



Analysis Of Quality Tools In The Educational Arena

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ARTICLE INFO ABSTRACT

Total Quality Management (TQM) is a very wide continuous improvement philosophy that has initiated many organizations to jump into the aim to drive their business economically and efficiently, satisfying the customer needs. The elementary statistical tools have fetched a lot of importance, as the Seven Indispensable Tools of Quality for any organization to flourish to the zenith of excellence. Implementation of these seven indispensable tools in the Educational Arena requires the significance of teaching fraternity as the employees or workforce in general. The customers tend to be the parents, who pay the fees and want quality in return for the good result of their wards. Our current work is a case study, to highlight the general principles of TQM involved and to point out how this approach has been and can be used to improve the quality of an academic institution. This will cover the whole of an educational institution and the administrative structure, rather than academic areas and departments. How an educational institution is working with quality issues now will be compared with a TQM approach and the weaknesses and strengthens of the quality work of an institution will be recognized. To reach the objectives of this case study, we will use primary data in the form of interviews, brainstorming, and secondary data in the form of pieces of literature, scientific articles, books, and web pages. To be succinct, the academic excellence tools carried out in our work can be effectively implemented in the higher educational institutions to enhance the quality of education and thereof students' satisfaction.

Keywords: 7C, PDCA, KAIZEM, 5S, 3M, and TPM

About TQM

Quality management is the act of overseeing all activities and tasks that must be accomplished to maintain a desired level of excellence. This includes the determination of a quality policy, creating and implementing quality planning and assurance, and quality control and quality improvement. It is also referred to as Total Quality Management (TQM). This concept of overall excellence is derived from people through creativity, flexibility, teamwork, participation, and ownership quality. The wide spectrum of the acceptance of this Philosophy has shown remarkable improvement in the organizations with their increased rate of productivity and quality of excellence.

TQM in Education

TQM has received wide acclaim as an effective approach for achieving quality and performance enhancements in the industry. With its recognition and acceptance increasing by the day in the private sector, academic institutions have started to explore the potential for applying the TQM philosophy to education.

TQM approach in education involves not only achieving high quality but also influencing all segments of the educational process: organization, management, interpersonal relations, material, and human resources, etc. Applying the approach described above, quality becomes total (integral).

The introduction of total quality management requires some changes in educational institutions. The first changes have to occur in the attitudes and activities of the management and educators, in the organization and monitoring of the educational process, in the evaluation of its results, in the culture of communication, in the college atmosphere, and especially in the area of interpersonal relations.

Why TQM in Education

The basic objective of the education industry is to meet the educational needs of the students as well as the different stakeholders. As the top management leadership, the college management is obliged to meet such

requirements. The management being an education leader is the person who collaborates with the teacher and the parents to meet distinct requirements and expectations of the customers and direct the resources of the society to the college. The education leader fulfills this function by affecting its surroundings. The education leaders must know about topics such as the laws, regulations, management processes, and applications concerning the college and topics such as the content of the curriculum, program assessment, and development. Because, the management as the education leader is the most significant element having an impact on the occupational qualification of the teachers at the college, the level of student achievement, and the degree of effectiveness at the college functions.

The researcher has observed that management is challenged to create an organizational climate, structures, and practices for the academic success of all students. An administration in a college with a high percentage of learners and a campus considered academically low-performing may be especially challenged to create total quality management practices.

As college management, he should be familiar with the college setting focusing on curriculum, instruction, human resources, physical facilities, budget allocation, and research. The college has a turbulent past, has had a reshuffling of staff, and needs a new beginning for students who expect educational equity and excellence and a fair chance to graduate from college. The college management is expected to employ innovative college reform initiatives adapted to address learners. College management is faced with the critical task of achieving equity-based educational excellence and a challenge to balance instruction that prepares all students.

These are the reasons why the researcher was prompted to conduct a study on the total quality management practices (TQM) of college management in selected higher educational institutions in the Province of Quezon province about colleges' performance.

Method of Study

This Research deals with the presentation of the research method used by the researcher, the respondents of the study, research instrument of the study, data-gathering procedure, validation of data, and the statistical treatment of data.

Design

This study used the Descriptive Type of Research as this is the precise research design study focusing on the total quality management (TQM) practices of college management among teacher education institutions in the Province of Quezon. The descriptive research fits this study since this study described the total quality management practices (TQM) of college management in selected teacher education institutions in the Province of Quezon. The study described the situation and events more accurately and precisely regarding the total quality management practices (TQM) of college management.

Descriptive research is a process of gathering, analyzing, classifying, and tabulating data about prevailing conditions, practices, beliefs, processes, trends, and cause-effect relationships and then making adequate interpretation of such data.

Sampling Technique.

This was used for the selection of faculty and management respondents in this study. As stated by Pagoso purposive sampling, also known as selective or subjective sampling is a type of non-probability sampling technique. Non-probability sampling focuses on sampling techniques where the units that are investigated are based on the judgment of the researcher. In this study, the management is selected since they are the ones who oversee the system of the university. The respondents were those teachers and management in the selected teacher education institution in the Province of Quezon. The management included the chairman and the vice-chairman. The teachers were selected based on the selection criteria that they have been in the college for 5 years.

Instrumentation

The researcher prepared a questionnaire that was used in data gathering. To gather the needed data, the researcher utilized the following instruments:

Questionnaire. For data gathering purposes, the researcher used a set of questionnaires that elicited the respondents' assessment on the total quality management (TQM) practices in terms of curriculum, instruction, human resources, physical facilities, budget allocation, and research.

In constructing the questionnaire, the researcher was guided by the ideas that were drawn from literature and studies. The concepts and theories from the literature and studies were utilized as a guide in the formulation of the questions to evaluate the college management's total quality management (TQM) practices.

A four-point Likert scale was used to interpret the respondent's answers following the verbal interpretation below:

Document Analysis was used to analyze the records of the colleges' performance on faculty performance, enrollment rate, dropped-out rate, retention rate, graduation rate, and awards/recognition received. Records were identified by the researcher from the different offices of the selected teacher education institutions in the Province of Quezon.

Unstructured Interview. This was conducted to supplement the answers which were not expounded in the questionnaire.

Validity. The initial content validation was done by three experts in the field of education particularly those who have enough experience in management practices of the different educational programs at the tertiary level.

Reliability. To test the reliability of the questionnaire, that is, the degree to which the questionnaire produces stable and consistent results, the researcher used the test-retest reliability? The test-retest reliability is a measure of reliability obtained by administering the same questionnaire twice over a while to a group of individuals. Test-retest reliability is a measure of reliability obtained by administering the same test twice over a while to a group of individuals. The scores from Time 1 and Time 2 can be correlated to evaluate the test for stability over time.

Procedure

Questionnaire Administration. The researcher initially prepared a draft of the questionnaire based on the statement of the problem. A letter of approval was sought by the college management to disseminate the questionnaire. All the approved, questionnaires were disseminated to the college management and the teachers personally by the researcher.

Data Gathering. The researcher disseminated the questionnaire to the respondents. The researcher explained the objectives of the study and gets the written letter address to the college management of each of the selected teacher education institutions in the Province of Quezon to administer the questionnaire. Questionnaires were administered personally to assure a greater percent of retrieval and for the explanation of items to the respondents for reliable and complete filling of the items of the said instrument. After answering the questionnaire, the researcher got the questionnaire after filling up the necessary information. An unstructured interview was also conducted both with the management and the teachers to elicit some information and answers which were not expounded from the questionnaire.

Data Processing. The data obtained from the questionnaire and interview guides were collected, tabulated, analyzed, and interpreted by the researcher. The data collected amazed using appropriate statistical tools.

Data Analysis. The following statistical tools were used in the analysis and interpretation of responses:

The percentage was used to describe the colleges' performance in terms of faculty performance, enrollment rate, dropped-out rate, retention rate, graduation rate, and awards/recognition received. Pagoso defined the percentage formula by;

$P = \frac{f}{N} \times 100$ P – Percentage N - Total number of sample

Weighted Mean was used to assess the college management and teachers' assessment on the total quality management (TQM) practices in terms of curriculum, instruction, human resources, physical facilities, budget allocation, and research. Pagoso obtained the formula by $Wm = \frac{\sum fw}{N}$ Wm - weighted mean Fw - frequency x by the weight N- total number of respondents

z – test was used to determine the significant difference between the college management and teachers in the assessment of the TQM practices of the college management in terms of curriculum, instruction, human resources, physical facilities, budget allocation, and research. The formula used was: Where: \bar{x}_1 - the mean score of the management \bar{x}_2 - the mean score of teachers n_1 - the number of management n_2 - the number of r teachers S_{11} - standard deviation of the management S_{22} - standard deviation of the teachers

t-statistic was used to test the significance of Spearman's r. Reyes defined t-statistic by the formula; Where: t – computed t-valuer – Spearman's r coefficient – number of paired observations All statistical computations were guided with the use of the Statistical Software package SPSS.

Results and Discussions

The following are the major findings of the study arranged according to specific problems:

What is the assessment of the teachers and college management themselves on the college management total quality management (TQM) practices in terms of curriculum, instruction, human resources, physical facilities, budget allocation, and research?

Is there a significant difference between the college management and teachers in the assessment of the TQM practices of the college management in terms of the aforementioned variables?

What is the status of the college in terms of the following performance indicators; enrollment rate, dropped-out rate, retention rate, and graduation rate?

Is there a significant relationship between the TQM practices of college management and college performance?

What strategic direction can be developed to enhance the TQM practices of the college management to improve the college performance? A strategic direction/initiative based on the findings was prepared by the researcher with the hope of enhancing the TQM practices of the college management that will consequently improve the college performance. (Please refer to Strategic Direction for Teacher Education Institution in the Province of Quezon. Leadership Initiative to Re-Invent Education in the 21st Century)

Conclusion and Recommendation

In the light of the findings, the following conclusions were drawn:

The college management is moderately practicing total quality management according to the two groups of respondents. The management is not very much adept with total quality management when applied in the areas of research and budget allocation.

The teachers and college management have the same view regarding the practice of total quality management of college management. Public colleges and private colleges have varying performance in college performance indicators.

Total quality management practices of college management affect negatively drop-out rates but have no direct relationship with enrollment rate, retention rate, and graduation rate.

:College management should enhance their skills in practicing total quality management especially in the areas of research and budget allocation which is addressed in the proposed action plan. College management should take the opportunity to attend training on total quality management for them to apply it in their work.

The proposed strategic direction may be adapted by the college management to see its functionality and contribution in enhancing their TQM skills and be evaluated periodically for further refinement.

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