“SWOT analysis and Identification of Total Quality Management practices in Higher Education Institute”

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Abstract: Total Quality Management (TQM) is a perception, which any organization can only attain through long period of planning and by formulation or execution of annual quality programs, which substantially moves towards the accomplishment of the vision and mission of any organization. Application of TQM concepts is one of such degree, which will go a long way in reviving the higher education system.

The purpose of this paper is to explore the Total Quality Management practices and their effectiveness in Higher education institute along with SWOT analysis. The overall objective of this thesis work is to highlight the general principles of TQM involved and to point out how this approach has been used to improve the quality aspects of an academic institution.

This work has been specified for G.G.D.S.D COLLEGE RAJPUR, Higher Education Institute of Basic Science and Arts under Himachal Pradesh University and it will cover the whole of institution, administrative structure, academic areas, department and services.

1. Introduction

The Total Quality Management (TQM) is a system for improving the product and operational quality that has been adopted by leading organizations everywhere. It is a key strategy for maintaining competitive advantage and market leadership. In today’s learning environment where quality is crucial to success, education organizations use TQM as a powerful tool to continuously improve academic structure and student satisfaction.

The core ideas of total quality management (TQM) were introduced in the mid-1980s by W. Edwards Deming, Joseph Juran and Kaoru Ishikawa. It was acknowledged that TQM is not a clear-cut concept; TQM is generally understood as an integrated organization strategy for improving product and service quality. Since then TQM has been used as universal remedy for a range of organizational problems and solution for improved organization performance.

For the successful TQM implementation, there is a need for recognition of the importance of human factors in quality management. Many of the basic elements of TQM involve human factors such as teamwork, participative management, creativity, effective communication, customer feedback, employee involvement and empowerment, employee and management trust and support. Human factors identified in the TQM literature includes management style, type of employees, departmental interaction, management commitment, employee’s attitude, authority to empower employees, rewards/recognition for innovation and citizenship behaviors.

The quality of higher education is everybody’s concern today. Various studies and reports at official level has recognized the same and given recommendations for its improvement. Government and other constitutional agencies are taking necessary measures. However, these alone, will not serve the purpose unless education institutes and faculty take proactive initiatives and measures.

TQM is naturally relevant to higher education, because it is a process-focused approach aimed at increasing productivity, decreasing costs and improving quality. Going through the literature, following are the most cited dimensions of Total Quality Management in education.

1. Leadership
2. Vision
3. Measurement and Evaluation
4. Process control and improvements
5. Program design
6. Quality system improvements
7. Employee involvement
8. Recognition and rewards
9. Education and training
10. Student focus

2. Literature Review

Richard Joss (1998) states that TQM may be summarized as “an integrated, corporately-led programme of organizational change designed to sustain a culture of continuous improvement based on customer satisfaction”. Quality in education makes learning a pleasure and a joy. A good system for the management of education demands a long range perspective of the quality. Long range planning requires consistency of purpose,
Methodology

This section explains the methods used in study for data collection and research. Moreover, in this chapter a comprehensive view to those thoughts and conditions, which are necessary for result presentation are explained. In fact, this section is a reference for scientific method necessities.

2.1 Study area

The case study of this dissertation work is specified for G.G.D.S.D COLLEGE RAJPUR, a higher education institute under affiliation of Himachal Pradesh University, which provides educational services to student within the state. The college is an education institute of basic science and arts which came into existence in May 1984.

2.2 Description of research population

In all 122 respondents participated in this survey, which includes 62 respondents of college staff (Teaching-Non teaching) and 60 students studying in various courses in the college. Each category of respondents plays an important role in ensuring that quality service is provided at all times. A sample of 125 paper of Questionnaire was distributed to college’s faculty and students out of which 122 given the full response.

2.3 Research instruments

For the purpose of this research, two research instruments were used for data collection, face-to-face interviews, and survey questionnaires. The survey questionnaire helps to investigate the perceptions of the college staff towards the use of a quality management approach. The questionnaire includes the concepts of total quality management in higher education. The survey questions of Total quality management were divided into 3 areas, which are as follows:

- PERSONAL DETAILS (COLLEGE STAFF)
- TQM PRACTICES AT G.G.D.S.D COLLEGE (STAFF PERSPECTIVE)
- EFFECT OF TQM ON ORGANIZATIONAL PERFORMANCE

In a word, the research strategies adopted in this study can be characterized as approaches of quantitative (a questionnaire survey) and qualitative investigations (a literature review, structured interviews, and a case study).

2.4 Testing of Hypothesis by Chi Square test:

The chi square test is based on the difference between the observed and the expected values for each category. The chi square statistic is defined as
\[ \chi^2 = \sum \frac{(O - E)^2}{E} \]

Where \( O \) is the observed value and \( E \) is the expected value. This chi square statistic is obtained by calculating the difference between the observed number of cases and the expected number of cases in each category. This difference is squared and then divided by the expected value. These values are then added for all the categories, and the total is referred to as the chi squared value which set the criteria for rejection or acceptance of the hypotheses.

On the basis of literature review following hypothesis were developed which determines the TQM principle were practiced at G.G.D.S.D College or not.

**Hypothesis 1:** Employee involvement as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 2:** Teamwork as a as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 3:** System of recognition and appreciation as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 4:** Self assessment as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 5:** Subscription to quality award system as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 6:** Student focus as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 7:** Rework done in the departments as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 8:** Internal communication as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 9:** Recognition and award for students as a TQM principle is practiced or not at G.G.D.S.D College.

**Hypothesis 10:** Availability of resources for improvements as a TQM principle is practiced or not at G.G.D.S.D College.

3.1 **Findings of Hypothesis Testing:**

The Chi Square test helps to test the developed hypotheses. The critical value of chi square for the degree of freedom is taken as 0.05 against which the measures value of chi square statistic (\( \chi^2 \)) value is compared from the chi square table. This will helps in accepting or rejecting a hypothesis developed.

The results shows that only six (6) out of ten (10) TQM principles are practiced at G.G.D.S.D College. Which includes employee involvement, team work, self assessment, students/customer focus, internal communication and award system for the students?

On the other hand the TQM practices like Recognition and award for staff, Subscription to any Quality award system and availability of resources for any improvements have negative responses which concludes that these principles does not exist as a TQM Practice at G.G.D.S.D College.

### 4. RESULTS:

Table 1 shows the results of hypotheses testing on the basis of data collected from survey questionnaire.

<table>
<thead>
<tr>
<th>Hypothesis (TQM Principle practices)</th>
<th>Observations (response)</th>
<th>chi-square statistic ( \chi^2 )</th>
<th>Chi-square value for critical value (AS)</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>+ve</td>
<td>-ve</td>
<td>None</td>
<td></td>
<td></td>
</tr>
<tr>
<td>H1 (Employee involvement)</td>
<td>46</td>
<td>12</td>
<td>2.34</td>
<td>5.99</td>
</tr>
<tr>
<td>H2 (Team work)</td>
<td>47</td>
<td>11</td>
<td>1.04</td>
<td>5.99</td>
</tr>
<tr>
<td>H3 (Self assessment)</td>
<td>44</td>
<td>9</td>
<td>2.95</td>
<td>5.99</td>
</tr>
<tr>
<td>H4 (Recognition and appreciation)</td>
<td>26</td>
<td>23</td>
<td>24.09</td>
<td>5.99</td>
</tr>
<tr>
<td>H5 (Quality award system)</td>
<td>13</td>
<td>39</td>
<td>90.75</td>
<td>5.99</td>
</tr>
<tr>
<td>H6 (Student/customer focus)</td>
<td>56</td>
<td>5</td>
<td>0.93</td>
<td>5.99</td>
</tr>
<tr>
<td>H7 (Rework done)</td>
<td>20</td>
<td>32</td>
<td>47.58</td>
<td>5.99</td>
</tr>
<tr>
<td>H8 (Internal communication)</td>
<td>45</td>
<td>10</td>
<td>0.85</td>
<td>5.99</td>
</tr>
<tr>
<td>H9 (Recognition and award for students)</td>
<td>44</td>
<td>10</td>
<td>1.21</td>
<td>5.99</td>
</tr>
<tr>
<td>H10 (Availability of resources)</td>
<td>27</td>
<td>22</td>
<td>16.33</td>
<td>5.99</td>
</tr>
</tbody>
</table>
4.2 SWOT Analysis

In This study an extensive review of the external and internal environment in which the G.G.D.S.D College operates is conducted. For this structured interviews with college’s management and staff were conducted and the College’s strengths, weaknesses, opportunities, and threats (SWOT) was identified. In all 62 members of staff participated in the survey.

The survey addressed the following areas:

Strengths: What are the top things that the G.G.D.S.D College does well?
Weaknesses: What are the top things that the G.G.D.S.D College should improve?
Opportunities: What opportunities could the G.G.D.S.D College take advantage of in the next three years?
Threats: What is changing in the environment which could adversely affect the G.G.D.S.D College?

4.3 Key SWOT issues indentified:

Strengths: A majority of those participated in interviews believes that G.G.D.S.D Faculty act as core strength. Comments were made about administrative responsiveness. The college also views its library as strength with references facilities and services.

Weaknesses: Weaknesses represents of where the institution could improve itself and represents area that college should control at least in the eyes of respondents. Most comments were made about facilities which indicate that G.G.D.S.D College is out of space to expand programming that it could make more effective use of existing space. Other area identified as weakness was security/safety to the faculty as well as students as the respondents have a view that they needed more visible security presence in the college.

Opportunities: Opportunities occurs externally to G.G.D.S.D College. There was a notable agreement on the new programming classes as an opportunity for college including suggestions and expanded programs in carrier and other fields. A majority of respondents stated community engagement and collaboration among local colleges as an opportunity. Administration improvements were also cited as an opportunity to which college can look up to.

Threats: Competition from the nearby community colleges and other higher education institutions in the State is viewed as a major threat. Also Poor Academic Preparation cited as a challenge as the students are not prepared to perform college-level work and sometimes there is a need for remedial classes for those. Also increase in various technological courses was viewed as threats to the science and arts education institute.

<table>
<thead>
<tr>
<th>Table 2 SWOT analysis of G.G.D.S.D College</th>
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</thead>
<tbody>
<tr>
<td><strong>Strengths</strong></td>
</tr>
<tr>
<td>Faculty as core strength</td>
</tr>
<tr>
<td>Administration responsiveness</td>
</tr>
<tr>
<td>Affordability/ value</td>
</tr>
<tr>
<td>Collaboration with other colleges</td>
</tr>
<tr>
<td>Communication</td>
</tr>
<tr>
<td>Facilities</td>
</tr>
<tr>
<td>Institution image in community</td>
</tr>
<tr>
<td>College campus</td>
</tr>
<tr>
<td>Library</td>
</tr>
<tr>
<td><strong>Opportunities</strong></td>
</tr>
<tr>
<td>New program classes</td>
</tr>
<tr>
<td>Global initiatives</td>
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<tr>
<td>Political adverseness</td>
</tr>
</tbody>
</table>
5. CONCLUSIONS:
The study sought to assess the TQM practices and its effect on organizational performance at G.G.D.S.D College, Rajpur. The first objective was to identify the TQM practices at G.G.D.S.D College. The study concluded that some TQM practices exist at this educational institute. Another conclusion, which was drawn from the findings, was that the TQM at the same was not being implemented to the highest level. The investigated TQM practices exist at the college were following:

- Employee involvement
- Teamwork among staff
- Self assessment
- Student/customers focus
- Effective communication
- Recognition and reward system for students

Also G.G.D.S.D College failed to execute some TQM practices which are as follows:
- Availability of necessary resources of improvements
- Quality award system
- System of Recognition and appreciation for staff
- Rework/renovation of departments

All the study established the fact that six out of ten TQM practices were employed effectively in G.G.D.S.D COLLEGE, also the college failed to execute some major TQM practices which could have a negative impact on the organizational performance in quality aspects.

The second objective was SWOT (strengths, weaknesses, opportunities, threats) analysis which was also conducted at G.G.D.S.D College and some key SWOT features were identified are as follows:

<table>
<thead>
<tr>
<th>Strengths</th>
<th>Weaknesses</th>
<th>Opportunities</th>
<th>Threats</th>
</tr>
</thead>
<tbody>
<tr>
<td>Administration responsiveness</td>
<td>Lack of new technology</td>
<td>Collaboration among nearby colleges</td>
<td>Increasing technical courses</td>
</tr>
<tr>
<td>Faculty</td>
<td>Lack of facilities</td>
<td>Administration improvements</td>
<td>Poor academic preparation of students</td>
</tr>
<tr>
<td>Library</td>
<td>Security and safety</td>
<td>Technological aspects</td>
<td>Competition from other colleges</td>
</tr>
</tbody>
</table>

6. RECOMMENDATIONS:
In the light of the findings and conclusions, the following recommendations are hereby proposed:
Efforts must be made to implement those TQM practices, which are not being effectively practiced at the educational institutes. There is the need to employ quality functional deployment. This will enable quality systems to be built on student’s needs and wants and also exceed student’s performance. When this is done, it will help in addressing the issues of poor student’s relations as well as prevent student’s expectations in terms of quality education. It is recommended that the education should subscribe to a quality award system as this gives an idea about the areas to be preferred for quality aspects.

7. FUTURE SCOPE:
Further research could go beyond the scope of this study to investigate the effect of individual dimensions of TQM and to map how TQM dimensions interact with each other as well as with market competition to affect performance. Research in this regard will help to understand what aspects of TQM are most vital in impacting
on performance, thereby aiding decision making on resource allocation.

References: