

The Importance of Teamwork, Continuous Top Management Support and Training in Bringing About TQM

**Sanjana Brijball Parumasur, Patsy Govender*

College of Law and Management Studies, University of KwaZulu-Natal Durban, South Africa

**brijballs@ukzn.ac.za*

Abstract: As a result of increasing competition, organizations have realised the importance of its human capital in bringing about continuous improvement in quality in order to secure increased customer satisfaction and loyalty as well as sustainable development. Strategic approaches frequently, though not always successfully, adopted in a TQM environment include teamwork, management support and training. Hence, this study aims to assess managerial perceptions of the importance of teamwork, continuous top management support and training in bringing about TQM. Biographical influences on these managerial perceptions are also assessed. A sample of 202 managers (middle, senior, top) was drawn using a stratified random sampling technique. Data was collected using a pre-coded, self-developed questionnaire whose psychometric properties were assessed using Factor Analysis and Cronbach's Coefficient Alpha respectively. Data was analyzed using descriptive and inferential statistics. The findings reflect that in this organization, the focus in bringing about total quality management is on continuous top management support, followed by continuous training and learning and lastly, teams and teamwork. These dimensions also significantly inter-correlate with each other. Biographical influences were also noted in terms of position, qualifications and gender. Based on the results, recommendations are presented for enhancing team performance, managerial support and training in efforts to bring about TQM.

Keywords: *teams and teamwork, managerial support, training and learning, total quality management*

1. Introduction

Today's looming brutal recessionary period, environmental trends and complexities has a major impact on organizational performance. This compels managers to continuously scan the external environment for opportunities and threats (Gomez-Mejia, Balkin & Cardy, 2004) as survival is perceived to depend on critical imperatives, for example, the alignment of outputs to demands. Hence, a rethink of internal organizational processes is necessary to visualize the huge corporate goals efficaciously. Total quality management (TQM) changes an organization's culture and redirects it with focus on products and services of a superior quality (Gaither, 1996 cited in Ali & Shastri, 2010). In line with this, the implementation of TQM as a 'Kaizen initiative' should be at the helm of an organization and practised every day through the innovative spirit and lenses of employees in order to obtain the best quality. Therefore, the realization of TQM depends on management as well as employees. Employees need to harness an ethos of team effectiveness and continuous training and learning whilst managers need to provide continuous support and create the environment that encourages and nurtures improvement. This is particularly important in a public sector organization where the attitude may be to do minimum work and implement processes and systems to work rather than excel. It is envisaged that developments like Six Sigma would instil a new drive in public sector operations to energise employees towards continuous improvement in processes and delivery.

TQM has led to developmental organizational changes including improvements with performance, productivity and effectiveness. Earlier theorists have built the foundational tools with TQM, and now with a climate of contingency thinking, turf protection and reactivity, top managers need to oversee processes with reason and rationality. Top managers need to display vision, support and commitment in aligning quality values with organizational aims. This will enable those engaged in improvement initiatives to take quantum leaps to shift processes to create superior organizational performance for organizations. TQM is a philosophy that provides a practical context for managing people (Schultz, Bagraim, Potgieter, Viedge & Werner, 2003), including its primary objective to delight customer needs and satisfaction. Grandzol & Gershon (1997, p. 44) define TQM as "a holistic approach to running an organization such that every facet earns the descriptive quality". The augmentation of quality and sustenance of excellence in a

grim recessionary period dictates that organizations engage in strategic actions. The study takes cognizance of the extent to which teamwork, management support and training are effectively undertaken in a TQM environment. The aim is to unfold new patterns of thinking and alter employees' mindsets to readjust and percolate differing ideas and strategies and inculcate in them the zero defects theme to do it right the first time (Evans, 2005). A salient point of the Japanese experience is that there must be a 'fanatical obsession' of pursuing perfection and challenging targets with quick reaction to problems and taking corrective action (Dale, van der Wiele & van Iwaarden, 2007).

Teams and Teamwork: TQM requires both individual and team input for work processes which depend largely on employee talents, experience, competencies, knowledge, skills, and capabilities. With a total quality environment dictated by cooperative links, the emphasis is on teams and teamwork aimed at breaking down barriers and obstacles among individuals, departments, line and staff functions (Evans & Lindsay, 2005). Dale et al. (2007) are convinced that there is variation with the characteristics of quality improvement teams. What is imperative is a team's pooled efforts and management's role in ensuring that stakeholders (employees, customers and suppliers) receive the necessary preparation and work with synergy as a team to enjoy the benefits of their partnerships and interaction. For example, autonomous workgroups may enrich work by simply finding 'groundbreaking new patterns' of arranging and designing jobs (Fincham & Rhodes, 2005).

High performing teams with special characteristics function optimally at teamwork, and must utilize their creativity to help organizations with continuous operations improvement and in the development of new 'products, services and markets' (French, Rayner, Rees & Rumbles, 2008). Intense improvement is needed with productivity and quality, including response time, which can be dealt with in teams (Manz & Sims, 1993 cited in Gomez-Mejia et al., 2004). Teamwork includes responsibility for 'driving down errors', output and defect monitoring including workers motivation and behaviour factors (Fincham & Rhodes, 2005). Positivity will emerge with workgroups if the work includes a 'measure of up skilling', including self-management and is noticeable where work is less restrictive and workers are able to manage with uncertainty too (Wall & Jackson, 1995 cited in Fincham & Rhodes, 2005). A need exists for management to help teams with team processes. Team cohesiveness with "stable memberships foster feelings of loyalty, security and high self-esteem" (French et al., 2008, p. 286) and is beneficial for achieving ultimate results in a TQM environment.

Team activities empower employees and enable the efficient identification of individual training in job-related and problem-solving skills and consequently, increase the pace of quality improvement (Evans & Lindsay, 2005). Teams and teamwork can be effectively utilised taking cognizance of the following:-

- Utilize management teams, natural work teams, self-managed teams and virtual teams for decision-making relating to work design and the way it is organised (Evans & Lindsay, 2005; French et al., 2008). The types of teams depend on the nature of the problem. The common types are "project teams, quality circles and quality improvement teams" (Dale et al., 2007, p. 528).
- Utilize quality circles, problem-solving teams and project teams to manage tasks or issues of a specific nature regarding quality improvement initiatives (Evans & Lindsay, 2005).
- Effective team functioning is evident with team awareness of how each one fits into the efforts of the larger team.
- Effective team building necessitates an environment that fosters differing opinions and open resolution of conflict. This emphasizes the need for role clarification and in this regard role analysis techniques and role negotiation techniques may be effectively utilised. Such processes assist in eliminating mistrust or negative feelings, which can hinder the team spirit of the group.
- Training to transform a group into a high performance team is imperative (Sundstrom, 1999, cited in Quinn, Faerman, Thompson & McGrath, 2003).

To achieve high performance, team acquaintance is required. They need to be given an opportunity to express their approach in solving a problem or managing a project. As the team progresses through the stages of team development (organising, establishing interdependence, producing and evaluating), suitable group behaviours and prioritization of activities must be ensured. Thus, facilitators are needed to provide advice when problem-solving, using certain quality management tools and keeping the activities of the team on course (Dale et al., 2007) to create high performance teams. Managers need to be good listeners, accept team recommendation, reward and motivate the team (Thamizhmanii & Hasan, 2010) and, through empowered teams and commitment to quality, the company must promote self-development and empowerment (Juran & Godfrey, 1999 cited in Evans & Lindsay, 2005). With ownership

and responsibility teams are empowered to make changes to ensure the ultimate success of a quality end result. According to Coyle-Shapiro (1997 cited in Psychogios & Priporas, 2007), teamwork is a condition for continuous improvement and is an effective work entity than individuals.

Today's managers are tasked to ensure that appropriate training and training in team dynamics and project planning, amongst others, is available. A noteworthy point is that team's problem solves and works according to an agenda (Dale et al., 2007). With superior performing organizations employing various types of teams, this can be used at different stages of development of TQM (Dale et al., 2007). The types of teams depend on the nature of the problem. Managers need to monitor skills to handle the continuous changing of jobs that comes with team complexity, and managers control the processes and not team members. Teams in a Kaizen work setting could cultivate a culture of total quality by building responsibility, providing more communication channels between individuals, managers, customers and suppliers and raise awareness of quality improvement, leaning toward behavioural and attitude change (Dale et al., 2007).

Continuous Top Management Support: Essential to the successful implementation of TQM is leadership and top management support. Managers need to create a corporate culture so that "quality products and services, business processes and people are central" (Bank, 2000, p. xi) and their effectiveness will determine short and long term success and organizational survival, viability and profitability. Top management commitment is the rim that holds TQM initiatives and they often convince senior managers of the financial benefits that can be derived. Yousaf (2006) highlights that they need to ensure that decisions and action are in place, as quality comes from the top. The need for senior management commitment and leadership is recognised by most prominent writers in the field, including Juran, Feigenbaum, Deming and Shewhart. The lack of top management support is one factor attributing to the failure of TQM implementation (Krumwiede et al., 1998 and Waldman, 1993 cited in Yen, Krumwiede & Sheu, 2002). Effective leaders should facilitate 'sense making' by helping others to be in line with the realities in the context in which they function (Fincham & Rhodes, 2005).

The purpose of a manager's job is threefold (Kinnich, 2002):

- To guide individuals for successful task completion and engaging in activities that support organizational goals. Managers may lead by working continuously with employees to improve processes that they control. They may also work continuously with subordinates and model behaviours that emulate obtaining accurate feedback from customers and effectively acting on this information. In this way, managers can engage in, and encourage, behaviours that are consistent with quality values, make constructive suggestions for quality improvement initiatives and, inspire and motivate employees. Hence, barriers to process improvement can be removed and employees can be recognised for improvement efforts when key milestones are accomplished (Evans, 2005).
- To develop people for continuous improvement of organizational capability involves investing in employees via an organization-wide culture change programme incorporating effective communication, training, teamwork, empowerment and continuous improvement. Other contributory elements include mutual trust with employees and keeping them motivated and focused on desired goals. By educating employees of organizational processes they are able to participate effectively in the TQM initiative and embark on setting priorities for the improvement of processes.
- To implement both policies and procedures consistently to protect the organization.

Before implementing the TQM principles, organizational development practitioners must examine the culture before implementation (Pool, 2000). Managers need to improve supervision, train and retrain staff to be equipped with new skills and formulate a structure to 'push the quality programme' (French et al., 2008). With a balanced scorecard, managers can see the performance of an organization based on the needs of stakeholders and their satisfaction. It also depicts the organization from internal and external customers', employees' and shareholders' perspectives (Noe, Hollenbeck, Gerhart & Wright, 2008). The sustenance of organizations requires that managers maximise market share, growth and output through principles of management including planning, leading, mentoring and enhancing employee involvement. The evolution of these concepts is provoked by other stressors such as resources and time pressures. To attain corporate goals and to become a significant role-player in the economy, competitive organizations require a proactive style of management. Competition demands quality leadership to lead quality, to develop people competencies and to motivate. By implication, leaders too need to be carefully identified,

recruited, selected, developed and provided with opportunities to implement their skills (Brewster, Carey, Dowling, Grobler, Holland & Warnich, 2003). A lesson from the Japanese experience of TQM is that a managed process must be in place to examine, amongst others, products, service processes and procedures continuously (Dale et al., 2007).

Continuous Training and Learning: With investments in training and education, an organization's capabilities surface strongly to achieve the ultimate excellence in performance. Education, training, and career development facilitate the attainment of organizational objectives and build employee knowledge, skills and abilities. The training and TQM relationship is different from traditional organizations (Maughan & Anderson, 2005). Borrow (1993) and Sohal & Morrisson (1995 cited in Pool, 2000) discovered that both TQM and the learning organization initiatives provide teamwork, and the ability to learn as an organization, amongst others. Borrow (1993) specifically states that TQM and organizational learning are inextricably linked. The learning orientation includes knowledge accumulation about products, product development and how it is made (Applebaum & Reichart, 1997 cited in Maughan & Anderson, 2005). Companies that invest adequately and effectively in training based on a proper training needs analysis, outperform those that do not. Considering this, Yang (2003, p. 156) makes reference to peoples' input and structural input with the resultant effect being the 'gain of organizational knowledge' and the increase of 'organizational financial performance'. According to Noe et al. (2008), organizations have placed emphasis on product quality, engaging in TQM programs that need extensive training of staff in the TQM philosophy, methods and skills that contribute to quality. With focus on TQM, organizations make training and education an essential responsibility of the human resource department especially to develop the skills and knowledge of empowered employees (Evans & Lindsay, 2005). Fundamental to the TQM ideology is to enlighten employees of the goals of customer satisfaction, to train them on how to identify customer needs and fulfil their expectations, and to emphasize the value of their role in enhancing product and service delivery. Training addresses quality awareness, leadership, project management, decision-making, problem-solving, improving communication and team cohesiveness, and process management that enhance effectiveness, efficiency and safety and reduce the occurrence of defective products.

Employee's organization-wide should have the correct level and standard of education and training so that they are *au fait* with quality management concepts, including skills and competencies that are suited to continuous improvement (Dale, 2003). Training and education must be aligned with the operational circumstances of the business environment and the training programme must facilitate continuous education and self-development to optimally unleash potential and creativity. It must shape the employees' behaviour and attitude to take note of customer needs and to channel activities to optimize the fulfilment of customer expectations (Kelemen, 2003). According to Maughan and Anderson (2005), constructivists view the learner as building new knowledge via experiences and information obtained. In addition, learning opportunities steer the way to new ideas and concepts. Apart from increasing employee morale, training impacts on productivity and opens avenues for lucrative opportunities for outstanding business outcomes. Without a single best learning framework to base training programs for quality organizations, all hold value and some characteristics show unique applications (Maughan & Anderson, 2005). Linking teaching and learning practices to TQM organizational structure requires quality training experts and HRD professionals of HRD to guide practices and structures (Maughan & Anderson, 2005). When companies adopt or re-emphasize TQM practices, the workplace structure and the nature of work changes, and triggers new requirements for new knowledge and skills (Maughan & Anderson, 2005). According to French et al. (2008), there must be synergy between training, learning and purpose. In line with this, Dale et al. (2007) assert that the right form of training aimed at the right people should be developed. Top managers need to align their leadership styles with TQM development. In this regard, the success of TQM implementation follows top management's ideas, vision, and strategic thinking to lend support to this mammoth task.

Aims of the study: This study aims to assess managerial perceptions of the importance of teams and teamwork and continuous top management support, training and learning in bringing about TQM. Biographical influences on these managerial perceptions are also assessed.

2. Methodology

Research approach: The research methodology has been designed to assess the importance of teams and teamwork and continuous top management support, training and learning in a total quality management (TQM) initiative using a survey approach.

Respondents: The population comprised of middle, senior and top management in a large public sector department in eThekweni (Durban) in South Africa. The population comprised of approximately 400 managers. The sample of 202 subjects was drawn using a stratified random sampling technique to ensure proportionate representation from the strata of the designated groups of interest, that is, managers. According to the population-to-sample size table by Sekaran (2003), the corresponding minimum sample size for a population of 400 is 196, thereby confirming the adequacy of the sample size for this study. In terms of the composition, 12.9% of the sample consisted of top managers, 32.7% were senior managers and 54.4% were middle managers. In addition, 29.7% of the respondents were 50 years and older, 39.1% were between 40-49 years, and 24.8% were between 30-39 years with only 6.4% being below 30 years. White respondents made up 34.7% of the respondents, followed by Indians (39.1%), Blacks (19.8%) and Coloureds (6.4%). In terms of tenure, 24.8% of the respondents worked in the organization for 21 years and over, 16.8% served for 16-20 years, 27.2% for 11-15 years, 21.3% served for a term of 6-10 years and only 9.9% were between 0-5 years in the company. The majority of the subjects have a postgraduate degree (40.6%), followed by those who hold a first degree (24.3%), those who have a diploma certificate (16.3%), a postgraduate diploma certificate (10.4%) and 8.4% who have between Standard 8-10 (Grade 10-12). The majority of the subjects were males (85.1%) with only 14.9% being females, thereby indicating the disproportionate percentage of females to males in management. The adequacy of the sample was further determined using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (0.783) and the Bartlett's Test of Sphericity (1934.514, $p = 0.000$) for teams and teamwork and continuous top management support, training and learning, which respectively indicated suitability and significance. The results indicate that the normality and homoscedasticity preconditions are satisfied.

Measuring Instrument: Data was collected using a self-developed questionnaire consisting of Section A (biographical information) and Section B which included items relating to teams and teamwork and continuous top management support, training and learning. The biographical data in Section A was collected using a nominal scale with pre-coded option categories and the items in Sections B were measured using a 5-point Likert scale ranging from strongly disagree (1), disagree (2), neither agree/not disagree (3), agree (4) to strongly agree (5). The questionnaire was formulated on the basis of identifying recurring themes that surfaced during the literature review and the 26 items included in the questionnaire related directly to the constructs being measured (12 items related to teams and teamwork, 7 items pertained to continuous top management support, 7 items related to continuous training and learning). This ensured face, content and constructs validity. Furthermore, in-house pretesting was adopted to assess the suitability of the instrument. Pilot testing was also carried out using 12 subjects, selected using the same procedures and protocols adopted for the larger sample. The feedback from the pilot testing confirmed that the questionnaire was appropriate in terms of relevance and construction.

Statistical measures of the questionnaire: The validity of the questionnaire was assessed using Factor Analysis. A principal component analysis was used to extract initial factors and an iterated principal factor analysis was performed using SPSS with an Orthogonal Varimax Rotation. Only items with loadings >0.4 were considered to be significant and when items were significantly loaded on more than one factor only that with the highest value was selected. In terms of the sub-dimensions of participative management (Section B), three factors with latent roots greater than unity were extracted from the factor loading matrix. Factor 1 relates to teams and teamwork and accounts for 14.22% of the total variance, Factor 2 pertains to continuous training and learning and accounts for 13.89% of the total variance and Factor 3 relates to continuous top management support and accounts for 13.87% of the total variance in determining the importance of the dimensions in bringing about total quality management. The reliability of Section B of the questionnaire relating to the sub-dimensions of participative management was determined using Cronbach's Coefficient Alpha ($\text{Alpha} = 0.867$). This alpha coefficient indicates a very high level of internal consistency of the items and hence, a high degree of reliability. The reliabilities for the individual dimensions were also assessed. Whilst the reliability for teams and teamwork ($\text{Alpha} = 0.805$) is very strong and the inter-item consistency for continuous top management support ($\text{Alpha} =$

0.699) is fairly strong, the reliability for continuous training and learning (Alpha = 0.602) is fair/acceptable.

Administration of the measuring instrument: The questionnaires were administered over a three month period and respondents could either post the questionnaire in the attached self-addressed envelope or send them electronically to the researchers.

Statistical analysis: Descriptive (means, standard deviations) and inferential (correlation, ANOVA, t-test, Post Hoc Scheffe's test) statistics were used to analyze the quantitative data. The data was captured using Excel (Version 5), processed with SPSS and presented using tabular and graphical representations.

3. Results

Managerial perceptions of efforts to ensure effective teams and teamwork, continuous top management support and continuous training and learning in order to enhance total quality management were determined (Table 1).

Table 1: Descriptive Statistics – Teams and teamwork, continuous top management support, training and learning

Statistic		Dimensions Teams and teamwork	Continuous top management support	Continuous training and learning
Mean		3.0760	3.6447	3.4874
95% Confidence	Lower Bound	2.9769	3.5719	3.3938
Interval for Mean	Upper Bound	3.1752	3.7174	3.5811
Variance		0.490	0.271	0.449
Std. Deviation		0.69999	0.52062	0.66977
Minimum		0.00	2.00	1.14
Maximum		4.33	5.00	5.00

Overall, managerial perceptions of teams and teamwork, continuous top management support and training and learning in efforts to achieve total quality management are fairly positive. In this organization, the focus in bringing about total quality management is on continuous top management support (Mean = 3.6447), followed by continuous training and learning (Mean = 3.4874) and lastly, teams and teamwork (Mean = 3.0760). Against a maximum attainable score of 5, there is room for improvement in each of the dimensions having the potential to influence total quality management. Frequency analyses were computed to obtain greater insight into these managerial perceptions. With regards to teams and teamwork, 66.3% of the managers agreed or strongly agreed that employees are kept informed of how they fit in the larger scenario of the organization. However, large segments of managers were uncertain whether there is constant evaluation of behaviours that are aligned with goal accomplishment (36.6%), whether team members were aware of the competencies of others (36.1%), whether there is freedom of expression in problem-solving and project management teams (30.7%) and of the benefits of using quality circles for quality issues in the organization. Furthermore, managers were not convinced that teams in the organization are staffed, structured and trained adequately (31.7%) and that formal team building techniques are used to identify strengths, weaknesses and areas for improvement (24.8%).

With regards to continuous top management support, 79.1% of the managers strive to create a corporate quality culture where services and people are central and 75.3% believe that the organization implements policies and procedures consistently to protect the institution. However, managers were not convinced that employees are constantly guided and encouraged to engage in behaviours that are consistent with quality values (47.5%) or inspired and motivated (40.4%) so that the accomplishment of organizational goals may be promoted or that employees' competencies are developed so as to ensure continuous improvement (35.2%). With regards to continuous training and learning, a significant segment of managers felt that training and education is a critical component in the organization (81.7%), the organization invests in training and education for achieving excellence (81.2%) and recognizes the need for a proper training needs analysis on an ongoing basis (80.1%), that training and education equips staff with additional skills and abilities (77.2%) and shapes their behaviour and attitudes towards

fulfilling customer expectations optimally (73.3%). However, managers were not convinced that employees are given the right level of education to understand the continuous improvement mindset (56.1%) and that training in TQM ideology includes quality awareness, leadership, decision making and team cohesiveness (35.1%).

Hypothesis 1: There dimensions of teams and teamwork, continuous top management support, training and learning that have the potential to contribute to total quality management significantly correlate with each other (Table 2).

Table 2: Intercorrelation - Dimensions of teams and teamwork, continuous top management support, training and learning

Sub-dimension	Teams and teamwork	Continuous top management support	Continuous training and learning
Teams and teamwork	1		
Continuous top management support	0.585 0.000*	1	
Continuous training and learning	0.595 0.000*	0.618 0.000*	1

* p < 0.01

Table 2 indicates that the dimensions of teams and teamwork, continuous top management support, training and learning that have the potential to contribute to total quality management significantly correlate with each other at the 1% level of significance. Hence, hypothesis 1 may be accepted. The implication is that an improvement or change in any one of these dimensions has the potential to impact on the other dimensions thereby, influencing total quality management. The combined improvement of all the dimensions will have a snowballing effect and exponentially contribute to, the realization of TQM. Table 2 also reflects a fairly strong relationship between continuous top management support and continuous training and learning (r = 0.618).

Hypothesis 2: There is a significant difference in the perceptions of managers varying in biographical data (position, age, race, tenure, academic qualification, gender) regarding each of the dimensions of teams and teamwork, continuous top management support, training and learning that have the potential to contribute to total quality management (Tables 3 – 6).

Table 3: ANOVA and t-test - Biographical Variables and teams and teamwork, continuous top management support, training and learning

Dimension	ANOVA										t-test		
	Current Position		Age		Race		Tenure		Academic Qualifications		Gender		
	F	p	F	P	F	p	F	p	F	p	t	df	p
Teams and teamwork	0.39 3	0.67 6	0.42 5	0.73 5	2.15 3	0.09 5	0.08 5	0.98 7	0.42 7	0.789		19 5	
Continuous top management support	1.18 7	0.30 7	1.32 5	0.26 8	0.16 8	0.91 8	0.23 7	0.91 7	2.54 8	0.041 **	- 2.61 3	19 5	0.011 **
Continuous training and learning	4.74 4	0.01 0*	1.37 8	0.25 1	0.67 5	0.56 8	1.35 5	0.25 1	2.99 0	0.020 **	- 1.09 4	19 5	0.275

* p ≤ 0.01

** p < 0.05

Table 3 indicates that the perceptions of managers varying in current position (top, senior, middle managers) regarding continuous training and learning differ significantly at the 1% level of significance. Furthermore, managers varying in academic qualifications differ significantly in their views of continuous top management support, training and learning, at the 5% level of significance. Also, male and female manager differ significantly in their perceptions of the extent to which continuous top management support exists in the organization in ensuring total quality management. No other significant biographical influences were noted in Table 3. Hence, hypothesis 2 may only be partially accepted. In order to assess exactly where these significant differences lie, the Post Hoc Scheffe's test was computed (Tables 4 – 5).

Table 4: Post Hoc Scheffe's Test – Current Position and Continuous training and learning (Multiple Comparisons)

Dependent Variable	(I) Current Position	(J) Current Position	Mean Difference (I-J)	p
Continuous training and learning	Top manager	Middle manager	0.341	0.003*
* The mean difference is significant at the 0.01 level				
Dimension		Top manager	Senior manager	Middle manager
Continuous training and learning	N	26	66	110
	Mean	3.896	3.670	3.555
	Std. Dev.	0.446	0.483	0.554

The mean differences in the Post Hoc Scheffe's Test results (Table 4) indicate that top managers (Mean = 3.896) differ significantly from middle managers (Mean = 3.555) with regards to their perceptions of the extent to which continuous training and learning exists in the organization to bring about total quality management. Evidently, middle managers are not as convinced as their counterparts (top managers) that continuous training and learning takes place in the organization in efforts to ensure total quality management.

Table 5: Post Hoc Scheffe's Test – Academic Qualifications and Continuous top management support, training and learning (Multiple Comparisons)

support, training and learning (Multiple comparisons)						
Dependent Variable		(I) Academic Qualifications	(J) Academic Qualifications	Mean Difference (I-J)	p	
Continuous top management support		Post-graduate diploma/certificate	Standard 8-10	0.305	0.035**	
			Diploma/Certificate	0.279	0.009*	
		Post-graduate degree/s	Undergraduate degree	0.236	0.011**	
Continuous training and learning		Post-graduate degree/s	Standard 8-10	0.558	0.016**	
			Diploma/Certificate	0.394	0.023**	
* The mean difference is significant at the 0.01 level						
** The mean difference is significant at the 0.05 level						
Dimension		Standard 8-10	Diploma/ Certificate	Under- graduate Degree	Post- graduate Degree	Post- graduate Diploma/ Certificate
Continuous top management support	N	15	33	49	82	21
	Mean	3.162	3.351	3.414	3.611	3.674
	Std. Dev.	0.943	0.704	0.601	0.620	0.613
Continuous training and learning	N	15	33	49	82	21
	Mean	3.476	3.502	3.545	3.781	3.368
	Std. Dev.	0.576	0.649	0.419	0.486	0.507

The mean differences in the Post Hoc Scheffe's Test results (Table 5) indicate that with regards to continuous top management support, managers who hold a post-graduate qualification (diploma/certificate or degree: Mean = >3.611) differ significantly from managers who have Standard 8-10 (Mean = 3.162), a diploma/certificate (Mean = 3.351) or an undergraduate degree (Mean = 3.414) with the former being more convinced than the latter that continuous top management support exists in the

organization to ensure total quality management. Furthermore, managers with a post-graduate degree/s (Mean = 3.781) differ significantly from managers with Standard 8-10 (Mean = 3.476) and those with a diploma/certificate (Mean = 3.502) regarding continuous training and learning in the organization. Whilst the former believes that continuous training and learning takes place in the organization to ensure total quality management, the latter is not convinced.

4. Discussion

The results indicate that managerial perceptions of teams and teamwork, continuous top management support and training and learning in efforts to achieve total quality management are fairly positive. In this organization, the focus in bringing about total quality management is on continuous top management support (Mean = 3.6447), followed by continuous training and learning (Mean = 3.4874) and lastly, teams and teamwork (Mean = 3.0760). Against a maximum attainable score of 5, there is room for improvement in each of the dimensions having the potential to influence total quality management with the greatest improvement needed in teams and teamwork. This is imperative as teamwork is an integral aspect of TQM, providing a chance for co-operative action to pursue continuous improvement (Dale, 2003; Irani, Beskese & Love, 2004; Kontoghiorghes, 2003). In fact, Patel (2013) believes that within the concept of TQM, teamwork is an imperative outcome and a condition or necessity for continuous improvement. Furthermore, team activities empower employees, enable the efficient identification of individual training in job-related and problem-solving skills and consequently, increase the pace of quality improvement (Evans & Lindsay, 2005; Kontoghiorghes, 2003; The Irish Times, Business 2007/8). Shahraki, Konarizadeh, Paghaleh and Zarei (2011) add that multidisciplinary teamwork in teams composed of members from different organizational functional domains promotes TQM. However, Foster (2004, p. 329) cautions that sometimes quality improvement teams initiate improvement projects and “for whatever reason, things fall apart, and the team risks failure”. With regards to training, researchers have concluded that continuous training is pivotal to the internal diffusion of quality ideas and practices and, is essential to the implementation of a TQM initiative (Patel, 2013; Shahraki et al., 2011). Training is also a vital component in adapting to changes in technology, changes in the organization’s environment, structure and human resources. In terms of top management support in a TQM environment, researchers emphasize the need for senior managers to succinctly define the quality objectives of the organization in order to provide direction and leadership (Daily & Bishop, 2003; Patel, 2013).

The results also reflect that the dimensions of teams and teamwork, continuous top management support and training and learning significantly relate to each other at the 1% level of significance. Regarding the relationship between teams and teamwork and continuous top management support, Keighley (1993, p. 6) maintains that the “self-managed work team is a new way of viewing the relationship of the worker-management-organization”. Top management support is certainly needed to prevent employees in teams from feeling that TQM and employee empowerment is a ‘management buzzword’ and that decision making is still handled at the top of the organization’s hierarchy (Mustafa & Talib Bon, 2012; Scully, 1993), especially with regard to customer-orientated values and beliefs (Irani, Beskese & Love, 2004) and in ensuring lower defects and higher profits (Maddox, 2009). Daily and Bishop (2003) maintain that management support reinforces commitment from employees, assists in the design of teams to bring about positive outcomes, ensures that teams have appropriate information access and emphasizes the importance of teams and teamwork. Mealiea and Baltazar (2005) confirm that a critical team-building resource that is readily available in organizations is the manager and management support is central to building effective teams.

In the current study, it is found that there is a significant relationship between teams and teamwork and continuous training and learning at the 1% level of significance. Salas and Rosen (2003) found that team training impacts important processes and outcomes relating to safety and quality. Furthermore, the results of the current study also reflect that there is a fairly strong relationship between continuous top management support and continuous training and learning in efforts to achieve TQM. Foster (2004) believes that management may receive information regarding the current status of employees’ knowledge and, problems which may be revealed must be addressed through training. Further to providing insight into training needs, Ribière and Khorramshahgol (2004) emphasize the importance of integrating TQM and knowledge management which will enable an organization to achieve business excellence in its quality endeavour and in its KM practices. The significant inter-correlation of the dimensions of teams and teamwork, continuous top management support, training and learning emphasize that an improvement in any one sub-dimension has the potential to have a snowballing effect and enhance all the

other dimensions as well as total quality management. A combined improvement in all the dimensions of teams and teamwork, continuous top management support, training and learning, therefore, has the potential to enhance total quality management exponentially.

Impact of biographical data on teams and teamwork, continuous top management support, training and learning

With regards to the influence of biographical data, it was found that there is no significant difference in the perceptions of managers varying in biographical data (current position, age, race, tenure, academic qualifications, and gender) regarding teams and teamwork and their efforts to achieve total quality management. However, with regards to teams and teamwork and tenure, Kirkman, Tesluk and Rosen (2004, p. 334) noted that teams were “less effective when their team leaders had longer, rather than, shorter, organization tenure”. Furthermore, regarding the influence of gender on teams and teamwork, research indicates that the advantages that gender balanced teams have are not normally present in ‘same sex teams’ and having gender combinations benefits team functioning, performance without sacrificing cohesion or at the expense of increased decision making time (Rogelberg & Rumery, 1996). It was noted that organizations with the most gender diversity outperform those with the least and hence, emphasize the need for gender diverse executive teams (Hoogendoorn, Oosterbeek & van Praag, 2013; Workplace Gender Equality Agency, 2013). In particular, Hoogendoorn et al. (2013) found that teams with an equal gender mix perform better than male-dominated teams in terms of sales and profits. Evidently, gender balancing brings about economic growth as diverse boards or teams make better decisions, are more effective and are associated with higher task performance, thereby making the rewards both financial and ethical (Boiney, 2001; Winmark & ReedSmith, 2011). Furthermore, Knouse (2007) noted that innovative and higher quality solutions to problems might be produced by team diversity. However, Kirkman et al. (2004, p. 361) found that “racial diversity has direct negative effects on team empowerment and both direct and indirect negative effects on team outcomes”. With regards to teams and teamwork and current position (top, senior and middle managers), Callanan (2004) states that leaders who embrace the concepts of high involvement and participative management may face difficulty with internal systems reward Machiavellian behaviours that preclude the sharing of power.

With regards to the impact of biographical data, it was also found that there is a significant difference amongst managers varying in current position in the organization regarding continuous training and learning at the 1% level of significance. Furthermore, there is a significant difference amongst managers varying in academic qualifications regarding continuous top management support and continuous training and learning respectively at the 5% level of significance. Fripp & Wilson (1996 cited in Brown, 1999) noted that managers involved in training favour the portability of qualifications which provides improved changes of employment and improved promotion prospects, amongst others, to employees. In addition, in the current study it was found that there is a significant difference amongst male and female managers regarding continuous top management support in efforts to accomplish total quality management.

5. Conclusion and Recommendations

Since teams and teamwork is an essential management ingredient, ensure that employees understand the benefits of using quality circles for quality issues relating to the organization. In addition, institute a formal team building technique as an ingredient of high-performing teams to identify strengths, weaknesses and areas for improvement.

Managers can effectively utilize teams and teamwork in their quality initiatives in the organization by taking cognisance of the following:

- Use management teams, natural work teams, self-managed and virtual teams for designing and organizing work.
- Use quality circles, problem-solving teams and project teams to manage tasks and improve quality.
- Ensure team awareness of how each team member fits into the efforts of the larger team.
- Effective team building needs an environment that fosters differing opinions and open conflict resolution.
- Attention must be focused on design, staffing and structure of teams and training is important to achieve high-performing teams.

- Accomplishing high-performance teams needs members to recognize each other's competencies, an expressive approach to problem-solving, and a formal team-building effort and management commitment to it.

Emerging from the results of the current study regarding continuous top management support, it is strongly recommended that managers must guide and inspire employees by encouraging behaviours that are consistent with quality values and, managers must constantly motivate employees. Furthermore, managers must guide individuals for successful task completion and in engaging in activities that support organizational goals. They must lead by:

- Working continuously with subordinates to improve processes that they control.
- Modelling behaviours that emulate obtaining accurate feedback from customers and effectively acting on this information.
- Making constructive suggestions for achieving quality improvement and customer satisfaction.
- Inspiring and motivating employees and removing barriers to process improvement.
- Providing employees with recognition of improvement efforts when key milestones are reached (Evans, 2005).

In addition, managers need to develop people for continuous improvement of the organization's capability, which involves focusing on effective communication, training, teamwork, empowerment and educating employees on merging organizational processes so as to participate effectively in the TQM initiative. Of utmost importance, managers must implement policies and procedures consistently to protect the organization.

With regards to continuous training and learning, managers need to ensure that employees are given the right level of education to understand the continuous improvement mindset. Furthermore, training in a TQ environment should ensure that:

- Employees are given the right level and standard of education and training so that they understand quality management concepts and build skills, competencies and attitudes that are congruent with the continuous improvement philosophy (Dale, 2003).
- The mode of training and education must be aligned with the operational circumstances of the business environment and the training programme must facilitate continuous education and self-development to unleash potential and creativity.
- Training and education must focus on shaping employee attitude and behaviour to recognize customer needs and to optimize the fulfilment thereof (Kelemen, 2003).

With regards to the biographical data, continuous training and learning is influenced by managers' current position in the organization. In the current study, it was found that the higher the managerial level, the stronger the perceptions that training and learning is taking place in the organization. In light of this, it is imperative to effectively communicate all training and learning initiatives to lower levels of management as they interact directly with subordinates those they often recommend for training programmes. In addition, continuous top management support, training and learning is influenced by managers' academic qualifications. It was found in the current study that the higher the academic qualifications of managers, the stronger the managerial perceptions that continuous top management support, training and learning is taking place in the organization in efforts to accomplish TQM. In view of this, it is essential that managers with lower qualifications are given the opportunity to further their qualifications to be au fait and equipped with issues involving training and learning and receive support from executive management for their own progression and development and that of their subordinates. Furthermore, it was found that continuous top management support is influenced by gender. Hence, it is imperative that there is equity in top management support and that this is perceived by both male and female employees in the organization. Evidently, team-based organizations, employee empowerment, further education and training on quality matters and tapping into peoples' abilities lay a firm foundation for a smooth quality journey, with high standards. Effective managers working towards a TQM initiative need to be proactive, motivated, show optimism, set strategic goals and create an environment of trust. Undoubtedly, a powerful organizational culture with effective managerial leaders engaged in a TQM initiative is an investment. The study emphasizes the need for effective teams and teamwork and continuous top management support, training and learning when facing the magnitude of challenges to keep a TQM momentum progressing effectively.

References

- Ali, M. & Shastri, R. K. (2010). Implementation of total Quality Management in Higher Education. *Asian Journal of Business Management*, 2(1), 9-16.
- Bank, J. (2000). *The Essence of Total Quality Management* (2nd Edition), Europe: Prentice Hall.
- Boiney, L. G. (2001). Gender Impacts Virtual Work Teams. *Graziadio Business Review*, 4(4), 1-5.
- Borrow, J. (1993). Does total quality management equal organizational learning? *Quality Progress*, 26(7), 39-43.
- Brewster, C., Carey, L., Dowling, P., Grobler, P., Holland, P. & Warnich, S. (2003). Contemporary issues in human resource management: gaining a competitive advantage, Cape Town: Oxford University Press Southern Africa.
- Brown, P. (1999). Client-based management qualifications: A case of win-win? *Journal of Management Development*, 18(4), 350-361.
- Callanan, G. A. (2004). What would Machiavelli think? An overview of the leadership challenges in team-based structures. *Team Performance Management*, 10(3-4), 77-83.
- Daily, B. F. & Bishop, J. W. (2003). TQM workforce factors and employee involvement: the pivotal role of teamwork. *Journal of Managerial Issues*, 15(4), 1-12.
- Dale, B. G. (2003). *Managing Quality* (4th Edition), United Kingdom: Blackwell Publishing Ltd.
- Dale, B. G., van der Wiele, T. & van Iwaarden, J. (2007). *Managing Quality* (5th Edition), USA: Blackwell Publishing.
- Evans, J. R. (2005). *Total Quality: Management, Organization, and Strategy* (4th Edition), Canada: Thomson South-Western.
- Evans, J. R. & Lindsay, W. M. (2005). *The Management and Control of Quality* (6th Edition), Singapore: Thomson South-Western.
- Fincham, R. & Rhodes, P. (2005). *Principles of Organizational Behaviour* (4th Edition), Oxford: Oxford University Press.
- Foster, S. T. (2004). *Managing Quality: An Integrative Approach* (2nd Edition), Singapore: Pearson Prentice Hall.
- French, R., Rayner, C., Rees, G. & Rumbles, S. (2008). *Organizational Behaviour*, England: John Wiley & Sons.
- Gomez-Mejia, L. R., Balkin, D. B. & Cardy, R. L. (2004). *Managing Human Resources* (4th Edition), New Jersey: Prentice Hall.
- Grandzol, J. R. & Gershon, M. (1997). Which TQM practices really matter: An empirical investigation. *Quality Management Journal*, 4(4), 43-59.
- Hoogendoorn, S., Oosterbeek, H. & van Praag, M. (2013). The Impact of Gender Diversity on the Performance of Business Teams: Evidence from a Field Experiment. *Management Science, Articles in Advance*, 1, 1-15.
- Irani, Z., Beskese, A. & Love, P. E. D. (2004). Total quality management and corporate culture: constructs of organisational excellence. *Elsevier, Technovation*, 24, 643-650.
- Keighley, T. (1993). Creating an empowered organization. *Training and Development in Australia*, 2, 6-11.
- Kelemen, M. L. (2003). *Managing Quality: Managerial and Critical Perspectives*, London: Sage Publications.
- Kinnich, M. (2002). *Improving Management Effectiveness: Human Resource Tools. Effective People Management: HR Tools*. Mark Kinnich & Associates.
- Kirkman, B. L., Tesluk, P. E. & Rosen, B. (2004). The Impact of Demographic Heterogeneity and Team Leader-Team Member Demographic Fit on Team Empowerment and Effectiveness. *Eastern Academy of Management*, 3, 334-368.
- Knouse, S. B. (2007). Building task cohesion to bring teams together. *Quality Progress*, 40(3), 49-53.
- Kontoghiorghes, C. (2003). Examining the Association between Quality and Productivity Performance in a Service Organization. *ASQ Publications, Quality Management Journal*, 10(1), 1-3.
- Maddox, J. E. (2009). *The Influence of Top Management Support on TQM Indicators of Defect Reduction and Profitability*, Capella University.
- Martinez-Lorente, A. R., Dewhurst, F. & Dale, B. G. (1999). TQM and Business Innovation. *European Journal of Innovative Management*, 2(1), 12-19.
- Maughan, G. R. & Anderson, T. (2005). Linking TQM Culture to Traditional Learning Theories. *Journal of Industrial Technology*, 21(4), 2-7.
- Mealiea, L. & Baltazar, R. (2005). A Strategic Guide for Building Effective Teams. *Public Personnel Management*, 34(2), 141-161.

- Mustafa, E. M. A. & Talib Bon, A. (2012). Role of top management leadership and commitment in total quality management in service organization in Malaysia: A review and conceptual framework. *Elixir Human Resource Management*, 51, 11029-11033.
- Noe, R. A., Hollenbeck, J. R., Gerhart, B. & Wright, P. M. (2008). *Human Resource Management: Gaining a Competitive Advantage*, Boston: McGraw-Hill Irwin.
- Oakland, J. (1995). *Total Quality Management*, Oxford: Butterworth Heinemann Ltd.
- Patel, S. G. (2013). TQM in Higher Education Institutions (HEIs). *International Journal for Research in Education*, 2(2), 79-83.
- Pool, S. W. (2000). The learning organization: motivating employees by integrating TQM philosophy in a supportive organizational culture. *Leadership and Organization Development Journal*, 21(8), 373-378.
- Psychogios, A. G. & Priporas, C. V. (2007). Understanding Total Quality Management in Context: Qualitative Research on Managers' Awareness of TQM Aspects in the Greek Service Industry. *The Qualitative Report*, 12(1), 40-66.
- Quinn, R. E., Faerman, S. R., Thompson, M. P. & McGrath, M. R. (2003). *Becoming a Master Manager: A Competency Framework* (3rd Edition), New York: John Wiley & Sons.
- Ribière, V. M. & Khorramshahgol, R. (2004). Integrating Total Quality Management and Knowledge Management. *Journal of Management Systems*, 16(1), 39-54.
- Rogelberg, S. G. & Rumery, S. M. (1996). Gender diversity, team decision quality, time on task, and interpersonal cohesion. *Small Group Research*, 27(1), 79-90.
- Salas, E. & Rosen, M. A. (2013). Building high reliability teams: progress and some reflections on teamwork training. *Quality and Safety in Health Care*, 22, 369-373.
- Scully, J. P. (1993). A point of view: Actions speak louder than buzzwords. *National Productivity Review (NLP)*, 4, 453-456.
- Schultz, H., Bagraim, J., Potgieter, T., Viedge, C. & Werner, A. (2003). *Organisational behaviour: A contemporary South African Perspective*, Pretoria: Van Schaik Publishers.
- Sekaran, U. (2003). *Research Methods for Business: A Skill Building Approach* (4th Edition), United States of America: John Wiley & Sons, Inc.
- Shahraki, A., Konarizadeh, M., Paghaleh, M. J. & Zarei, M. (2011). HRM effects on TQM. *Business Management Dynamics*, 1(3), 1-12.
- The Irish Times, Business 2000. (2007/8). *Total Quality Management*. Bus Eireann (11th Edition), Retrieved from the World Wide Web on 15 July 2013: <http://www.buseireann.ie>
- Thamizhmanii, S. & Hasan, S. (2010). A review on an employee empowerment in TQM practice. *Journal of Achievements in Materials and Manufacturing Engineering*, 39(2), 204-210.
- Winmark, K. & ReedSmith, L. (2011). *Gender Balancing: It's Good Business. A guide to making diversity in leadership happens*. Winmark: Networks, Research, Development and Reed Smith: The business of relationships, 1-40.
- Workplace Gender Equality Agency. (2013). *The business case for gender equality*. Retrieved from the World Wide Web on 15 July 2013: <http://www.wgea.gov.au>, 1-9.
- Yang, B. (2003). Toward a holistic theory of knowledge and adult learning. *Human Resource Development Review*, 2(2), 106-129.
- Yen, H. J., Krumwiede, D. W. & Sheu, C. (2002). A cross-cultural comparison of top management personality for TQM implementation. *Total Quality Management*, 13(3), 335-346.
- Yousaf, N. (2006). *Top Management Commitment for TQM – A Process Model*. Pakistan's 10th International Convention on Quality Improvement, November 27-28, Lahore, Pakistan.