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TQM IMPLEMENTATION
IN SMALL BUSINESS SERVICE SETTINGS

by

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ABSTRACT

This study examined TQM implementation within the context of small non-manufacturing businesses. Following training in TQM practices eighteen months previously, 15 small business service operators were questioned about what aspects of TQM benefited their businesses. A semi structured interview protocol was used to probe these small business operators attempts to put TQM theory into practice. The consensus among the small business respondents was that the TQM seminars relating to customer service and customer satisfaction had the greatest value. The least valuable topics were statistical techniques. The findings suggest a need to modify TQM training to meet the special needs of the service domain.

INTRODUCTION

TQM has been defined as a philosophy, a set of tools and procedures, and a systematic approach to management—focused on continually improving customer satisfaction at lower costs. TQM practice is associated with increased productivity, improved internal and external customer satisfaction and superior competitive strength. For that reason, it is no wonder that TQM has become pervasive and respected in large businesses. Most analysis of TQM effectiveness has focused on this group. Small businesses have been relatively slow to implement TQM (Ghobadian & Gallear, 1996). Consequently, fewer studies have examined this group. The few analyses of TQM practices in small business have tended to target manufacturing firms. Little attention has been directed to the small business service sector: an oversight which causes some concern since over 75% of US business are service related.

BACKGROUND

TQM studies of large business support the idea that TQM yields higher levels of employee satisfaction, product quality, productivity and customer satisfaction. (Larson & Sinha, 1995). Small business use of TQM has not been studied to the same degree that larger business have, but the findings are similar. Most TQM studies of small business focused on manufacturing or process firms rather than service firms. Transportation equipment (Wernick, 1991), water control systems and pipes (Gunaskaran, Okko, and Yli-Olli, 1996), metal fabrication and precision machines (Rishel & Burns, 1997), auto parts and electronics (Ahire, 1996), and plastic products (Brown, 1993) have been studied.

The analysis of TQM implementation in small business can be categorized as guides or research reports. The guides (Barrier, 1992; Brown, Hitchcock, & Willard, 1994; Hendricks, (1992) describe why TQM implementation fails and what should be done to keep TQM on track. Because of money and time constraints small businesses are advised to proceed cautiously and selectively in their implementation of TQM and apply the precepts of continuous improvement, focus on customer satisfaction, power sharing and accurate measurement to their own context.

The few articles relating TQM to small businesses within the service sector examined health care, banking, and accounting. The health care studies looked at
administrative TQM practices (Berwick, Godfrey & Roessner, 1990; McLaughlin & Kaluzny, 1990; Milakovich, 1991). Kaldenberg & Gobeli (1995) studied TQM implementation in dental practices. In all the health related studies there was a significant positive relationship between outcome and TQM practices. However, the professional nature of any health care context makes it difficult to generalize the findings to other service context. According to Kaldenberg and Gobeli, professionals tend to assume they know what is best for the patient and are less interested in the notion of customer satisfaction; they hesitate from espousing the need for TQM since it implies that the previous care giving is less than optimal according to Kaldenberg and Gobeli. In another service sector study of TQM, Shea and Kleinsorge (1994) found that cost accountants working in different types of business setting all felt they had developed a customer focus as a result of integrating TQM practices. In one of the few general studies involving services, Barrier(1994) related the positive reactions of small businesses to TQM.

The literature review reveals the dearth of information about TQM implementation in small service businesses. Some people believe that what we have learned about TQM in small manufacturing business can be generalized to all small businesses. Ahire (1996) noted that the findings of his research of small manufacturing firms could have significant implications for small firms in any industry. The accuracy of this statement is dubious since there are such marked differences between manufacturing and service. The characteristics of services: intangibility, simultaneous production and consumption, and the involvement of the client/consumer in the service transformation process pose quite different demands on management than the demands of a manufacturing context. Larson and Sinha (1995) noted the difference between manufacturing and service and called for further research comparing the two contexts’ application and success with TQM.

PURPOSE

The present study extends the research of TQM implementation in the small business context to non-manufacturing firms: specifically, those within the service sector. The study seeks to identify how TQM implementation "plays" in the service arena. What elements of TQM do work and what don't?

RESEARCH DESIGN

During 1995 43 small Texas businesses participated in TQM training sponsored by the local Small Business Development Center. Over 80% of the firms had fewer than 50 employees. All but three were non-manufacturing businesses. Eighteen months later these businesses were asked to relate their experience and thoughts about TQM implementation in their businesses. Since the present study focused only on service businesses, the three manufacturing firms were not included in the study. From the remaining original group of 40 firms that attended the TQM seminars, 15 agree to participate in the study. This represented a 33 percent response rate.

Each participant was interviewed. The interview protocol was partially open ended and partially structured. Interviewees were asked to describe what their business did, what their position in the company was, and why they were first interested in attending a TQM training. Then the respondents were shown a list of key TQM elements. These key elements were: customer focus, facts and analysis, benchmarking, teamwork, recognition, information and measurement, continuous improvement, and recovery, correction and prevention. They were asked to consider what elements were most useful and what elements were least useful; and what elements of TQM they wished to know more about. The last open ended question asked the respondents to describe what their business experienced in the way of positive outcomes as a consequence of their attempts to implementation TQM. Finally the respondents were given a list of benefits attributed to TQM. The list included reduced customer complaints, increased ability to attract new
customers, increased employee satisfaction, better services, and improved productivity. They were requested to rate each item on a scale of 1-5. The scale was anchored at 5, indicating a very strong benefit of TQM and at 1, indicating no benefit. Lastly the respondents were asked to rate the tools used in TQM in terms of their usefulness during the implementation of TQM. These tools were: flowchart, cause and effect diagram, pareto chart, scatter diagram, histogram, run chart, and control chart. This rating scale was anchored at 5, indicating a very useful tool and at 1, indicating a non useful tool. Zero was used to indicate that the respondents had no knowledge of the tool. The data were analyzed using descriptive statistics and content analysis.

FINDINGS

A wide range of non-manufacturing (service) businesses were represented in the group of participating small businesses: retail, repair, health care, police, repair services, telecommunication provider, photography, truck stop, car dealer, dry-cleaning, profession services (law), maintenance, and property management. All respondents except two were owners or managers of the firm and had attended the training meetings. One of the two was a director of quality management; the other was a professional (lawyer).

There were fourteen useful responses to the question about the beneficial outcomes of TQM. Following are the percentages of respondents who said the item was a strong or very strong benefit of TQM:
- Increased employee satisfaction 71%
- Better Services 57%
- Improved productivity 57%
- Reduced customer complaints 50%
- Increased ability to attract new customers 21%.

TQM tools were rated in terms of their usefulness from 5(very useful) to 1(not useful).

The zero rating was not included in the frequency calculation because it meant the respondent had no knowledge of that tool. This meant that the individual had been absent from that particular training session. Following are the percentages of respondents who gave either a 4 or 5 to the item; this indicated that the item was useful in bringing about the outcomes noted in the previous question:
- Flow chart 70% (3/10)
- Cause and effect diagram 30% (3/10)
- Pareto chart 50% 3/6 (8 answered that they had no knowledge of the tool)
- Scatter gram 33% (3/9)
- Histogram 30% (3/10)
- Run chart 33% (3/9)
- Control chart 33% (3/9).

Below are the percentages of respondents scoring 1 or 2 meaning the tool was not useful in their business settings:
- Flowchart 30% (3/10)
- Cause and effect diagram 40% (4/10)
- Pareto chart 50% (3/6)
- Scatter gram 33% (3/9)
- Histogram 60% (6/10)
- Run chart 33% (3/9)
- Control chart 67% (6/9).

The unaccounted for percentage in each of the categories should be attributed to scores of "3" which were not included into either calculation above since "3" indicated that the person was indifferent to the tool. None of the categories had 15 responses due to the fact that not everyone attended every TQM training workshop and therefore had to write "0" to indicate that they had no knowledge of the particular tool.
The content analysis of the open ended questions showed the following patterns of response. Customer focus was identified three times more frequently than any other element of TQM in response to the question: What elements of TQM have you found most useful? While customer focus was listed by fourteen interviewees, teamwork and continued improvement were mentioned 5 and 4 times respectively. Empowerment and analysis were discussed also. A number of elements of TQM were listed as not useful. Flow charts and analysis were most often cited as least useful (4 times each) to the service owners. Other elements were information measures, better organization, benchmarking and recognition of employees. The open-ended question: Why were you interested in attending TQM workshops? received with a general response reflecting curiosity and an interest in learning something new or a specific interest in increasing customer satisfaction or improving business operations to become more competitive. In response to the question: What elements of TQM do you wish you knew more about? interviewees most frequently said they wanted more information about continuous improvement achieving a customer focus. Two respondents said they wanted to know how the TQM elements applied specifically to firms providing services. One owner commented that TQM applies to more of a manufacturing business than to his business which is a service. Another said she wanted to know more about the areas that would help service providers perform better.

**DISCUSSION**

In this study, the results of trying to implement TQM were similar to other studies (Shea & Kleinsorge, 1994). There was overwhelming agreement among the small business owners that TQM helped them foster and improve a customer focus. They echoed Wernick's (1991) tenet that "understanding who the customer is and what the customer wants is the most important step in installing a TQM program" (p.14). They agreed teamwork and continuous improvement were the most important elements of TQM. Moreover, they were in concert that statistical tools were not very useful in their businesses. What emerges clearly from their reaction to TQM training is that they highly value the philosophy and certain aspects of TQM practice, but not others. Selectivity in TQM implementation is an idea which has been advised by others: Henrick (1992) cited a small businessman who advised against conforming to someone else's idea of TQM and advocated configuring TQM to the needs of a particular organization. Boggs (1996) noted that R. M. Hodggets in *Implementing TQM in Small & Medium-Sized Organizations: A Step by Step Guide* suggests that the reader customize TQM strategies to fit the business; he also noted that statistical process control was mentioned only in passing. The findings of this study suggest that Hodggets is correct in both aspects. Additional support for the idea that contextual variables influence TQM application can be found in Benson, Saraph, and Schroeder's (1991) article.

The need to customize TQM application may be partially explained by examining the nature of services in contrast to manufacturing. The service operation system is not as suited for statistical control as the manufacturing operation system because the service system is characterized by nontangibles and simultaneous production and consumption of the product. In addition, the unpredictable consumer is also an input to the service transformation system. It may be important to note that the flow chart was the one technique which was considered of value. This may due to the importance of appropriate scheduling and sequencing in the service system. This exactness in choosing one and not all techniques is another indication that certain TQM skills may be more needed that others in a service context.

This study is limited in its scope and range. Therefore, the findings cannot be used to prove any point of view; instead the findings can be useful in suggesting further research directions. The implications of this study are that future research is required in the small business service sector to determine how TQM can effectively be implemented. The findings make us hesitate in assuming that what works for manufacturing or process types
of small business will be applicable to the service sector. The findings also suggest that further theory building efforts are needed to adjust TQM practices to service sector contextual variables.

CONCLUSIONS

Interviews with small business service owners show how they are selectively implementing TQM. The resulting changes brought about by TQM implementation reflect the same positive effect on organizational performance as has been found in earlier studies. Further study of TQM application to the service sector is suggested based on the findings of this study.

REFERENCES


