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A Study of TQM Practices in Private University of Haryana

Dr. PRAMILA MALIK,
Associate Professor,
Baba Masthnath University,
Asthal Bohar, Rohtak

ANNU,
Research Scholar,
Baba Masthnath University,
Asthal Bohar, Rohtak.
Emal Id: annu72066@gmail.com

Abstract

In today's cutthroat corporate environment, the terms quality, quality assurance, and quality evaluation have taken on a life of their own. Many decision-makers have begun talking about the challenges with higher education quality, particularly in India. The TQM-based quality management practices enable the institutes to improve all facets of customer satisfaction. Academics are becoming more eager to adopt these practises as they realise how beneficial they are to both their reputation and that of their institution. This study uses a structured questionnaire and an empirical methodology. Utilizing IBM SPSS Statistics software, data was coded and examined.The study examines current status of TQM Practices in private universities of Haryana from the perspective of faculty members of the respective university.

Index Terms-Total quality management;Private University;Quality Management; Higher Education

1. Introduction

Everyone agrees that investing in education is an investment in human capital. Through schools, colleges, universities, and other educational institutions, society transfers its cultural heritage, collected information, values, and abilities from one generation to the next.

Education beyond the eighth grade, particularly that offered by colleges and universities, is referred to as higher education. In-depth information and insight are taught in higher education, advancing pupils to new areas of knowledge in various fields. It strengthens the student's capacity for inquiry and truth-seeking and qualifies him or her to offer criticism on current events. It not only increases a person's intellectual capacity within a specific field of study but also broadens his or her outlook on the outside world. Additionally, higher education offers chances for lifelong learning, enabling people to periodically update their knowledge and abilities in accordance with social needs. A more competitive economy now calls for higher standards in schooling. There is no denying that quality is a crucial factor in today's higher education. The adoption of the TQM idea in education has been prompted by the world's escalating rivalry, quick technological development, declining quality, shifting demographics, and privatisation and globalisation of education. The fact that "quality of Education" is the primary determinant in the fierce competition between nations has also come to light.

Economic forces are forcing education, and higher education in particular, into commercial rivalry. TQM can be used to boost employee and student morale, boost productivity, and provide both internal and external clients with higher-quality service. Along with the clear connection between the quality of education and its effects on a society's quality of life, the usage of quality concepts has also been discussed in relation to the quality of teaching, quality in the classroom, and quality in the teaching-learning process. The educational institutions strive to provide higher-quality products, similar to business and industry.

2. Literature review

TQM can be used in academic settings. A strong educational institution is best suited to accomplish this objective, as Education can open all doors to advancement. The standard of instruction can be raised by adopting the TQM theory. Higher education's terms can be changed if existing procedures are occasionally revised to reflect new advances and fluctuating demands. Numerous educators think that the Deming's TQM philosophy offers guiding principles concepts for the required reform in education. Myron Tribus wrote "Total Quality" in his book from 1994. Seven components were listed in management in education as being necessary for quality management. The overall quality is as follows:

- Philosophy

- Vision
- Strategy
- Skills
- Resources
- Rewards
- Organization

Deming had the original insight that a company could never check for product quality. A quality product combines an appealing design with an efficient manufacturing process.

Deming promoted an endless cycle of product development, production, marketing, and sales, followed by market research, redesign, and so on. He asserted that better production results in improved quality, which then results in long-term competitive strength.

Total Quality Management

Total Quality Management is about providing the customer with what they want, when they want it and how they want it where there is continuous involvement of moving with changing customer expectations. The structure of the organization thereby allows creating a quality culture where the aim of every member of staff is to delight their customers (Tandon and Gupta, 2008).

TQM is both a philosophy and a set of guiding principles that are the foundation of a continuously improving organisation. While defining TQM, the four essential elements of TQM are continuous process improvement, people orientation, quantitative methods, and customer focus. By totalIt refers to the organization's participation in a constant improvement effort by each and every member of the organization. Quality is defined as 100% customer satisfaction, where the customer is anybody who uses the product and is impacted by it. However, the term "customer" may be used to refer to both internal and external customers, with TQM placing equal emphasis on both. Internal consumers are the next step in the company after external consumers, who are the product's final user. Last but not least, "management" is defined as the leadership of an organization that establishes and sustains a TQM environment, with managers serving as the initiative's leaders (Saylor, 1992).

TQM has three main needs, which Wilkinson and Witcher, (1993) attempted to characterize as follows:

• **Overall:** Through institutional management, there is functional integration and collaboration at all organizational levels.

• **Quality:** Absolute adherence to customer-specified standards while guaranteeing the use of the proper tools, techniques, and procedures.

• **Management:** Establishing a supportive climate, top management's dedication, and the availability of necessary support infrastructure

Roadmap for TQM

In order to have meticulous planning and successful Total Quality of Life

The 11 roadmaps identified by Management, Jha (2011) are as follows:

• An evaluation of organizational effectiveness: To pinpoint weaknesses and their causes in an assessment is the initial step that must be taken in each company.

• Sensitization and awareness-building: This will aid staff in understanding needs,

TQM ideas, advantages, and reasons.

• Determining a company's vision, purpose, and goals: An organization's goals should be well-communicated, and it ought to be founded on the goal of client attention.

• Putting objectives into practice: A functional level of an organization's goals should

be created, and whenever possible, efforts should be made to enhance its functionality.

to connect with the organizational

• Involving consumers: An engaging session with clients is necessary to understand the views and demands of the firm.

• Examining the present procedure: Every company should study the current procedure.

and well-documented, and they ought to be evaluated in light of the procedures to be used.

• Starting improvement projects: In a project, it is important to frequently check on the project teams to make sure that the appropriate teams are being assigned.

• Learning needs must be identified: TQM goals must be evaluated to see whether they have been met. It is also necessary to be aware of the limitations and sufficiency of present information.

This perspective is summed up by the "chain reaction" idea of Deming:

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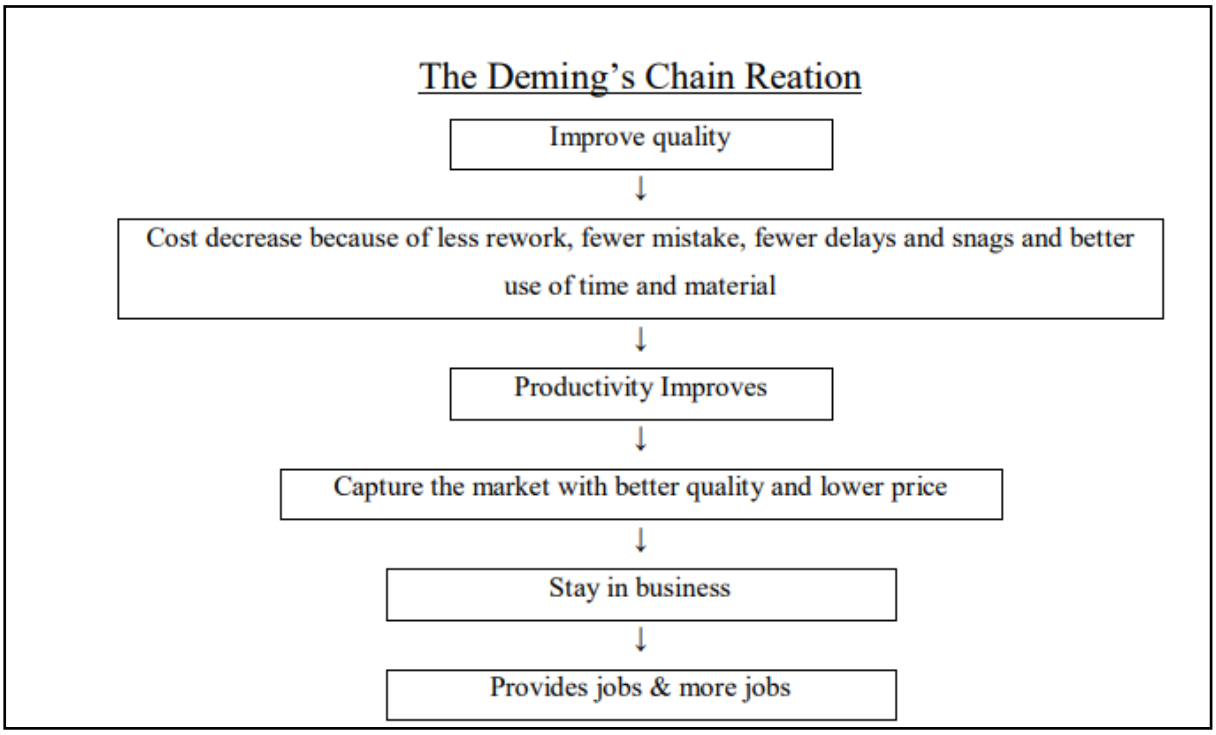

Figure1 **:Deming's chain reaction**

Academics can benefit from Deming's chain reaction theory as well. This approach, which advocates for less redo work, fewer errors, and better use of time and resources, must be followed if we are to maintain the quality of our educational system. According to this notion, any institution's entire unit must fully commit to improving productivity; else, quality will drop. Deming emphasises that top management has a greater obligation to improve quality than do middle and level management staff.The basic goal of an organisation, according to W. Edward Deming, J. M. Juran, and Kaoru Ishikawa—three experts on total quality management—is to stay in operation so that it can contribute to community stability and provide useful goods and services that meet customers' needs client needs, as well as promote employee growth and job happiness. They offer a sound foundation for recognising the TQM's underlying presumptions even though they have many aspects in common, philosophy. The following are the presumptions:

Quality Is Less Costly Than Poor Workmanship

Thus, it is assumed that the costs of providing high-quality goods and services (such as those associated with training, appropriate tools and equipment, improving processes, and other related costs) are less expensive than the costs of providing low-quality goods and services

(such as those associated with inspection, rework, high scrap rates, lost business, and other related costs).

Employees Will Naturally Try To Improve Quality As Long As They Have Appropriate Support

We can also state that if provided the necessary equipment and training, employees will gladly support quality change.

Serious Quality Improvement Requires Cross-Functional Effort

Design specialists and production specialists must interact closely during the configuration stage in order to deliver high-quality products efficiently. Therefore, the majority of quality problems don't fit neatly inside functional regions.

Quality Improvement Requires the Strong Commitment Of Top Management

According to Bartol and Martin (2000), because goods and services are created within the framework of an organisation, upper-level managers are ultimately in charge.

It is obvious that the nature of the frameworks that managers create determines the ability of their workforce to do work of a high calibre.

Intervention Strategies for TQM

Many TQM proponents implement modified concepts using a variety of intervention strategies. Cost of quality analysis, which aids in identifying areas where improving quality would result in considerable savings, is used to assess the potential cost savings linked to executing the work correctly the first time. Expenses are assessed in this analysis in order to keep quality at the desired level, such as the cost of preventing quality issues vs the costs of low quality (Evans & Lindsay, 1996).

Teams for Quality Improvement

Teams of personnel working on specific quality and productivity issues are known as quality improvement teams. These teams have defined quality improvement goals. The team that is formed and is charge of making such quality-related enhancements typically consists of members from different departments. Management and employees both identify the issues, and the group frequently establishes definite improvement goals and engages in friendly competition.

Training

Employee competency in the production of high-quality goods and services is emphasised in training, one of the key intervention approaches utilised in TQM implementation.

Benchmarking:

The reason why schools haven't adopted benchmarking, a method for achieving operational effectiveness, as a quality tool, was mentioned by Scott (2003). According to a claim, a school or college is a more challenging venture to evaluate how well the institution has accomplished its goals, whereas a business can assess its performance by looking at the money it produces or doesn't make.

The difference between for-profit (profitable) and not-for-profit (non-profitable) companies when it comes to gauging effectiveness is pretty clear. However, because there isn't a free market with consumer control, there aren't any precise, market-driven metrics for measuring effectiveness in not-for-profit organisations.

However, because there isn't a free market with consumer control, there aren't any precise, market-driven metrics for measuring effectiveness in not-for-profit organisations. choosing norms or criteria for selection. It is quite challenging to find performance metrics in the absence of such a market, but it is not insurmountable. Regarding the evaluation of school performance, academics and practitioners have no understanding, but a method of communication exists within one organisation or another. Using comparable points of reference, benchmarking entails assessing the crucial tasks performance of one institution and contrasting it with another's performance in key areas another organisation whose main goal is to boost performance and hence raise effectiveness. In contrast to a one-time comparison with a standard, benchmarking is an ongoing activity given that institutions are engaged in ongoing.

The benchmarking process, according to Williams (2005), consists of identifying outstanding practices, processes, and standards in other organizations and adapting them to one‘s own organization, in which the measurements used, are mainly quantitative in nature. However, as of Cook & Hunsaker (2004), benchmarking involves not chasing the best practices of others but consists in identifying the core competencies of one‘s own organization that can add value to the improvement process. Improving quality by analyzing and then copying the methods of the leaders in various fields is the basic idea behind benchmarking (Robbins & Coulter, 2009). Following are the four steps the benchmarking process follows:

(1) Forming a planning team, which initially identifies what is to be benchmarked, identifies comparative organizations, and determine data collection methods.

(2) Collecting data internally on its own work methods and externally from other organizations.

(3) Analyzing the data to identify performance gaps and the cause of differences; and

(4) Formulating and implementing an action plan that will result in meeting or exceeding the standards of others. Benchmarking, as explained by Zairi & Leonard (2004), begins with the identification and measuring performance levels, then finding benchmark organizations or work units to compare these data. Operating units that are within the organization (internal benchmarking) other organizations that compete on the same service market (competitive benchmarking) or other organizations that are the best in a particular functional process whether or not they are competitors (functional benchmarking) – all include benchmarked partners.

Without the target of company's knowledge, benchmarking can also take place.

Reverse engineering, taking and analyzing a competitor's product - is one common practice in benchmarking. McShane & Von Glinow (2006), who traced the history of benchmarking, declared that it was developed by Xerox in 1949 and has since been widely adopted by others. Four reasons for its popularity are:

(1) Benchmarking is consistent with performance measurement and fact-based management. It provides objective rather than subjective standards against which to evaluate one's own organization.

(2) Benchmarking is a form of goal setting with continually moving targets. For this reason, corporate leaders sometimes refer to benchmarked information as stretch goals.

(3)Benchmarking is part of the continuous learning process and is consistent with the philosophy of knowledge management. By visiting other firms, employees learn new practices through observation. This practice encourages them to continually question their current work practices and to seek out new practices.

(4) Benchmarking reduces employee resistance to change because the benchmarks companies provide visible evidence that a higher standard of performance is both necessary and achievable.Researching what another institution does is not just what benchmarking is for. Having the willingness and the expertise to access this information and use it are a must for all organizations (Kelly, 2006).

TQM is a philosophy and set of tools that enable an organization to pursue systematically a definition of quality and a means to attaining quality. Staff participation in problem solving, use of new tools and techniques for process improvement, and relentless focus on meeting or exceeding customer needs are all what TQM encourages (Lembcke, 1994). TQM supports the

interest and enthusiasm of staff in critical thinking, utilization of new devices and methods for procedure change and steady focus on meeting or surpassing client needs.

Continual Development:

One of the basic tenets of TQM is the constant, often known as continuous improvement, or "Kaizen," which entails the methodical process of organising continuously reviewing and re-implementing processes with the goal of enhancing. For effectiveness and customer satisfaction, products, services, and processes. Kaizen is a Japanese word a term for ongoing improvement that entails small-scale, incremental undertakings that significant alterations (Sallis, 2002). Although TQM is only being used on a modest basis in practise.The TQM philosophy is comprehensive, motivating, and all-encompassing. It is highly practical and gradual embracing (Sallis, 2002). Like innovation, kaizen is subtle rather than dramatic. As a result, the idea of TQM strives to achieve beneficial long-term success through incremental improvements.

The literal meaning of *Kaizen* is change for good; '*kai*' meaning 'change' and '*zen*' meaning 'becoming good'. Culture change consumes time and therefore, change in TQM does not mean drastic intervention. Not only is culture change about changing the behavior of the staff, but it also requires a change in the way how institutions are managed and led (Rao, 2007).

3. The objectives of the study are:

1. To Examine Current Status of TQM Practices in Private Universities of Haryana.
2. To Identify the difference in the perception of Male and Female faculty towards Total Quality Management Practices in Private Universities of Haryana.

4. Procedures:

The survey instrument was distributed among the faculty members of the Private Universitiesof Haryana. They were delivered through face to face method or mails and emails to theparticipant's email address along with a coverletter introducing and explaining the purposeof the study,stressing the confidentiality of responses and enlisting the response of theparticipant.Toincreasetheresponserateandmotivation amongparticipants,follow-upphone calls and emails were also took place. Participants were asked to report on their actualTQMpracticesimplementedintheirrespectiveuniversitiesbycompletingasurveyquestionnaire in their own time. Participation was voluntary and no identifying informationwasrequiredoftheparticipants.

5. Sampling Design:

Random sampling technique is adopted. Faculty of 10 private universities in Haryana were taken for the purpose of thestudy.Total sample size is 150 as collected from these different randomly selected universities.

6. Data Analysis

In thisStudy,Descriptivestatisticswereusedtoanalyzedata.Specifically, data on percentages and frequencies were calculated to illustrate patterns ofTQM practices adopted in various private universities. Data were coded and analyzed usingIBM SPSSSTATISTICS Version 25software.The reliability and the validity of theoretical constructs used in questionnaire is evaluated through the calculation of the Cronbach's alpha coefficients.

7. Results andTest for Normality

A normality test was carried out to confirm whether the sample data was obtained from a normally distributed population. The normality tests were performed on the Total TQM practices. These tests are depicted in the below tables

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Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
TQM|_practices	.390	150	.110	.652	150	.170

a. Lilliefors Significance Correction

H0: Data on TQM practices follow a normal distribution.

H1: Data on TQM practices do not follow a normal distribution.

As shown in Table, the Kolmogorov-Smirnov Test and the Shapiro-Wilk Test have been used to conduct the normality test. TQM practices variable produces a statistically significant test results whereby the p-value is less than 0.05. Therefore, the null hypothesis is accepted and it can be said that data is normally distributed for TQM practices. Since the sample data do follow a normal distribution and parametric test is considered suitable for this study.

8. Primary analysis

8.1 Reliability and Validity of data

Reliability is a term commonly used in conjunction with repeatedly used measurements that produce the same results on multiple occasions. In order to obtain the reliability of the questionnaire, the Cronbach's alpha test has been applied. The Cronbach's alpha is widely used for Likert questions in a questionnaire that form a measurement and to determine the reliability of that measurement (Olaniyi, 2019). Generally, an alpha of 0.6-0.7 indicates an acceptable level of reliability and 0.8 or higher indicates a very good level (Ursachi et al., 2015). Therefore, the consistency of the data was tested as shown in the following tables below:

TQM Practices

Case Processing Summary

		N	%
Cases	Valid	150	100.0
	Excluded[a]	0	.0
	Total	150	100.0

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a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.980	45

Scale Statistics

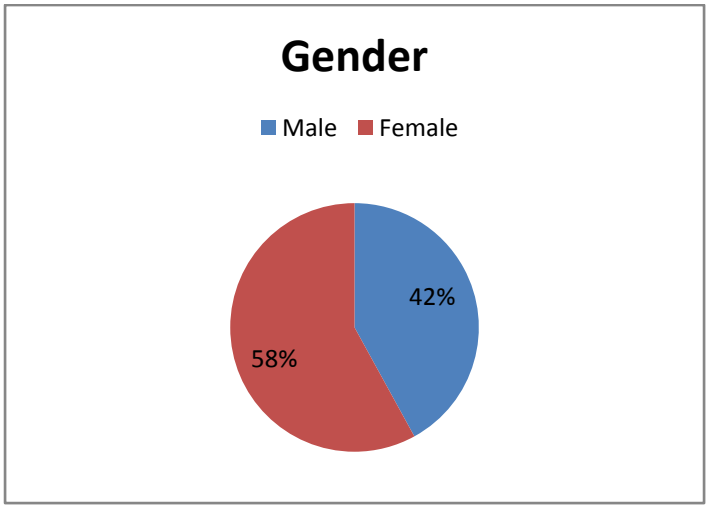
Mean	Variance	Std. Deviation	N of Items
103.3696	816.256	28.57020	45

As shown in above Tables, a Cronbach alpha value of .980 is noted for the TQM practices. Therefore, the values for this variable surpass 0.7, indicating a good reliability.

8.2 Demographics

In this study, out of the 150 participants, 58% were female (n =87) and 42% were male (n =63) as shown in below table.

Demographics		
Total Sample (N)	**150**	
Gender	**No. of Male**	**No. of Female**
	63	**87**
	42%	**58%**



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8.3 Objective 1. To Examine Current Status of TQM Practices in Private Universities of Haryana.

H01: There is no significant difference in the TQM Practices implemented by Private Universities of Haryana

Descriptives

TQM_practices

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Shree Guru Gobind Singh Tricentenary University	15	116.8000	7.72010	1.99332	112.5247	121.0753	105.00	132.00
Amity University Gurgaon	15	117.2000	7.59887	1.96202	112.9919	121.4081	105.00	132.00
SRM University	15	116.0000	6.42540	1.65903	112.4417	119.5583	105.00	132.00
The NorthCap University	15	117.4000	7.05894	1.82261	113.4909	121.3091	105.00	132.00
BML Munjal University	15	116.6000	8.20105	2.11750	112.0584	121.1416	105.00	132.00
Lingaya's Vidyapeeth	15	116.0000	6.42540	1.65903	112.4417	119.5583	105.00	132.00
Ansal University Gurgaon	15	116.5333	6.57774	1.69837	112.8907	120.1760	105.00	132.00
Baba Mast Nath University	15	117.4667	8.58459	2.21653	112.7127	122.2207	105.00	132.00
KR Mangalam University	15	116.0000	6.42540	1.65903	112.4417	119.5583	105.00	132.00
PDM University	15	116.0000	6.42540	1.65903	112.4417	119.5583	105.00	132.00
Total	150	116.6000	6.98993	.57073	115.4722	117.7278	105.00	132.00

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ANOVA

TQM_practices

	Sum Squares	ofDf	Mean Square	F	Sig.
Between Groups	48.533	3	5.393	.104	1.000
Within Groups	7231.467	147	51.653		
Total	7280.000	149			

H01 states that there is no significant difference in the TQM Practices implemented by Private Universities of HaryanaOne way analysis of variance showed that the effect of TQM practices was not significant, $F(3,147) = .104$, $p < 1.0$. Post hoc analyses using the Tukey's HSD criterion for significance indicated that the average number of errors was significantly lower in the condition of Shree Guru Gobind Singh Tricentenary University (M= 116.80, SD= 7.720), Amity University Gurgaon (M= 117.20, SD= 7.59), SRM University (M= 116.0, SD= 6.425), The NorthCap University (M= 117.40, SD= 7.06), BML Munjal University (M= 116.60, SD= 8.20), Lingaya's Vidyapeeth (M= 116.0, SD= 6.42), Ansal University Gurgaon (M= 116.53, SD= 6.58), Baba Mast Nath University (M=117.47, SD=8.58), KR Mangalam University(M= 116.0, SD= 6.42) and PDM University (M= 116.0, SD= 6.42540.

8.4 Objective 2.To Identify the difference in the perception of Male and Female faculty towards Total Quality Management Practices in Private Universities of Haryana.

H02: There is no significant difference in the perception of Male and Female faculty towards Total Quality Management Practices in Private Universities of Haryana

Group Statistics

	Gender	N	Mean	Std. Deviation	Std. Error Mean
TQMpractices	Female	87	133.8952	3.91333	.35143
	Male	63	129.5000	2.54951	.50000

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Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
TQMpractices	Equal variances assumed	.883	.349	-19.457	148	.000	-15.60484	.80202	-17.18973	-14.01995
	Equal variances not assumed			-25.534	53.164	.000	-15.60484	.61115	-16.83056	-14.37912

H02 states that there is significant difference in the perception of Male and Female faculty towards Total Quality Management Practices in Private Universities of Haryana. Analysis of TQM practices score on shows that females exhibited greater perception related to these practices (M= 133.89, SD= 3.91) as compared to females having perceptions of TQM (*M* =129.50, SD= 2.54), $t(148) = 19.4$, $p<.01$, effect size was large d = .83. So in this found there is significant difference in the perception of Male and Female faculty towards Total Quality Management Practices in Private Universities of Haryana

9. Conclusion:

According to the study, almost all private universities has adopted total quality management practises to increase organisational effectivenesssignificantly.Thus, it can be concluded that total quality management refers to a comprehensive strategy used by businesses to continuously improve their products, services, or processes, involving all stakeholders, in order to increase customer satisfaction, productivity, and sustainability. The study advised private universities in Haryana to successfully implement total quality management. The university's top management should also continue to push for total quality management to be a top priority moving forward and involve the university in TQM implementation at all levels. Organizations should also never stop looking for ways to manage their knowledge and

processes better. The constant development of organisational practises and knowledge is a crucial part of total quality management.

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