

Research Paper



THE UTILITY OF DEMINGS PRINCIPLES OF MANAGEMENT IN INSTITUTIONS OF HIGHER LEARNING

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ABSTRACT

Total Quality Management is an age old concept but still relevant even today and Deming's fourteen principles of total quality management is a benchmark in the aspect of improving quality of a product service or an institutions. Though quality is a perceived aspect of a particular service utility and benefits. It depends upon the nature of industries that offer these services for the benefit of the users. Deming has stated that quality is a predictable degree of uniformity and dependability at low cost and which is applicable to the present needs. Deming's fourteen principles of management has been identified as a quality meter which can be applied to different industries as well as institutions of higher learning. This paper purports to study the impact of Deming's principles of management in institutions of higher learning. It is an empirical paper which dwells on fourteen principles of management and its applicability and utility in institutions of higher learning. Findings: There is an impact of Deming's principles in total quality improvement in institutions of higher learning.

KEYWORDS: Total quality management, Demings principles, quality.

1. INTRODUCTION

Deming quality improvement strategies foster the development and growth of institutions of higher learning. Universities are institutions of higher learning wherein the quality aspects of education is prime criteria apart from low cost factor. Deming advocates low cost education with quality inputs. Deming's fourteen principles of management is a building block to further improvements in the quality areas of an institution. It is a precursor to many total quality management tools, techniques and systems. The fourteen principles of Deming's total quality management can be applied to institutions of higher learning

1. Create Constancy of purpose for improving products and services
2. Adopt the new philosophy
3. Cease dependence on inspection to achieve quality
4. End the practice of awarding business on price alone, instead minimize total cost by working with a single supplier
5. Improve constantly and forever every process for planning production and service
6. Institute training on the job
7. Adopt and institute leadership
8. Drive out fear
9. Break down barriers between staff areas

10. Remove slogans exhortations and targets for the workforce
11. Remove numerical quotas for the workforce and numerical goals for management
12. Remove barriers that rob people of pride of workmanship and take out the annual rating or merit system.
13. To provide training on self education and self improvement on regular basis
14. To involve everyone at work to accomplish the change and transformation

2. OBJECTIVES OF THE STUDY

1. To study the fourteen demings principles of total quality management.
2. To analyse the utility of fourteen principles of total quality management in institutions of higher learning.
3. To find out ways and means of enhancing the quality in institutions of higher learning.

3. RESEARCH METHOD AND DESIGN

3.1 Research Hypothesis

- H₁. There is an impact of Demings principles in total quality improvement in institutions of higher learning.

3.2 Nature of Research It is empirical and descriptive in nature



3.3 Research Design Process

The research design process followed a three stage approach, i) questionnaire design ii) a pilot survey and (3) main survey. The first step involved the operationalisation of measures, which was achieved using the literature review to measure the constructs and design the draft questionnaire for pre testing. In step two 285 draft questionnaires and schedules were directly administered to permanent teaching fraternity in select universities of Andhra Pradesh. 167 questionnaires and schedules were perfectly filled and complete data collected and assessed using Factor analysis and Reliability testing to refine and finalise the questionnaire administered to the main survey. For the last step, final questionnaire and schedules were used to collect data from 267 permanent teaching fraternity from select universities in Andhra Pradesh.

3.4 Sample Frame

In this study, the sampling frame is based on the list of all universities located in Rayalaseema region of Andhra Pradesh.

3.5 Sampling technique

Simple Random sampling technique is used for collecting information from the selected respondents.

3.7 Method of Data Collection

In this research data is collected from the sample respondents with the help of administration of structured questionnaire and schedule

3.8 Tools of Data Analysis

The collected data is analysed with the help of SPSS (20 version). In this research both descriptive and Inferential statistics were used. Reliability and validity tests are taken up for apt analysis.

4. ANALYSIS AND IMPLICATION

Table 1.-Reliability and Validity Tests

	Reliability Statistics	Value	Analysis
1	Cronbach's Alpha	.850	Excellent
2	Cronbach's Alpha Based on Standardized Items	.869	Excellent
3	N of Items	14	Adequate
KMO and Bartlett's Test			
1	Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.619	Minimum
2	Approx. Chi-Square	3242.289	Valid
3	Bartlett's Test of Sphericity Df	36	Valid
4	Bartlett's Test of Sphericity Sig.	.000	Valid

Source: Statistical results of field data

Table - 2 Responses of Respondents on the ' Demings' Variable with Regard to Gender in Sample Universities

S. N	Gender						χ^2	D.F	Sig.lvl
	Male		Female		Total				
o	Mean	S.D	Mean	S.D	Mean	S.D			
1	3.7068	.91106	4.2090	.84136	3.9588	.91056	44.627 ^a	3	.000
2	3.7218	1.17004	3.3881	.89199	3.5543	1.05125	45.321 ^a	3	.000
3	4.1729	.93348	3.4403	1.49441	3.8052	1.29759	40.197 ^a	3	.000
4	2.3684	.95722	2.7537	1.48393	2.5618	1.26213	34.094 ^a	4	.000
5	4.3233	.57140	4.1866	.40980	4.2547	.50068	17.327 ^a	2	.000
6	1.6917	.46352	1.5746	.61774	1.6330	.54851	11.250 ^a	2	.004
7	3.3233	.46951	3.6418	.49665	3.4831	.50811	26.326 ^a	2	.000
8	1.9624	.39707	2.3582	.63011	2.1610	.56220	42.823 ^a	3	.000
9	4.4361	.49777	4.3060	.46255	4.3708	.48392	4.844 ^a	1	.028
10	1.7820	.97186	2.2612	1.18213	2.0225	1.10682	43.370 ^a	4	.000
11	2.6165	1.67749	1.6716	1.12240	2.1423	1.50011	30.323 ^a	3	.000
12	3.3383	1.17349	3.8134	1.21499	3.5768	1.21577	57.030 ^a	5	.000
13	2.7368	.96840	2.5522	1.03740	2.6442	1.00599	27.162 ^a	2	.000
14	3.7970	1.40755	3.2836	1.45928	3.5393	1.45398	49.891 ^a	4	.000

Source: Statistical results of field data

Note: Strongly Agree=5, Agree=4, Neutral=3, Disagree=2, Strongly Disagree=1

Mean= 1.00 to 1.99 highly negative, 2.00 to 2.99 moderately negative, 3.00 to 3.99 moderately positive, 4.00 to 5.00 highly positive; 0-2 value indicates low standard deviation.

χ^2 =Chi Square, D.F=Degrees of Freedom, Sig.lvl=Significance level

FINDINGS

Data interpretation: The research embarks here on interpretation as an offshoot of the statistical processing, table no 2 illustrates the outcomes in the form of Mean and Standard Deviation, conceptually higher SD indicates high deviation, moderate SD indicates moderate deviation, and a low SD indicates low deviation and the standard deviation value is between 0-2 hence it is low deviation for the entire

variables. The table 2 presents Gender, wise responses on Demings principles of management in the selected respondent universities. Irrespective of Gender, the respondents have a highly positive opinion on the aspects that the teaching faculty receives creation of work environment where quality standards is the criteria with various consultancy activities, quality improvements regularly, breaking down staff barriers and also,

moderately positive opinion is opined about concentration on building vendor relationships, to remove fear due to reaching targets and concentrating on quality, regularly adopting new philosophy. But it is to be noted that both male and female respondents have exhibited a moderately negative opinion on the training aspects, removing numerical quotas and number related aspects from management point of view.

It is therefore interpreted that all the fourteen statements and components of Demings total quality management have greater impact because the cumulative mean scores of both males and females for each of the components are on the positive side Hence, it is interpreted that the variable demings total quality management principles among teachers in the sample universities is positive and has greater impact in contributing to enhancing total quality improvements for further growth in universities.

Testing of Hypothesis:

The Chi-Square values in table 2 on various aspects of demings fourteen principles of management are higher than the table values. Hence, null Hypothesis which states that There is no impact of Demings principles in total quality improvement in institutions of higher learning is rejected and the alternate Hypothesis which states that there is an impact on Demings principles in total quality improvement in institutions of higher learning is accepted.

SUGGESTIONS

1. To institute regular quality improvement training for the teaching fraternity without bias
2. Removal of numerical quotas for the workforce and numerical goals for management

CONCLUSION

The fourteen principles of management helps in the quality improvement in institutions of higher learning by regular training and providing innovative and useful inputs and taking up novel method whenever the need arises to improve quality. Putting faith on the workforce by removing the barriers like numerical statistics and number games on quality aspects. Demings fourteen principles of management if effectively implemented improves the quality of an institution on a holistic manner and There is an impact of Demings principles in total quality improvement in institutions of higher learning.

REFERENCES

1. www.asq.org/learn-about-quality/total-quality-management/overview/deming-points.html
2. samat N, ramayah t, saad NMJ. TQM practices, service quality, and marDet orientation: some evidence from a developing country. *Management research News*, 2006; 29 (11): 713Y28.
3. Brahs A, teessl. relationship between TQM and performance of singapore companies. *International Journal of Quality & reliability Management*, 2002; 19 (4): 356Y79.
4. Dthivel PB, Rajendran G, raju R. TQM implementation: tQ implementation and students' satisfaction of academic performance. *The TQM Magazine*, 2005; 17 (6): 573Y89.
5. Kanji GK, Tambi AMBA, Wallace W. A comparative study of quality practices in higher education institutions in the Us and Malaysia, *total Quality Management*, 1999; 10 (3): 357Y371.
6. Gupta A, Chen I. service Quality: implications for management development. *International Journal of Quality & reliability Management*, 1995; 12 (7): 28Y35.
7. Ooi KB, Lin B, chong AYL. Are TQM practices supporting customer satisfaction and service quality?. *Journal of services Mar Deting*, 2011; 25 (6): 410Y419.
8. OaDland s. *total Quality Management - the route to improving performance. second Edition. Oxford: Butteworth - henemann; 1993.*
9. Ixstevenson J. *production / Operations Management. Fourth Edition. Boston: Irwin. Home wood; 1993.*