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COMPARATIVE STUDY OF TQM PRINCIPLES APPLIED AT PUBLIC AND PRIVATE SECONDARY SCHOOLS IN PUNJAB, PAKISTAN

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ABSTRACT

Total Quality Management (TQM) is being used in educational sector to enhance the quality of education. It is endless venture to fulfil the customer needs through zero defect and continual improvement at work. In Pakistan, public and private sectors are working to impart secondary education. Generally, both sector schools are applying TQM principles to impart quality education. The research highlights the comparison to evaluate application of TQM principles in both sectors. Sample of the study was consisted of 299 secondary school teachers. The instrument 'TQMPI' was developed by the researchers. Reliability coefficient was calculated as 0.84. Moreover, factor analysis was also carried out. For the evaluation of data, independent t-test was applied. Present studies revealed better applications of TQM principles at private sector than public sector thus resulting in enhanced quality product. The researchers recommended that Govt. of Pakistan should ensure the application of TQM principles at public sector schools.

Keywords: *TQM, Continual improvement, Leadership, Training, Transformation.*

1) INTRODUCTION

Total Quality Management was an effort of the theorists to enhance the quality of education. TQM is boundless attempt to execute client wants and hopes through continual development of work (Bergman & Klefsjo, 2003). It is a set of various processes used for the satisfaction of customers and betterment in quality of education. As Elfaituri, (2012) stated that TQM is different from other traditional philosophies due to its practices. Similarly, Tomar, (2014) opined that TQM has become significant management philosophy due to its magnificent development and accomplishment of system. Likewise, Rao (2003) advocated that TQM is

used at schools and colleges to manage the prompt changes and improvement of educational system.

The provision of quality education at secondary level is facing a lot of challenges in Pakistan. It is multifaceted concept comprised of multifunctional activities that exhibits the basis of academic life. The quality of education includes quality teachers, infrastructure, customer services, curricula and other resources (Isani &Virk, 2005). It is well recognized that students who pass matriculation, do not fulfil the demands of the society because of lack of quality education. As, Leung and 梁佩玲. (2001) stated that it is the quality management through which educational experts tackle emerging challenges of the society. Secondary education has prime importance due to its role in abridging the elementary with higher education as its quality is dependent on the secondary education (AIOU, 2002).

Unfortunately, the quality of education in Pakistan is under huge criticism and its standard is being deteriorated rapidly. The major causes, as stated by Malik (2002), are low admission standards, demotivation of learners, low qualified teachers, imbalance of teacher student ratio, lack of supportive environment, physical facilities and ineffective evaluation system have further aggravated the issue of quality education. So, we are unable to achieve international standards.

The secondary education in Pakistan is comprised of four classes, 9th, 10th, 11th and 12th. It offers middle level workforce for economy as well as raw material for higher education. Hence, the education should be quality oriented to develop essential attitude knowledge and skills for better performance. In this context, it can be summarized that TQM has become the most important aspect to enhance the quality of life in any country.

2) REVIEW OF RELATED LITERATURE

The term TQM was used initially by the Naval Air system in Japan to improve the quality in products. Feigenbaum and Ishikawa were the founders of this term. Later on, Crosby, Deming, and Juran reshaped it with new dimensions (Lundgren & Alänge, 2000). According to Ross (2000), for the continuous betterment of quality in an organization, TQM provides a combination of various processes and functions. The person who made major contribution in popularizing quality control was

Deming in Japan. According to Arumugam, Ooi, and Fong, (2008) TQM developed statistical quality control system which ensured its success. As Rafael (1991) stated that Deming was in belief of necessity of quality standards in all stages of manufacturing and presented 14 points to manage the quality in an organization. The researcher has opted basic five elements (i.e., constant and forever improvement, self-improvement & transformation, institute leadership, institute education and institute training on job) in the present study. The comprehensive description of these factors is as under.

2.1) Continual and Forever Improvement

TQM is a continuous improvement process of work to avoid mistakes and defects. It is widely propagated that mistakes are not only committed by the people but are also due to faulty system. The theory, therefore, identifies the root cause of such mistakes and eliminated them (Mohanty & Lakhe, 2007). The experts of TQM, however, have introduced mechanism to prevent from mistakes that provided continuous improvement. It includes abstaining from occurring errors, detecting them at early stages and stop production where such mistakes re-occur.

2.2) Institute Leadership

The other important element is on job leadership training provided by institution (Robin & Coulter, 2004). Deming propagates that management is leadership rather than supervision (Senapati, 2004). He further opined that leader is a counsellor working with his subordinates during daily activities. That's why after the 2nd World War, Japan had applied TQM system as a whole. Deming was of the opinion that effective leadership is essential to fulfil the organizational objectives (Bradshaw, 1998). Everybody in the institution have leadership role. As Senge, Cambron-McCabe, Lucas, Smith, and Dutton, (2012) stated that leader is designer and creator of the educational institution and its environment. He might remove the barrier in communication which enhances productivity at schools.

2.3) Institute Training on Job

It is evident that teachers are proficient in their disciplines but lack of art of teaching, therefore, it is imperative for the instructional leaders to

develop a training programme for teachers. TQM should be taught to everyone in school organizations viz.; faculty, staff and students because it helps them to resolve their problems easily (Basu, 2004). Deming emphasized on the need of on job training because it embraces self-improvement and innovation (Rafael, 1991). The organizational workers who are well trained and equipped with quality along with just-in-time information enhance the efficiency of the organization (Even & Lindsay, 1999). However, Lunenburge (2010) concluded that obviously it is elusive to change the behaviour of the employees but the vigorous training can change their approach as per demand of the organization.

2.4) Institute Education and Self-improvement

All teachers and administration in schools should realize that self-improvement creates higher level work productivity (Lunenburg & Ornstein, 2004). According to Mulvey, (2010), education and self-improvement of teachers prepared them to meet the new trends and issues about school organization. Moreover, it is stated by O'Toole and Lawler III (2006), the workers who are well trained and highly skilled can greatly influence the organization as compared to those who are poorly trained and non-skilled. The school organization should train their teachers in core activities. The education and self- improvement should not be limited to intellectual approach but they have to make proficient in to the physical environment (Hansson, 2003).

2.5) Self-Improvement and Transformation

In the present era, it is the responsibility of instructional leaders in schools to have clear plan of action to carry out the quality mission. In quality mission, the organizational members must be transformed in to productive workforce (Roos, 2005). The top management team is required with action plan to carry out the quality mission because neither the worker nor the manager can only complete the quality mission and transformation (Sallis, 2002). Deming was of the view that every employee in the organization must play its role in completing the transformation job (Hansson, 2003). Moreover, it is advocated by Harry (2000) that transformation requires a defined process through which ordinary things can be transformed in to extra-ordinary and result oriented products which are direly needed in educational system. All above mentioned TOM factors have been source of inculcating esteem

leadership qualities amongst all sectors in the educational organizations. Due to lacking of these factors in the educational organization of Pakistan, the performance of secondary schools is below the par.

3) RATIONALE OF THE STUDY

The educational authorities in Pakistan are conscious about the poor quality of education in public schools. While at the same time, the public cheered that private schools are imparting quality education. It is an amazing phenomenon that public sector schools are enjoying better facilities as compared to private schools then why such assumption is propagated by the public. Therefore, researchers find it utmost important to investigate the use of TQM principles at private and public secondary schools.

4) SIGNIFICANCE OF THE STUDY

Quality management is the key factor to enhance the productivity of educational institutes because these are the places where skilled, developed, trained, responsible and productive citizens are produced. Therefore, quest for TQM system in educational institutes has become a manifesto across the globe and such aspect has been received much considerations in Pakistan. Many organizations are carrying out certain remarkable efforts in order to improve the total quality management however it is a grimy situation that research work on such aspects had not yet been carried out to associate the quality management system of private and public secondary schools in Punjab. The present study would be an asset in the relevant area of research.

5) DELIMITATIONS OF THE STUDY

Due to time shortage and resources constraints, delimitation of study was carried out in the central Punjab and research was focused on public and private secondary of Okara district.

6) OBJECTIVES OF THE STUDY

Researchers tried to investigate the use of TQM principles used by the public and private secondary schools. Moreover, the researchers compared various principles of TQM i.e. continual improvement, institute

leadership, institute training on job, self-improvement & transformation and institute education & self-improvement used by the competent authorities in both sectors secondary schools.

7) HYPOTHESES OF THE STUDY

The following null hypotheses are designed to achieve the desired objectives:

H_o1: There is no significant difference in the use of TQM principles applied by the administrators of both sectors secondary schools.

H_o2: There is no significant difference in the use of continual improvement principle applied by the administrators of both sectors secondary schools.

H_o3: There is no significant difference in the use of institute leadership principle applied by the administrators of both sectors secondary schools.

H_o4: There is no significant difference in the use of institute training on job principle applied by the administrators of both sectors secondary schools.

H_o5: There is no significant difference in the use of institute education and self- improvement principle applied by the administrators of both sectors secondary schools.

H_o6: There is no significant difference in the use of transformation principle applied by the administrators of both sectors secondary schools.

8) DESIGN AND PROCEDURE OF THE STUDY

The study was planned in order to evaluate the utilization of TQM principles applied in private as well as public sectors secondary schools of central Punjab. The province of Punjab has been divided into 36 sub-units called districts. The district Okara was randomly selected as sample of the study. The researchers approached all secondary school teachers from public and private institutions. The total number of sample in both type of schools were 346. The responded questionnaires were 299 and response rate was 86.4%. The distribution of sample is illustrated in the Table 1.

Table1: Respondent's Sample Description

Respondents	Sample	Total Respondents	Response Rate
Public	180	151	83.88%
Private	166	148	89.1%
Total	346	299	86.4%

The questionnaire was consisted of 25 items developed by the researchers on five Point Likert Scale. The questionnaire was piloted upon 50 secondary schools teachers from district Sahiwal. The Reliability Coefficient (Chronbach Alpha) calculated, was 0.84. The factor analysis was also carried out. During the factor analysis, it was noted that item no. 20 of the instrument has weak correlation value. So, it was dropped from the final draft of questionnaire. Thus, the final draft of questionnaire was consisted of 24 items. For the data collection process, there were personal visits of researchers to the selected sample schools and requested teaching staff to share the information. The instructions were also given to the respondents about the sharing information beforehand. The division of items (factor wise) was tabulated (Table 2).

Table 2:Division of Items (Factor Wise)

Sr. No.	Factors	Serial Wise Items
1	Continual & Forever Improvement	8, 15, 18, 22, 25
2	Institute training on job.	5, 7, 9, 13, 21
3	Institute education &self-improvement.	1, 2, 3, 16, 19
4	1nstitute leadership	12, 14, 17, 23, 24
5	Transformation.	4, 6, 10, 11,

The researchers analysed the data through SPSS Version 19.0 and statistical technique independent t-test was applied.

9) STATISTICAL ANALYSIS OF DATA

Data collected through research tool was analysed and t-test was used to find any significant difference among implementation of TQM principles in public and private schools. Here is analysis of data:

H_o1: There is no significant difference in the use of TQM principles applied by the administrators of both sectors secondary schools.

Table 3: TQM Principles applied by the Administrators

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	3.78	0.44	-4.446	0.000***
Private	148	4.02	0.52		

Table No. 3, through mean score difference shows TQM applied by head teachers in their schools. In this table the test shows t value = -4.446 is significant at α level 0.000. Hence it is concluded that there is significant difference in use of TQM in public and private schools and null hypothesis is rejected.

H_o2: There is no significant difference in the use of continual improvement principles applied by the administrators of both sectors secondary schools.

Table 4: Continual Improvement Principle used in both Sectors Schools of Punjab

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	3.65	0.60	-3.061	0.002**
Private	148	3.95	1.02		

In table No. 4 t-value is -3.061 which is significant at α level =0.002. Hence null hypothesis is rejected. Mean score were found =3.95 and M=3.65.

H_o3: There is no significant difference in the use of institute leadership principle applied by the administrators of both sectors secondary schools.

Table 5: Institutional Leadership Principle used in both Sectors Secondary Schools

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	3.77	0.49	-4.089	0.000***
Private	148	4.01	0.51		

Data in the above table shows mean scores 3.77 and 4.01 and t test was applied to find statistical difference, it's value is -4.089 which is found significant at α level 0.000. Thus it was inferred that null hypothesis is to be rejected on the given grounds.

H_o4: There is no significant difference in the use of institute training on job principle by the administrators of both sectors secondary schools.

Table 6: On Job Training Principle used in both Sectors Secondary Schools

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	3.63	0.61	-2.497	0.013*
Private	148	3.82	0.72		

In the above table we found t-value = -2.497 significant at α level = 0.013 which is less than 0.05 and this is the acceptable level in social sciences. Mean score were 3.63 and 3.82 for public and private schools respectively.

H_o5: There is no significant difference in the use of institute education and self-improvement principle applied by the administrators of both sectors secondary schools.

Table 7: Institute Education &Self-improvement Principle used in both Sectors Secondary Schools

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	4.02	0.66	-3.254	0.001**
Private	148	4.23	0.46		

Table No. 7, through mean score difference shows Institutional Education and Self Improvement applied by head teachers in their schools. In this table the test shows t value = -3.254 is significant at α level 0.001. Hence, it is concluded that there is a significant difference in use of public and private schools and null hypothesis is rejected. Mean scores are 4.23 and 4.02 respectively.

H_o6: There is no significant difference in the use of transformation principle applied by the administrators of both sectors secondary schools.

Table 8: Transformation Principle used in both Sectors Secondary Schools

School Type	N	Mean	SD	t-value	Significant (2-tailed)
Public	151	3.81	0.55	-4.830	0.000***
Private	148	4.12	0.54		

In table No. 8, it can be clearly seen that mean score 4.12 for private schools is much higher than mean score of public schools M=3.81 and it tested through t-test for statistical significant difference and it is revealed to be statistically different with t value = -4.830. Hence, null hypothesis is rejected.

10) RESULTS AND DISCUSSION

TQM has become an essential part of secondary education which is a source of improvement in the organization to convene the customer demands in now and times, thus promoting human resources. Problem with today's education system is of quality education because students are unprepared to meet social demands (GOP, 2004). Hayes (1987) pointed out the terrific situation in the education system of Pakistan due to lack of relationship between labour market and future manpower requirements. On the other hand, Siddiqui, Haleem, and Wadhwa, (2009) proposed that TQM process made the system compatible with changing needs. That's why now a days, the nation is seriously working about the disposition of quality education.

The present study is an attempt by the researchers to explore and measure the application of TQM system in public and private secondary schools in Punjab. The current research exhibited the existence of variations between the application of TQM in public and private secondary schools. Similarly, the difference was also observed in the application of TQM principles (*viz.*, continual improvement, institute education, institute leadership, self-improvement & transformation and institute training on job,) of secondary schools teachers of private and public schools. The results of the study inferred that private secondary schools are performing better in applying TQM principles as compared to

public sector schools. That is why, the assumption that private secondary schools are imparting quality education, seemed to be logical and hence proven true. In the present study, for quality improvement, the quality model of Moosa (2006) has been followed.

It is admitted fact that educational institutions progression and their achievements are highly dependent upon teacher's efficiency. For the evaluation of institutional educational quality and its performance, it is imperative to have the analysis of quality enhancing parameters. The present research indicates that the quality of management is moderately negative. The results of the study revealed that public sectors institutions had no serious attempt to apply TQM principles as compared to private sectors secondary schools. Iqbal and Iqbal (2011) advocated that poor quality education in Pakistan is because of weak administration. The schools of public sector are not properly managed in improving the quality standards due to political interference in creating hurdles during admission processes and transfers of administration as well as teaching staff. Such instances are aggravating with the continuous interference from government side thus contributing in the deterioration of quality management.

As a result of present analysis, it was revealed that the quality standards of the public sector secondary schools were not properly justified and unsatisfactory even conveniences offered in public sector like study rooms, computer and science laboratories, staff offices, common rooms, mosques, printing press, playgrounds, cafeteria, dispensaries, hostels, dormitories and vehicle parking sheds were not sufficient compared to private sectors. Other facilities i.e., audio-visual aids including games and day care centres are also yet not being existed in the public sector secondary schools. In such grievous situation, however, the quality of education in Pakistan is proven to be satisfactory despite of having no access of teaching staff as well as students to the teaching as well as learning international quality standards. It was also revealed form the findings of Arshad (2003) that there was observation of slight negative trend in teaching profession exhibited by the attitude of teachers because of not having any sound knowledge regarding their task oriented jobs. The quality of education also becomes worsen as it could not approach to the international standards and main reasons observed were the dissatisfaction of staff in institutions regarding heavy workload, long time span in job and very less pay packages. The study was also correlated

with the quality of education in India having the services of teachers based upon certain tasks (Narula, 2000).

Based upon results of the study, the quality of examination system in the education sector was par excellent and both sectors (public as well as private) mainly relied on better assessment during examination. The assessment and evaluation in the secondary schools had been carried out through participative as well as open enumeration. A fair and quite transparent examination system that encouraged the rote learning with positive feedback from the teachers in a week's time was also analyzed. The grade system in the evaluation of examination system was not a measure to develop understanding of imparting knowledge, as the idea was also supported by Shirazi (2004). The TQM in the educational sector is not satisfactory without having proper objective of teachers as well as students thus deteriorating the quality of education so there would be an educational requirement of practically skilled and career oriented jobs based upon the understandings of international standards of quality management.

11) RECOMMENDATIONS

The researchers recommended that Government should take some serious attempts to apply TQM principles at Public sector secondary schools. Moreover, the Govt. should provide infrastructure and physical facilities to the public sector secondary schools to enhance quality education.

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