TQM Implementation In Small U.S. Cities: Factors That Affect Successful Implementation

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ABSTRACT

TQM is spreading in the public sector as fast as it is spreading in the private sector. Cities who have successfully implemented TQM have achived astonishing results. Yet, there are TQM initiative in local governments who have failed to live up to the expectations. Success on the one hand, and disasters on the other characterize the TQM initiatives. However, empirical research that uncovers the factors that are causing these discripancies is very limited.

This paper, based on a complete and usable data from 56 cities argue that successful TQM implementation in local governments is contingent on positive organizational culture that is compatible with the principles of TQM; top-management commitment to and support for TQM; high level of employee participation and empowerment; provision of training on the concepts and tools of TQM; and high employee adaptability and receptivity to organizational change. Major barriers to successful TQM implementation are lack of top-management commitment, linkage between strategic planning goals and quality goals, efforts to change the existing culture, employee involvement in decision making, training on the concept of TQM and its tools, and the esitence of funding and budgeting constraints.

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1. INTRODUCTION & BACKGROUND

Local governments are facing a formidable array of challenges (Glaser 1993) and most of local governments are "nearing a state of fiscal and service delivery crisis" (Marlowe and Nyhan 1993, 1). Moreover, productivity growth rate in local governments is declining (Marlowe and Nyhan 1993), funds are diminishing (Whitten 1989), thousands of employees have been laid off (Osborne and Gaebler 1992), and citizens are demanding more services with less taxes (Mali 1990). According to Mali (1990), 71 percent of cities who responded (n=20) indicate that citizens constituency demand more government services, but with lower taxes. Furthermore, citizens confidence in government is extremely low (Newell 1988; OPM 1992; and Osborne and Gaebler 1992). Over 60 percent of Americans voters believe that most of money paid in taxes is wasted by government, only 14 percent of the American people, as the 1992 polls show, have a great deal of confidence in government (OPM 1992), and only 5 percent of American surveyed indicate that they would choose government as their preferred career (Osborne and Gaebler 1992).

In brief, government is "broke" and needs "fixing" (Walters 1992). Local governments have to do more with less and they "cannot expect to simply increase revenue as the only answer to providing existing and new services (Biederman 1992, 449). A solution that reverse the current situation is required. Conventional wisdom and traditional approaches will lead nowhere. The current problems and imminent challenges require redefining the way governments operate and rethinking our values and theories in use with respect to how governments should be run.

The current trends have resulted in frustration as well as conviction at all levels that there is a compelling need for change, not only in the public sector but in the private sector as well. At the same time, a growing body of literature ignited by the work and teachings of the quality gurus Crosby (1979, 1984), Deming (1986, 1988), Feigenbaum (1983), and Juran (1988, 1989) emphasizing the need for a dynamic national movement toward quality and the benefits that can be gained from effective implementation of the principles of total quality management (TQM). Advocates of TQM argue that effective implementation of TQM will significantly improve productivity (Becker, Golomski, and Lory 1994; Bester 1993; Carlisle 1990; Deming 1986, 1988; Feigenbaum 1991, 1993; Gabor 1988; Gitlow and others 1990; Ishikawa 1988; Juran 1991; and Rieker 1987); boost organizational performance (Barra 1988; Blest, Hunt, and Shadle 1992; Garrity 1993; and Kane 1992); reduce the cost of quality[1] (Berg 1993; Bohan and Horney 1991; Brocka and Brocka 1992; Carman 1993; Corradi 1994; Crosby 1979, 1984; Feigenbaum 1983, 1989; Gryna 1988; Hoexter and Julien 1994; Juran 1989, 1991; Rosander 1989; and Spitzer 1993); and ensure survival in the coming decades (Balutis 1993; Barrier 1992; Bush 1992; Carman 1993; Deming 1988; Dewar 1988; Feigenbaum 1993; Gorman 1987; Hutchins 1992; and, Scott 1989).

Even though, TQM was designed for the private sector and intended to improve quality and productivity in manufacturing organizations (Crosby 1979, 1984; Deming 1986; Feigenbaum 1983; and Juran 1989), the response to the quality movement in the public sector has been overwhelming (Carr and Littman 1993; Cohen and Brand 1993; Hunt 1993; Keehley 1992a, 1992b; Lefevre 1992; Milakovich 1991; and Swiss 1992). In recent years, local governments were either attracted by the benefits TQM promises or forced by their crises to adopt the principles of TQM. Consequently, a very large number of local governments have implemented TQM in the past few years and most of which have documented positive results (Box, Joiner, Rohan, and Sensenbrenner 1991; Brown 1992; Buckwalter, Chesnut, and Parsons 1993; Carlisle 1990; Contino and

Giuliano 1991; Galloway 1992; Luther 1993; Pfister and Wart 1993; Ream 1992; Sarno, Kolak, and Moore 1990; Stewart 1988; and, Walters 1992).

Governments who effectively implemented TQM have experienced reduced waste and overall cost of quality (Becker, Golomski, and Lory 1994; Buckwalter, Chesnut, and Parsons 1993; and Ritter 1991); increased employee morale (Moore 1990); reduced absenteeism (Moore 1990); improved organizational effectiveness (Buckwalter, Chesnut, and Parsons 1993; and Walters 1992); improved productivity (Becker, Golomski, and Lory 1994; Carlisle 1990; and Mead, Rasmussen, and Seal 1986); improved employee sensitivity to customers--citizens--(Carlisle 1990); and major annual savings (Brown and DeCrease 1991; and Moore 1990).

Unfortunately, organizations who achieved positive results from the implementation of TQM are only the minority. The majority are not getting the expected and promised results. Failure has become very common. Research shows that failure is far exceeding success (Eskildson 1994; Goodman, Bargatze, and Grimm 1994; Harari 1993a, 1993b; Merron 1994; Sherwood and Hoylman 1993; Steele 1993; Walker 1992; and, Walters 1992). Titles such as "When TQM Goes Nowhere"; "Ten Reasons Why TQM Doesn't Work"; "10 Reasons Why Total Quality Is Less Than Total"; "Why Does Total Quality Fail in Two Out of Three Tries"; and "Why TQM Fails and What To Do About It" are becoming common in most journals.

Why do some fail and others succeed? What are the barriers to successful implementation and what are the factors that promote successful TQM implementation? These questions must be answered and unless the factors that cause TQM to fail and the factors that promote successful TQM implementation are identified, benefits that TQM promises will not be gained and TQM will soon become a fade as did ZBB, MBO, and QC. It is essential that the factors that foster successful implementation and the ones that cause failure are identified.

In an effort to address some of these questions, Kravchuke and Leighton (1993) investigates the role of organizational culture and leadership in determining the success of TQM implementation in state government. They concluded that "Successful implementation of TQM in state government is contingent on strong managerial leadership and receptive administrative culture" (Kravchuke and Leighton 1993, 71).

Mohr-Jackson (1994) compared quality starters (organizations just starting TQM) with quality advancers (organizations well advanced in TQM implementation). Major and significant differences between quality starters and quality advancers were found in the areas of leadership, strategic quality planning, human resource development and management, management of process quality, quality and operational results, and customer focus and satisfaction (Mohr-Jackson 1994, 52). Mohr-Jackson (1994, 56) concluded that "these findings highlight the factors that foster and/or discourage total quality improvement efforts."

West, Berman, and Milakovich (1993) investigated the role of leadership in implementing TQM in local governments. Based on a national survey of all cities with a population over 25,000, the authors concluded that successful TQM implementation heavily depends on top-management commitment. In order to achieve the promised results of TQM, leaders must encourage the establishment of teams, empower employees, and make sure that critical stakeholders' views are represented (West, Berman, and Milakovich 1993).

Finally, Lawler, Mohrman, and Ledford (1992) investigated and analyzed the practice of employee involvement (EI) in the Fortune 1000 companies. Even though the study does not specifically deal with TQM implementation, the authors identify conditions that facilitate EI and barriers to EI in these companies. EI is part of TQM and requires the same environment TQM requires for success. Thus, conditions that facilitate EI can be assumed to facilitate TQM and vice versa. Results of the study show that support by top management; support by middle management; support by

first-line supervisors; availability of resources for employee involvement activities; decentralization of decision-making authority; employee security; third party consultation; and monetary rewards for employee involvement activity are the major conditions that facilitate EI (Lawler, Mohrman, and Ledford 1992). Major barriers to EI include short-term performance pressure; lack of a champion for employee involvement; lack of a long-term strategy; unclear employee involvement objectives; lack of tangible improvements; centralization of decision-making authority; management culture opposed to employee involvement; worsened business conditions; lack of coordination of employee involvement programs with other programs; turnover in top management (Lawler, Mohrman, and Ledford 1992).

Despite the contribution these studies have made, more efforts in the area are needed if future failures are to be limited and success is to be ensured. Reitsperger and Daniel (1993) point out that if failure TQM implementations are to be prevented and successful TQM implementations are to be promoted, more empirical research in the area is needed. This study, empirically examines the role of organizational and behavioral factors in obstructing and/or fostering the implementation of TQM. It focuses on the issue of why some organizations fail and others succeed even though they are similar with respect to their missions and structures.

2. THE STUDY

To identify the barriers to TQM implementation in local governments and the factors the foster TQM implementation, all cities with population between 50,000 and 125,000 and council-manager forms of government were selected with help of the International City/County Management Association (ICMA).[2] Of the 242 cities that meet these criteria and that are in the ICMA data base, 142 were contacted by phone and 80 by mail to solicit their participation.

Packets that include one questionnaire to be completed by the city manager, a set of 20 questionnaires to be completed by other administrators in the city, a personalized cover letter to the city manager and cover letters to the other participants, and 21 pre-addressed and stamped envelops were sent to 78 cities who agreed to participate in the study and to 20 cities without a prior request. That is, 98 cities received the packet. After 5 waves of mailing and telephone calls, complete and usable data were received from 56 cities.

The questionnaire that was completed by the city managers assesses the level of TQM success and managers' perceptions of employees' participation, training, and the culture of the organization. It also collects factual data about the city such as the budget and the amount allocated for training. Level of success is assessed by the number of TQM activities that have been undertaken in the organizational unit(s) of the city[3] and the extent to which administrators perceived that positive results have been obtained from them. TQM activities fall in eight categories: (1) leadership; (2) employee training and recognition; (3) strategic planning; (4) empowerment and teamwork; (5) measurement and analysis; (6) customer focus; (7) quality assurance; and (8) results.[4] The second questionnaire that was completed by city employees assesses the culture of the organization, employees' motivation, employees' resistance to change, employees' involvement in decision making and empowerment, employees' satisfaction with training, employees' perceptions of TQM, and other demographic data.[5]

3. RESULTS

3.1. Response

The highest response comes from the South (20 cities, 36%), West, and North Central (17 cities each, 30%), and the lowest comes from the Northeast (2 cities, 4%). By state, the highest response comes from Texas (8, 14%), California (8, 14%), and

Florida (6, 11%). Table 1, summarizes the responses according to regions, divisions, and state.

3.2. TQM Implementation

TQM is being implemented in 26 cities (46%) of which 13 cities (23%) implementing TQM in all units of the organizations and 13 cities (23%) implementing TQM in one unit or more. 29 cities (52%) do not have any formal TQM program and one city (2%) discontinued its TQM program. The oldest TQM program was implemented in 1984 (Melbourne, Florida), followed by Port St. Lucie, Florida and Sterling Heights, Michigan who implemented TQM in 1988. The majority have implemented TQM in 1992 and 1993, 10 (40%) and 7 (28%) respectively. In 1990, 2 (8%) cities started their TQM programs and 3 (12%) cities started in 1991. One city did not indicate when it started its TQM program.

TQM appears to be more popular in the Southern and North Central cities (Table 1). As table 1 shows, 11 (42%) southern cities are being involved in quality improvement efforts and 10 (39%) North central cities have a formal TQM program. Non of the Northeastern cities that have responded to the survey has a TQM program and only 5 (19%) of the Western cities surveyed have implemented TQM.

Table 1: Distribution of cities according to the status of TQM implementation and regions, divisions, and states.

Regions, Divisions, and States	TQM Implementation				TOTAL
	No Units	One Unit	All Units	Discont.	
NORTHEAST	**2**				**2 (4%)**
New England					
Middle Atlantic					
New Jersy	1				
Pennsylvania	1				
NORTH CENTRAL	**7**	**7**	**3**		**17 (30%)**
East North Central					
Illinois	3	2	1		
Michigan	2	4	1		
Wisconsin	1				
West North Central					
Missouri			1		
Kansas	1	1			
SOUTH	**8**	**5**	**6**	**1**	**20 (36%)**
South Atlantic					
Virginia	1				
North Carolina		1			
South Carolina	1				
Florida	1	2	2	1	
East South Central					
West South Central					
Oklahoma	2		1		
Texas	3	2	3		
WEST	**12**	**1**	**4**		**17 (30%)**
Mountain					
Montana	1				
Colorado	3		1		
New Mexico	2				
Arizona	1				
Utah		1			
Pacific					
California	5		3		
TOTAL	**29 (52%)**	**13 (23%)**	**13 (23%)**	**1 (2%)**	**56**

3.3. TQM Activities

3.3.1. *Leadership*

Of those who implemented TQM, 23 (88%) have researched the feasibility of implementing TQM, 16 (62%) established a quality council or a steering committee, 14 (54%) have adopted new policies to further quality management principles, and 18 (69%) indicate that commitment of senior management to quality has been documented and communicated to employees. However, while 20 (77%) indicate that senior management have received TQM awarness training, only 13 (50%) indicate that middle managers have received TQM awarness training.

Overall, leadership is the strongest of TQM elements. When compared with other categories of TQM that are measured, leadership scored the highest (12 points) out of 20 (60%). However, some major efforts with respect to leadership must be undertaken at least by some cities. Evaluation of cities in an individual bases shows that only 3 cities (12%) have undertaken all the eleven activities in leadership[6] and three others have undertaken 10 activities each while 14 cities (54%) have undertaken only 6 activities or less. One city, for example, indicates that it has searched the feasibility of implementing TQM, utilized most of the principles of quality management throughout the organization and adopted significant new policies to further quality management principles. Yet, non of the other 8 activities has been undertaken by the city.

3.3.2. *Employee Training and Recognition*

The second strongest area following leadership is employee training and recognition. Generally, cities appear to be doing well with respect to training and recognition. Out of 15 points, cities scored 7.5 points (50%) in training and recognition. Moreover, training prior to the implementation of TQM was provided to managers and employees in 21 cities (81%) and 16 cities (62%) indicate that TQM teams are formally recognized and rewarded within the organization. However, only 11 cities (42%) had

conducted as assessment of their TQM needs and only 9 cities (35%) have TQM training plans that guide the quality training efforts.

In an individual basis, only three cities (12%) have undertaken all the nine activities in training and recognition[7] and three others have undertaken 8 activities. 13 cities (50%), however, have undertaken three activities or less of which 3 cities have undertaken only one activity. Despit the fact that some cities are doing superb job with respect to training and recognitions, some others have a long way to go. 12 cities have indicated that they have TQM training plans to guide the quality training efforts and have offered training throughout the organization on TQM tools. Yet non of these cities have conducted an assessment of its TQM training.

3.3.3. *Strategic Planning*

About half of the cities appear to be doing a good job in strategic planning. 12 cities (46%) have undertaken 4 activities or more in strategic planning[8] with only one city that has undertaken all the activities, and 14 cities (54%) have undertaken 3 activities or less of which three cities have not taken any activity in strategic plannin. Developing quality vision, mission, and policy statements is the only activity that has been undertaken by more than 50% of the cities (22 cities, 85%). All other activities such as developing a TQM implementation plan, relating team goals to the vision and improvement goals, linking the organization's overall strategic plan to the quality strategic plan, and using a strategic planning processes have been undertaken by only half of the cities or less. Overall, cities scored 7.3 points out of 15 possible points in strategic planning.

3.3.4. *Customer Focus*

While 20 cities (77%) have identified the major internal cutomers and their needs, only 6 cities (23%) have identified the major external cutomers and their

requirements, and only 9 cities (35%) have the mechanisms to anticipate the customer's need. Only one city indicates that it has identified external and internal customers and their needs and developed the methods to measure external customer satisfaction and the mechanism t to anticipate the customer's needs. On the other hand, 5 cities (19%) have not undertaken any of these four activities and 11 cities (42%) have undertaken two activities or less.

Needless to say, major improvements are required particularly in identifying external customers and their needs and developing the mechanisms to better anticipate such needs. Some cities have developed these which shows the possibility that they can be developed by those who have not yet done so. Overall, in this category, out of 35 possible points, cities scored 16 (46%).

3.3.5. *Empowerment and Teamwork.*

With respect to empowerment and teamwork, the only activity that seems to have been given the attention by most cities is encouraging service innovation. 18 cities (69%) indicate that they encourage service innovation. TQM teams were established by only 11 cities (42%) and only 6 (19%) indicate that one or more of these teams have completed a full cycle of a formalized improvement process. Moreover, employee satisfaction is assessed in only 9 cities (35%) on a regular basis. Finally, only 9 cities (35%) indicate that most of their employees are involved in the organization's quality initiative and only 8 cities (31%) have the union involved in the early stages of TQM implementation.

In empowerment and teamwork, cities scored 8.5 points (42%) of the 20 points possible. However, most of the points came from 6 cities who implemented all the 6 activities of empowerment and teamwork.[9] Most of the cities (18, 69%) have implemented only 3 activities or less with 5 of them have not undertaken any of the activities. In this category some cities (6) are doing splendid job and some other cities

(5) have done nothing yet. The rest have accomplished some but still have major work to be done. It should be noted, however, that most of the cities (17, 65%) have implemented TQM in 1992 and 1993. This should explain why some cities have not implemented most of the activities.

3.3.6. *Measurement and Analysis*

Non of the measurement and analysis 5 activities[10] was implemented by more than 50% of the cities surveyed. The only activities that have been undertaken by 50% of the cities are (a) analyzing the system and processes to streamline operations or improve productivity, and (b) developing internal measures of quality and productivity. Assessment to evaluate the organization's readiness and/or culture for TQM implementation was undertaken by only 10 cities (38%); external measures of quality and productivity were developed in only 9 cities (35%); and continuous improvement in the processes and services was documented in only 8 cities (31%). Overall, cities scored 6 points (41%) of the possible 15 points.

Only one city have implemented all the five activities of measurement and analysis. On the other hand, 5 cities (19%) have not implemented any of the five activities, and five others have implemented only one activity. Surprisingly, 2 cities indicated that they have developed internal measures of quality and productivity. Yet non of these two cities has assessed the environment or analyzed the system.

3.3.7. *Results*

Even though the overall score of results is very low (12 points out of 50, 24%), some cities have done admirable job. In addition, the maturity of TQM programs very well explain why some cities scored very poorly in results. Most of the activities in results[11] require time to be documented. However, 7 cities (27%0 have met early quality improvement goals and set new ones; one city has applied for a quality award; 6

cities (23%) have documented major improvements in processes and substantial cost savings as a result of TQM; and 2 cities indicate that other organizations are using one or more of their processes for benchmarking. All these results require time. Activities that do not require as much time, however, have been undertaken by most of the cities. For example, 15 cities (58%) indicate that they have implemented improvements in work processes throughout the organization wherever appropriate.

Non of the cities have achieved all the five results. Moreover, 6 cities (23%) have accomplished non of the five results. However, 3 cities have documented 3 of these results; 5 cities have documented 2; and 12 cities have documented only one of these results.

3.3.8. *Quality Assurance*

Only 4 cities (15%) of those who implemented TQM appear to be giving attention to quality assurance. Moreover, non of these four cities is implementing the two activities of quality assurance[12] together. Three of the cities indicate that they work with suppliers to improve quality and one indicates that it uses such methods as Quality Function Deployment (QFD) and Quality Policy Deployment (QPD) to enhance its ability to meet customers' requirements. Accordingly, it is not surprising that out of the 30 points possible, cities scored only 2.3 points (8%).

3.4. Successful and Unsuccessful TQM Implementation

Success is determined by the number of activities the city has undertook. Each category is evaluated seprately using the weight (points) and scale of the Presidential Award for Quality. However, since TQM requires years to be fully implemented, and hence, provide results, it is very early for these TQM programs to be evaluated and, then, labled as successful or unsuccessful. To overcome the maturity problem, the Engineering Technology Department's, Westinghouse, step-by-step plan and timetable

for implementing total quality was used as a basis to identify the activities that would not be undertaken in the first year and the ones that would not be inplemented in the first two years.[13] The first were eliminated from cities who implemented TQM in 1993 and the latter were eliminated from cities who implemented TQM in either 1992 or 1993. It should be noted that activities that have been undertaken were not eliminated regardless of whether they were considered to be undertaken later in the implementation process.

Accordingly, based on the activities being undertaken, only two cities have scored over 120 points (world-class TQM approach), and only one city scored below 30 points (the beginning of TQM awarness). Scores for all other cities ranged from 31.67 points to 113.6 points (Table 2). According to the managers' perceptions of their TQM initiatives with respect to results achieved, 13 cities (50%) scored over 120 points, and 12 cities (46%) scored over 120 points based on the managers' evaluation of their success in implementing TQM (Table 2). A 2-tailed t-Test comparing TQM index of success on the basis of activities being undertaken with managers' perception of achieving positive results from TQM implementation, it was found that the difference between the means is high and significant ($t= 7.6$, $p < .001$). Similar results were also obtained when the TQM index was compared with the managers' perception of the success of their TQM implementation ($t=7.7$ $p < .001$). The t-Test results show major discripancies between managers' evaluation of their TQM programs and the actual evaluation of these initiatives.

Table 2: Distribution of cities according to the level of success.

Categories	Based on Activities Being Undertaken		Based on Managers' Perception of Achieveing results		Based on Managers' Perception of TQM Implementation	
	#	%	#	%	#	%
A World Class TQM Approach (Over 120 points)	2	8%	13	50%	12	46%
A Well Developed TQM Approach (Between 120 and 90 points)	9	35%	10	38%	10	38%
A Well Planned TQM Approach (Between 90 and 60 points)	6	23%	1	4%	2	8%
The Beginning of A Sound TQM Approach (Between 60 and 30 points)	8	31%	1	4%	1	4%
The Beginning of TQM Awarness (Below 30 points)	1	4%	1	4%	1	4%

Table 2 demonstrates that there are cities who are very successful in implementing TQM and documenting results from their implementation. Two cities, for example, scored 140.67 and 139.50, and further review of their implementation of TQM shows that even though one of these two cities has a very low budget (about $278,000) compared to other cities (third to the lowest), a very high number of full time employees (about 900--only 15 cities, 27%, have more than 900 full time employees), and a population of over 100,000 demonstrates a very strong commitment to implementing TQM. The city appears to be very successful in establishing a quality culture and in overcoming most of the obstacles reported by other cities. The city has undertaken over 90% of the activities. In this city, a true commitment to TQM is evident.

On the other hand, there is a very large number of cities whose budget is extremely higher than the budget of this city (discussed above), have far less full time employees, and less population to serve. Yet, their implementations are less successful. For example, a city with a budget over $28.5 million, less than 500 full time

employees, and less than 55,000 population scored only 34.7 points. According to the city manager of this city, the TQM initiative has been successful. Yet, only about 40% of the activities have been undertaken (maturity of the program considered).

Perhaps there are factors other than the budget, the population, or the total number of employees that might explain why these two cities have achieved different results. It should be noted that the first city is not representative to other successful cities, neither is the second one representative to unsuccessful cities. However, examination of the budgets, populations, and number of full time employees show no associations between these variables and the level of success.

3.5. Factors Promoting Success

Successful TQM implementation in local governments is contingent on strong commitment by top management (leadership), enough and effective training programs (training), positive organizational culture (culture), effective empowerment and employee involvement systems (participation), and high employee's receptivity and adaptability to organizational change (adaptability). Table 3 summarizes the correlation between these variables (independent) and the three indices of TQM success (dependent): 1- level of success based on activities being undertaken; 2- level of success based on managers' views of the positive results achieved; and 3- level of success based on managers' evaluation of the TQM implementation proceess.

Table 3: Correlations between TQM indices of success and independent variables.

	Leadership	Training	Culture	Participation	Adaptability
TQM Index 1	.158	.419**	.137	.298*	.101
TQM Index 2	.483*	.510*	.525**	.472*	.493*
TQM Index 3	.413*	.495*	.413*	.504**	.477*

* P < .05
** P < .01

Cities who have the top management committed to the implementation of TQM, as was perceived by the city managers, are more successful than those who don't. In cities with less success, lack of top management committment is very evident. Senior managers support for TQM is insufficient and they do not spend enough time on TQM. Moreover, turnover of senior management is considered a very major problem by city managers with unsuccessful TQM implementation.

As shown in table 3, training is also significantly associated with success. Although no differences were found between cities with successful TQM implementation and those with unsuccessfull TQM implementation with respect to the amount allocated for training and the amount of money being spent per employee, major differences were found with respect to the provision and regularity of training opportunities. Both, cities with successful TQM implementation and cities with unsuccessful TQM implementation allocate an average of 0.3 of their budget to training programs and spend an average of $300 annually per employee on training. However, managers of cities with successful TQM implementation belive that their cities provide more training opportunities to their employees on a regular basis while managers of cities with unsuccessful TQM implementation believe that their cities do not provide enough training opportunities to their employees.

The majority (85%) of managers of cities who have implemented TQM believe that the culture of the organization has an influence on decions made in the organization. However, only 17 (65%), managers indicate that there was an effort to create a culture that promotes the implementation of TQM and only 7 (27%) believe that they were successful in changing their existing culture to a quality culture. Even though significant differences between those who believe they were successful in changing the culture and those who do not, sgnificant differences exist between those who have tried to change their existing culture to a quality culture and those who have not tried ($t=2.7$, $p > .01$).

Managers were also provided with four characteristics: 1- "the way we do things around here"; 2- "cover yourself"; 3- "we are doing fine ... why bother with introducing new ideas"; and 4- "if its not broke ... don't fix it." They were asked to identify how characteristic of the organization is each of these statement. The sum of the positive points (not characteristic) makes the score for a positive culture and vice versa. Examination shows that a positive culture is a characteristic of cities with successful TQM implementation (Table 3).

With respect to participation, examination demonstrates that cities with successful TQM implementation not only encourage employee involvement, but practice it. As shown in table 4, high level of participation is significantly assocaited with high level of TQM success ($F= .744$, $p < .01$).

Table 4: The relationship between TQM level of success and employee participation.

TQM	LOW	MODERATE	HIGH
HIGH	0	4	6
MODERATE	2	4	1
LOW	5	3	1

PARTICIPATION

Finally, high employees adaptability to organizational change is sginificantly associated with high levels of TQM successful implementation (Table 3). Managers of cities with unsuccessful TQM implementation belive that employees are resistance to change to a great extent. Managers with successful TQM implementation, on the other hand, belive that employees are reciptive to change.

3.6. Barriers to TQM Implementation

Several obstacles to TQM implementation were examined. These include leadership barriers (total=5), training and recognition barriers (total=3), strategic planning barriers (total=3), empowerment and teamwork barriers (total=4), measurement and analysis barriers (total=3), and customer focus barriers (total=2). These barriers were measured in a five-point Likert type scale (1=no problem at all and 5=very major problem). Overall examination of these obstacles shows that only employee training and recognition (mean= 3.5), and strategic planning (mean= 3.2) are considered by managers to be to some extent problematic. The others are considered to be problematic to a very moderate extent ranging from 2.4 (customer focus barriers) to 2.7 (leadership barriers).

Even though the the means of these barriers as groups are somewhat low, there are some major barriers within each group. These major barriers are presented below.

3.6.1. *Leadership*

The major barrier in leadership is the inability of senior managers to spend sufficient time on TQM (mean= 3.6). Of those who answered this question (54), 31 cities (57%) indicate that the inability of senior managers to spend sufficient time on TQM is a very major problem.

3.6.2. *Employee Training and Recognition*

Employee training and recognition is considered by 67% of the cities who answered this question (n=52) as a major problem (mean= 3.5). Major problems in employee training and recognition include; providing employees with information and training on the concepts and design of TQM (mean= 3.6); providing employees with sufficient information on how to implement TQM and use its tools (mean= 3.6); and the belief by employees that they are not empowered enough to make changes (mean= 3.3). Of those who answered these questions, 54% belive that the first one and the second one are major problems and 39% believe that the last one is a major problem.

3.6.3. *Strategic Planning*

Major problems in strategic planning are lack of a long-term planning approach (mean= 2.9); disconnect between strategic quality plan goals and the organization's other strategic plans (mean= 2.8); and funding and budgeting constraints (mean= 3.6). Of these three barriers in strategic planning, funding and budgeting constraints is the most problematic. 57% of the cities belive it is a major problem.

Finally, empowerment and teamwork, measurement and analysis, and customer focus are all considered by city managers to be moderate problems. Their means are 2.5, 2.7, and 2.4 respectively. Moreover, non of the barriers within these three groups has a mean over 2.8.

4. CONCLUSION

Successful TQM implementation in local governments is contingent on strong commitment by top management, positive organizational culture, high employees' adaptability to organizational change, provision of training on TQM concepts and tools, and high employee involvement in decision making. These are the major characteristics of successful TQM implementations in local governments. These are evident in every successful TQM implementation and absent in every unsuccessful TQM implementation.

Senior managers should document and communicate their commitment to TQM and they should give TQM sufficient time if its implementation is to be successful, and hence, provide the anticipated results. Leaders cannot authorize the implementation of TQM and the allocation of certain amount of money to fund it and leave the implementation to the lower levels of the organization. The role of senior managers is not over once they make a decision that TQM is to be implemented. TQM starts on the highest level of the hierarchy and then cascaded to the lowest level in the organization. During the process, senior managers must find time to be devoted to the TQM implementation. Otherwise, employees will view TQM as just another three letter management word. Senior managers must "walk the talk", if they want employees to believe that a true and real change is taking place. Employees must believe that the old ways of doing things are gone.

It is the leaders who are responsible for creating a new culture (a quality culture) that has quality as its primary goal. The principles of TQM--all the principles not 80% of them or even 90%--must become the basic underlying assumptions of the organization and its members. The establishment of such a quality culture requires the support and commitment of top management. Unless this quality culture is established throughout the organization, employees will reverse to the old ways of doing things, the TQM principles will be abandoned and the concept will become a fade.

To gain employees' support and commitment to TQM, their efforts must be recognized and they nust be fully involved in the process. Otherwise, employees are unlikely to support the effort and be committed to the new movement. In fact, they will hender the process. To prevent employees from resisting the change and gain their support and commitment, employees must be provided with enough and effective training. Training programs should be designed to aquaint employees with the concept and its tools as well as the benefits that will be gained from accomplishing the quality goals. Once employees are aquainted with the process and given the opportunity to fully participate in the process, it is unlikely that they will resist the movement. In other words, it is very likely that they will support TQM and be committed to it. Employees' support and commitment to TQM are crucial to the success of its implementation, and no organization can afford to introduce TQM without having all employees be supportive and committed.

In addition, cities need to overcome certain barriers that will prevent TQM from living up to the expectations. Major barriers to TQM implementation in local governments are found to be the senior management inability to give sufficient time time to TQM, providing employees with information and training on the concepts and design of TQM, providing employees with sufficient information on how to implement TQM and use its tools, the belief by employees that they are not empowered enough to make changes, the disconnect between strategic quality plan goals and the organization's other strategic plans, and funding and budgeting constraints.

Managers complain that employees hold the belief that they are not empowered enough to make a change. It should be noted that employees will continue to hold that belief unless they are truly empowered. The only way to change that belief is to empower employees. Then, they will believe that they are empowered. Telling employees that they are empowered will not make them empowered, neither will it convince them that they are empowered.

Finally, a review of the results demonstrates that senior managers can prevent failures and they can ensure success. All of it is in their hand. A quality improvement director cannot overcome funding and budget constraints, neither can the director of finance. Establishing a quality culture cannot be done by employees. It starts at the top. A large number of cities have succeeded because they established a culture where employees serve citizens not the rules and regulations. Employees will continue to serve the rules and work in accordance with these aged regulations unless they are empowered to make decisions and serve the people. Successful cities have done just that.

ENDNOTES

1.The cost of quality (COQ) is the sum of all costs to make things right and to correct them when they are not made right (Corradi 1994; Crosby 1979, 1984; Gryna 1988; Hagan 1986; Juran 1989; and Rosander 1989). Costs to correct things when they are not done right the first time are labeled as bad costs (Corradi 1994), price of nonconformance-PONC- (Crosby 1984), costs of poor quality-QOPQ- (Juran 1989), and costs of failure to control (Feigenbaum 1983). Costs that are associated with ensuring that things are done right the first time are labeled as good costs (Corradi 1994), costs of conformance-POC- (Crosby 1984), and costs of control (Feigenbaum 1983). The sum of the two types of costs is known as the cost of quality or quality costs. The Quality Cost Committee of the American Society for Quality Control (1971) developed four categories of quality costs. The four categories of quality costs are: prevention costs, appraisal costs, internal failure costs, and external failure costs. The prevention and appraisal costs are the costs of ensuring that things are done right the first time. The internal and external failure costs are the costs associated with failing to do things right the first time.

2.The authors would like to acknowledge the efforts of Woody Talcove (ICMA) and his assistance to the authors in selecting the cities.

3.Calculation of the level of success is based on the criteria for the Presidential Award For Quality which assigns a weight foe each element of TQM. In each element there are several activities that determine the extent to which the element has been satisfied. The elements, their weights, and the number of activities in each element are: leadership (20, 11); strategic planning (15, 6); customer focus (35, 4); training and recognition (15, 9); employee empowerment (20, 6); measurement and analysis (15, 5); quality assurance (30, 2); and results (50, 6). The total points is 200 and 49 activities. The scale of TQM success, then is computed as follows:

If, for example, a city indicates that it has undertaken 5 activities in leadership, its total points for this specific element would be 9 points (5/11*20) and so forth. The sum of the total points for each element determine the level of success using the following scale: above 120 = world-class TQM approach; between 120 and 90 = well-developed TQM approach; between 90 and 60 = well-planned TQM approach; between 60 and 30 = the beginning of a sound TQM approach; and below 30 points = the beginning of TQM awareness (Presidential Award For Quality, Self-Assessment Guide, OPM, FQI, 1992).

4.These categories and the activities were adopted from the United States General Accounting Office's survey of Federal Organization, October 1992.

5.Results obtained from this questionnaire are not reported here.

6.Leadership activities are:

a. The feasibility of implementing TQM was researched.
b. Senior management made the decision to implement TQM.
c. Senior management established a quality council, steering committee or a similar body to direct the quality improvement effort.
d. Senior management received TQM awarness training.
e. Senior management participated in a retreat to learn about TQM.
f. Middle managers received TQM awarness training.
g. Commitment of senior management to quality is documented and communicated to employees.
h. An executive level quality council or steering committee has targeted work processes for improvements.
i. The organization utilizes most of the principles of quality management throughout the organization.
j. The organization has adopted significant new policies which are designed to further quality management principles.
k. Members of the organization actively share techniques and lessons learned both within and outside the organization.

7.Employee training and recognition activities are:

a. At least a few managers or employees attended quality conferences or enrolled in a TQM training prior to the implementation of TQM.
b. One or more representatives from the organization attends quality network meetings outside of the organization.
c. The organization did an assessment of its TQM training needs.
d. Non-supervisory employees received TQM awarness training.
e. A TQM training plan guides the quality training efforts.
f. Group processes or TQM tools training is offered to employees throughout the organization as needed.
g. TQM teams are formally recognized and rewarded within the organization.

h. The organization's reward and recognition systems encourage management to be involved in quality efforts.
i. Quality performance goals have been incorporated into employees' performance plans.

8.Strategic planning activities are:
a. The organization developed quality vision, mission, and policy statements.
b. A TQM implementation plan was developed.
c. Team goals are related to the vision and improvement goals of the organization.
d. The organization actively benchmarks with other organizations to improve the primary processes within the organization.
e. A quality strategic plan exists or quality principles are included in the organization's overall strategic plan.
f. The organization uses strategic planning processes which include vision statements to indicate where it should be in the next five years.

9.Empowerment and teamwork activities are:
a. The union was involved in the early stages of implementation.
b. TQM teams are established by management to work on processes or problems.
c. One or more TQM teams have completed a full cycle of a formalized improvement process.
d. Employee satisfaction is assessed on a regular basis.
e. Most employees are involved in the organization's quality initiative.
f. Service innovation is encouraged throughout the organization.

10.Measurement and analysis activities are:
a. An assessment was done to evaluate the organization's readiness and/or culture for TQM implementation.
b. Analysis of systems and processes were done in order to streamline operations or improve quality.
c. Internal measures of quality and productivity are developed at the organization.

d. External measures of quality and productivity are developed at the organization.
e. Continuous improvement in your organization's primary processes and products/services is documented.

11.Results activities are:
a. Early quality improvement goals have been met and new goals have been set.
b. The organization has applied for a quality award.
c. Improvements in processes and substantial cost savings as a result of the organization's quality initiative have been documented.
d. Improvements in work processes are implemented throughout the organization wherever appropriate.
e. Outside organizations use one or more of your processes for benchmarking.

12.Quality assurance activities are:
a. The organization works with suppliers to improve quality.
b. The organization uses such methods as Quality Function Deployment (QFD) and Quality Policy Deployment (QPD) to enhance its ability to meet customer requirements.

13.It was taken into consideration that the plan was designed for a manufacturing organization. Only the activities that are applicable to the public sector were considered and applied (e.g. establishing quality teams and quality councils).