continuous improvement, empowerment and teamwork. These can help the teachers as well as the students to be efficient and effective in the classroom. The teachers can also become relevant by imparting relevant knowledge that helps to the students to understand and manage to perform well in their studies. There should be a commitment from both teachers and students if the best results have to be realised. A teamwork spirit should exist between the teachers, parents and the students to have a common objective of producing the best results. Farooq et al. (2007) support the need to have a participating approach as a means of addressing questions in quality management as well as in the education field. All the individuals working in the organisation are encouraged to ensure that they participate in continuous improvement to ensure that TQM is successfully implemented in the organisation. There is a need to have sophisticated infrastructure if TQM has to be effective. Infrastructure should also entail latest technology that is applied in the field of education to enhance the effectiveness of teaching. Infrastructure components which are in support of quality of education are well equipped classrooms, health facilities, clean water facilities and guidance and counselling facilities. Well-furnished and well-equipped classrooms, well equipped libraries, laboratories, reading rooms, internet facilities, and playgrounds should be at the institution in order to fulfil the quality of education at the school. Grumdhall (2010) observed that the implementation of TQM programs by schools lead to high achievements which changes the organisational culture of the schools to a learning culture that enhances good results at the schools. According to Hertzler (1996) implementation of TQM in an organisation creates fundamental changes on the way that organisation functions.

According to Nyaoga, Nyamwange, Onger, and Ombati (2010) TQM should be at the forefront of educational management instead of having a focus on the mass production of students. The enormous spending in the education sector by the public and private sectors has led to the urgent evaluation of the effectiveness of the quality of education in comparison to the investment that is done in education. The educational infrastructure, the availability of qualified teaching staff and other essential resources that are needed to enhance the quality of teaching and learning are also being assessed.

Some of the challenges that are affecting educational institution in Kenya were:

- Inadequate funding especially for research and

development,

- Poor quality and irrelevant courses,
- Inadequate use of ICT,
- Lack of a unified accreditation system, and
- Inadequate management capacity (Nyaoga *et al.* (2010).

Tara (2011) noted that TQM in education is associated with excellence or conformity to specific standards. Excellence has dominated quality education for a long period. Later, satisfaction replaced excellence to denote quality in the beginning of the 21st century. This has however, made TQM very essential in academic organisations (Bhalla 2012). India has managed to develop the best education system in the world through the adoption of TQM, the most common contributions are as follows:

- The implementation of TQM resulted to the adoption of new philosophies that bring about new teaching and learning strategies that leads to success of every student;
- It also ensured the participation of all stakeholders in ensuring the success of the entire organisations;
- TQM has helped educational institutions to focus on continuous growth and improvement of institution, parental involvement in education, contribution of their time, labour, materials and land, participation in decision making process and monitoring of teacher performance;
- TQM helped to effectively identify and address factors that cause educational problems. In institutions, there may be different problems such as low participation, dropouts, repetition, poor academic performance and poor management styles;
- TQM stresses a systematic, integrated, consistent and organisation-wise perspective to resolve problems;
- TQM ensured increased managerial participation;
- TQM focuses on the managerial part of the educational sectors continuously involving all managerial hierarchy of education;
- To increase teaching learning process. TQM does not only focus on the managerial parts but also on teaching learning process in classrooms; and
- It also helps to maintain quality in examination of various standards which leads to service quality, and effective teaching (Bhalla 2012).

Ramlagan (2009) noted that private education institutions in South Africa are faced with a lot of complex challenges such as the implementation and maintenance of a quality management system. Aside these, the policy of mergers among higher educational institutions introduced further regulations, especially to private higher and further education institutions which require these institutions to maintain higher standards. Managing these changes in private higher and further education institutions became complex as these institutions were required to meet the Department of Education's registration requirements or else they lose their certification.

3. Research Methodology

The quantitative research methodology was applied in carrying out this study. The simple random sampling technique was used to select a sample size of 50 respondents comprising of 10 principals, 10 heads of department, 10 lecturers, 10 parents and 10 industry representatives in Gauteng Province. The closed-ended questionnaires were used to collect quantitative data from the respondents. Data collected was analysed through the Statistical Programme for Social Scientists (SPSS) IBM 23 program. The Cronbach's Alpha was conducted to test the reliability of the research instrument. The research instrument had a coefficient value of .95 which is very good as it exceeded the minimum coefficient of .70 which is deemed to be good.

4. Results and Discussion of Findings

Inferential and descriptive statistical tools of analysis were applied in this paper to analyse data collected from the field. Of the 50 respondents 52% are male and 48% are female. The respondents who are in the 20-29 years age group constitute 16%, 30-39 years are 48%, whereas those in the 40-49 years age group constitute 34% and those who are 50 years and above constitute only 2%. Marital status of the respondents is that 72% are married and 28% are single. The sample indicated a relatively well educated sample of the respondents with 60% having done Masters Degrees in Education, whilst 40% had first degrees in their areas of specialty coupled up with Diplomas in education. The private tertiary institutions that had operated for a period of 1-5 years were 82%, whilst those in the 6 – 10 years were 4% and those in the 11 years and above were 14%.

The respondents were asked whether they applied TQM in their organisations. Only 6% indicated that they applied TQM in their organisations whilst the entire 94% did not apply TQM. The respondents were also asked if they had a TQM department in their schools, and only 2% had a fully-fledged TQM Department at their institutions, whilst 98% did not have. The results were in support of the fact that TQM is not applied in private tertiary institutions.

4.1 Pearson Correlation Results

A Pearson Correlation Bivariate analysis was conducted to determine the relationship between the variables and the results are as stated below:-

- There is a strong, positive correlation between TQM Structures and TQM Application $r(48)=.90, p < .01$.
- There is a strong, positive correlation between TQM Department and TQM Application $r(48)=.94, p < .01$.
- There is a strong, positive correlation between TQM Structures and TQM Department $r(48)=.96, p < .01$.
- The One Way Anova Test Statistic Results are as indicated below:

4.2 ANOVA Statistics Results Summary

Table 1 below presents a summary of the ANOVA statistical results which are discussed in this section.

Table 1: ANOVA Statistical Results

One Way Anova Statistics Results					
Parameter	Sum of squares	df	Mean Square	F	Sig
TQM Structures	0.238	1:48	0.238	4.433	0.040
TQM Application	0.242	1:48	0.242	5.221	0.045
TQM Department	0.216	1.48	0.216	3.944	0.015

Source: Primary Data

The above ANOVA test statistical results support the significant effect of independent variable: total quality management structures on dependent variable: formal strategic management practices application at the $p < .05$ level [$F(1, 48) = 4.43, p = .040$]. The result imply that the independent variable: Total Quality Management has a strong bearing on the dependent variable: Formal Strategic Management Application. The results obtained from the primary study have reflected that only 6% of the respondents apply formal strategic management practices in their private academic institutions, whilst 94% of the respondents do not apply the formal strategic management practices. The results therefore reflect that only the 6% who apply the formal strategic management practices have the TQM structures in place, whilst the 94% of the respondents do not have the TQM structures in place. The final product from the rest of these private academic institutions however, do not meet the expectations of the stakeholders. There is therefore a need to embrace TQM philosophy in the management of the private tertiary institutions (Kruger & Ramdass 2011). The mean score results as a measure of central tendency reflect that the mean scores ($M = 2.40, SD = .312$). Total quality management structures was non-normally distributed, with skewness of .411 and Kurtosis of 1.15.

The above ANOVA statistical results on Table 1 are in support of significant effect of independent variable: total quality management application on dependent variable: formal strategic management practices application at the $p < .05$ level [$F(1, 48) = 5.22, p < .045$]. The results are in support of the application of TQM in private academic institutions. Primary research has indicated that only 6% of the respondents applied TQM in their institutions. The entire 94% did not apply TQM. Toremén (2009) alludes that there needs to be an effective change in the management of the institution, educating staff members by fully utilising the human resource base for the attainment of quality improvements. In order to achieve high quality education systems as a result of the application of TQM principles. Tara (2011) noted that TQM in education is associated with excellence or conformity to specific standards. Excellence has dominated quality education for a long period. Later, satisfaction replaced excellence to denote quality in the beginning of the 21st century. This has however, made TQM very essential in academic organisations (Bhalla 2012). The mean scores results indicate that ($M = 2.62, SD = .659$). Total quality management application was non-normally distributed, with skewness of .600 and Kurtosis of 1.90.

The ANOVA test results in Table 1 are in support of significant effect of independent variable: total quality management department on dependent variable: formal strategic management practices application at the $p < .05$ level [$F(1, 48) = 3.94, p = .015$]. Findings from primary

research indicated that only 2% of the institutions understudy had fully-fledged TQM Departments at their institutions, whilst 98% did not have. For the TQM programmes to be effective in the education sector there is a need for top management to lead and direct the TQM processes. All the employees need to participate. There is a need to have a fully fledged TQM department run by the TQM Manager if TQM interventions are to succeed. A well-orchestrated TQM will lead to improved employment participation, improved increased enrolment of students, improved satisfaction of students and other stakeholders. This would eventually lead to institutional competitive advantage of the institution over other institutions of higher learning (Manoharan et al., 2012). The mean scores indicate that ($M = 2.75, SD = .412$). Total quality management department was non-normally distributed, with skewness of .605 and Kurtosis of 1.95.

4.3 Null Hypotheses Test

The following null hypotheses tests were conducted:

H₀ 1 There are no TQM structures in the private education institutions.

Reject the null hypotheses since $p < .05$.

H₀ 2 The private education institutions do not apply TQM.

Reject the null hypotheses since $p < .05$.

H₀ 3 The private education institutions do not have TQM departments.

Reject the null hypotheses since $p < .05$.

TQM has a strong bearing in the education sector, but the results of the study indicate that 94% of the respondents do not have TQM structures in their operations, with the exception of only 6% who indicated that they had TQM structures. A further 96% of the respondents indicated that they did not apply TQM in their organisations, whilst only 4% of the respondents indicated that they applied TQM in their organisations. Only 2% of the respondents indicated that they had TQM departments in their organisations, whilst the majority of the respondents indicated that they had no TQM departments. The results are pointers to the reasons why these private schools are not thriving. It is therefore a requirement that these private schools embrace TQM in order to enhance the quality of education in their schools. Barnabe and Riccaboni (2007); Srikanthan and Dalrymple (2007) noted that assessments instruments and quality assurance interventions are critical tools that have to be applied by the private education institutions to enhance the quality of education. For the final product from the academic institutions to meet the industry's expectations, there is need for the academic institutions to embrace TQM, in order to improve on the standard of education and also improvement on teaching methods in schools (Kruger & Ramdass 2011).

5. Recommendations and Conclusion

In order to improve on the quality of education in private education institutions in South Africa the following measures are recommended:

- Adoption of new philosophies that bring about new

teaching and learning strategies that leads to the success of all the students;

- There is a need to involve the participation of all stakeholders to ensure the success of the entire organisation;
- TQM needs to be embraced by educational institutions for continuous growth and improvement of the institutions.
- Parental involvement in education is highly needed. There is a need for parents to contribute their time, labour, monitoring of teachers and students performance as well as participating in decision making processes of the schools.
- Ensure that TQM is effectively introduced and implemented as it addresses factors that cause educational problems. In institutions, there may be different problems such as low participation, dropouts, repetition, poor academic performance and poor management styles;
- Ensure that management is fully involved and participates fully in spearheading TQM programmes;
- TQM focuses on the managerial part of the educational sectors continuously involving all managerial hierarchy of education;
- Ensure that TQM is properly implemented as it increases teaching learning processes and focuses on management of education as well as teaching learning process in classrooms; and
- It also helps towards the maintenance of quality in examination of various standards which lead to service quality, and effective teaching.

It is imperative that the private academic institutions in South Africa adopt the use of TQM since it has been proven in industry as well as in academic institutions. Academic institutions that have embraced the TQM philosophy have excelled in their operations as opposed to the institutions that have not embraced TQM.

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