

The Influence of Employee Involvement in Total Quality Management on Employee Performance

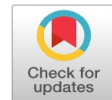
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Abstract: This research aims to find out methods to improve employees' involvement in quality management practice, identify the role of individual accountability in improving employees' quality work performance and improve the effectiveness and practicability of Total Quality Management (TQM). From the perspective of individual employees, this research utilized qualitative analysis to decompose employee involvement and accountability into different factors and reveals the influence of employee involvement on quality work performance from different dimensions. The main conclusions were as follows: (1) From the perspective of TQM practice, according to the degree of involvement, high involvement was needed, manifested in three aspects, i.e., involvement in decision-making, information sharing, and team cooperation; (2) PDCA cycle is the basic method of the TQM system. Employee involvement accountability was corresponding to these management stages. Accountability could be illustrated from four dimensions: quick response, reasonable explanation, sense of responsibility, and initiative. (3) In the process of participating in quality management, employees' accountability (attitude factor) and quality management involvement (behavior factor) were logically matched. Responsible individuals would adopt more accurate methods to solve problems and achieve organizational goals. Employee involvement had a positive impact on performance through the mediating role of accountability. Finally, focus on employee performance could better control each process and achieve the ultimate goal of improving product quality.

Keywords: Employee involvement, Accountability, Quality performance, TQM

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INTRODUCTION

With the development of quality management ideas and methods to a higher level, enterprises' production management and quality management have been upgraded from implementing the standardization stage to the management concept. Furthermore, there are great differences in the implementation effect of TQM. Studies have found that hard factors such as quality system, quality assurance, process control, quality design, and technology R&D and soft quality factors such as leadership support and employee attitude significantly impact product quality (Strang, 2011). TQM depends on the contribution of key employees. Therefore, human factors play an important role in the successful implementation of TQM (Alofan, Chen, & Tan, 2020). Most scholars focused on creating a good organizational environment, such as leadership support, personnel management, corporate culture, etc. Few studies focused on the internal factors of employees. This research clarified the influence of employee involvement on quality performance from the perspective of individual employees, revealed the deeper reasons that affect employee performance, and provided a theoretical basis for improving the effectiveness of quality management.

Full involvement is the main behavior and human guarantee to support TQM. Employees' involvement in the decision-making process and management of the enterprise can stimulate employees' enthusiasm, improve the relationship between colleagues, increase communication and coordination within the organization, solve the problem of information asymmetry in the process of enterprise management, eventually improve the quality performance of employees Effect. By studying the rude behavior of employees in the logistics industry, Morrow, McElroy, and Scheibe (2011) found that the rude behavior in the working environment had adverse consequences on employees' job satisfaction and affected the effect of TQM practice.

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The effectiveness of TQM implementation mainly depends on the attitude of employees. This research uses accountability to embody employees' attitudes to quality management practice. Compared with the dominant factors such as technology and structure, most of the hidden and intangible factors, such as the value, attitude, and concept of employees, have a greater impact on the effectiveness of TQM. In addition, it is found that the different attitudes of employees mainly come from whether the employees themselves are concerned or not enough in TQM practice.

Research goals

In the practice of total quality management, find out how and methods to improve employee Involvement, identify the role of individual accountability in improving employee quality work performance, and improve the applicability and effect of total quality management.

RESEARCH METHODOLOGY

The author gathered relevant data by consulting journalsperiodicals, and books. The method of qualitative analysis was utilized to reveal the internal influence process of quality management practice on job performance from two aspects: employees' objective situation (employee involvement) and subjective factors (accountability). This research decomposed employee involvement, accountability, and work performance into different factors and revealed the influence of employee involvement on quality work performance from different dimensions.

BASIC THEORY AND LITERATURE REVIEW

To ensure and improve quality is an important way to improve business management, reduce costs, improve efficiency, and enhance the competitiveness of enterprises. As a human factor in TQM, the employee is one of the key factors affecting the effectiveness of TQM. It can provide theoretical support for more efficient TQM implementation to analyze the impact of employee Involvement on quality work performance from individual micro-level.

TQM

Feigenbaum (1991) published "total quality control" and put forward the idea of total quality management, a management science driven by the needs and expectations of customers. The organization takes quality as the center, takes the full involvement as the foundation, and achieves long-term sustainable development by improving customer satisfaction and benefiting all members of the organization and the society. Its guiding ideology is to emphasize quality first, customer highlights the positive factors of people and acts according to the PDCA cycle.

In the practice of total quality management, all staff and whole process management are required (Mutingi & Chakraborty, 2021). All staff management means that every employee is in a different quality node, and everyone's quality performance will affect the quality of products or services. Therefore, every employee should have a sense of quality responsibility and do a good job in every quality control work. The whole process management is the process of making and organizing the quality plan, controlling the links and factors affecting the quality, so that the quality management activities "start from identifying the needs of customers, and finally meet the needs of customers." This process is in accordance with the PDCA cycle, running round and round without stopping.

PDCA cycle, also known as a quality loop, is a general model in management (Johnson, 2002). It was first conceived by Walter A. Shewhart in 1930 and later perfected and promoted by American quality management expert Dr. Edwards Deming in 1950. It is used in the process of continuous improvement of product quality. PDCA represents plan, do, check and action. As a method to solve problems, the PDCA cycle can guide people to solve problems and promote the healthy development of objects (Petersen, 2020; Sangpikul, 2017). The whole process management is a scientific procedure that carries out quality management in this order and goes on continuously.

1. P (Plan) - including the determination of policies and objectives and the development of activity planning.

2. D (Do) - implementation, in accordance with the predetermined plan, objectives and measures and their division of labor, to effectively implement and achieve goals
3. C (Check) - timely compare the implementation and implementation results with the proposed plan, check whether the implementation and implementation results meet the plan's requirements and find out the successful experience and lessons from failure.
4. A (Action) - to deal with the results and take measures to improve. The successful experience should be affirmed and standardized; the unsolved problems should be put forward, and the remaining problems should be transferred to the next phase.

The above four processes are carried out, again and again, each cycle will achieve certain quality objectives and push the quality management activities to a new height. Therefore, the PDCA cycle method can continuously promote and improve product quality in TQM.

Employee involvement

According to (Lawler & SA Mohrman, 1998), there are three ways of employee involvement: suggestion involvement, work involvement, and high involvement. Based on the characteristics of TQM whole process and full involvement, employees are required to be highly involved in management practice, which is reflected in the following three aspects:

Information sharing

Information sharing refers to the exchange and sharing of information and task results among information systems of different management levels and departments (Bo Shing & Xiaodie, 2017). In the Internet era, the importance of information sharing is becoming more and more obvious. Through information sharing, employees can track current events of product quality information and play a key role in independent decision-making of the quality management process. At the same time, information sharing is also conducive to the formation of a good communication environment and interpersonal relationship within the enterprise, helping managers and employees to establish a psychological contract on their work vision so that employees and managers can reach a consensus on the overall goal of the company, plans, help employees and other issues; in addition, employees can establish emotional satisfaction and expectation realization according to the amount and importance of enterprise information (Zhang, Song, & Song, 2020). The higher the responsibility and loyalty of employees to participate in management, the more positive incentive effect on employee performance.

Involvement in decision making

In the practice of total quality management, the focus on quality requires the empowerment of employees to achieve self-management (Alatrash, 2018). Decision involvement does not require every employee to participate in every organizational decision, but every employee should provide reliable information and judgment for specific aspects of organizational decisions. Through self-learning and self-control, employees realize the unity of their rights and responsibilities, which is conducive to improving employees' involvement in quality management. Leadership support and smooth internal communication channels are important factors for employees to participate in decision-making in quality management practice. Employee involvement in decision-making makes employees perceive procedural fairness, which greatly enhances employees' sense of responsibility for their work. Organizational support expresses the trust, respect, and recognition of the enterprise to employees (Sarıkaya & Kara, 2020). Employees' high-level psychological needs of self-realization are met, promoting employees to participate more actively in quality management-related decisions and suggestions.

Teamwork

TQM focuses on the personalized needs of consumers, so building a cross-functional and high-performance project team is an effective means to deal with market competition. Mehta (2018) believes that the importance of team and teamwork is verified and regards it as a kind of strength. Marks, Mathieu, and Zaccaro (2001) pointed out that multi-team learning will process and process all kinds of information

more efficiently and rapidly than any previous form of learning and effectively improve enterprise R&D performance. The cooperation among team members is often related to their responsibility (Xiao, 2016). An efficient team requires a high degree of responsibility and mutual trust among its members. Hagafors and Brehmer (1983) believe that highly responsible individuals are willing to cooperate with other members to maintain the consistency and stability of decision-making.

Accountability

Accountability, that is, responsibility and functional autonomy, emphasizes the part of individual accountability (Manirojana, 2016). The dimension of accountability consists of four aspects: reasonable explanation, initiative, sense of responsibility, and quick response. Some studies have found that the PDCA cycle, as the basic method of TQM system operation, has a corresponding relationship with accountability factors. It also proves that employees' accountability (attitude variable) and quality management involvement (behavior variable) are logically matched.

Table 1: Relationship between employee accountability and PDCA cycle

PDCA cycle	Accountability dimension	Interpretative statement
Plan	Reasonable explanation	Before the action, make a reasonable explanation to all team members on the quality plan, objectives, control methods, evaluation criteria, and other decision-making content.
Do	Initiative	In practice, employees should take the initiative to deal with current problems and even make forward-looking decisions.
Check	Sense of responsibility	Check and evaluate the results of implementation and find out the problems. The results of work are related to the sense of responsibility.
Action	Quick response	To deal with the results or improve in time, that is, the rapid response to feedback.

Employee quality performance

The ultimate goal of TQM is to meet the personalized needs of customers and improve customer satisfaction. In the information age, customer experience and participation have become the inevitable indicators to measure quality, which puts forward higher employee requirements. They should be sensitive to customers' changing needs and pay attention to various factors to improve customer satisfaction (Arshad, Ali, & Niazi, 2020). Therefore, employee performance evaluation index includes achieving quality task objectives and employees' future adaptability, such as spontaneous quality tackling, continuous learning ability, innovation ability, emergency response-ability, etc. (Qi & Chongming, 2006).

RELATIONSHIP AMONG EMPLOYEE INVOLVEMENT, ACCOUNTABILITY, AND EMPLOYEE PERFORMANCE

Based on the characteristics of TQM's whole process and full involvement, employees participate in the whole process of quality control. Accordingly, employees must participate in management practice in three aspects: information sharing, decision-making involvement, and team cooperation. The corresponding relationship between the PDCA cycle and accountability factors proves that the accountability (attitude variable) of participating employees and quality management involvement (behavior variable) are logically matched. In total quality management, enterprises attach importance to employee involvement and the accountability training of the employee involvement process, which will have a positive impact on employee quality performance, and ultimately improve the overall quality performance of enterprises.

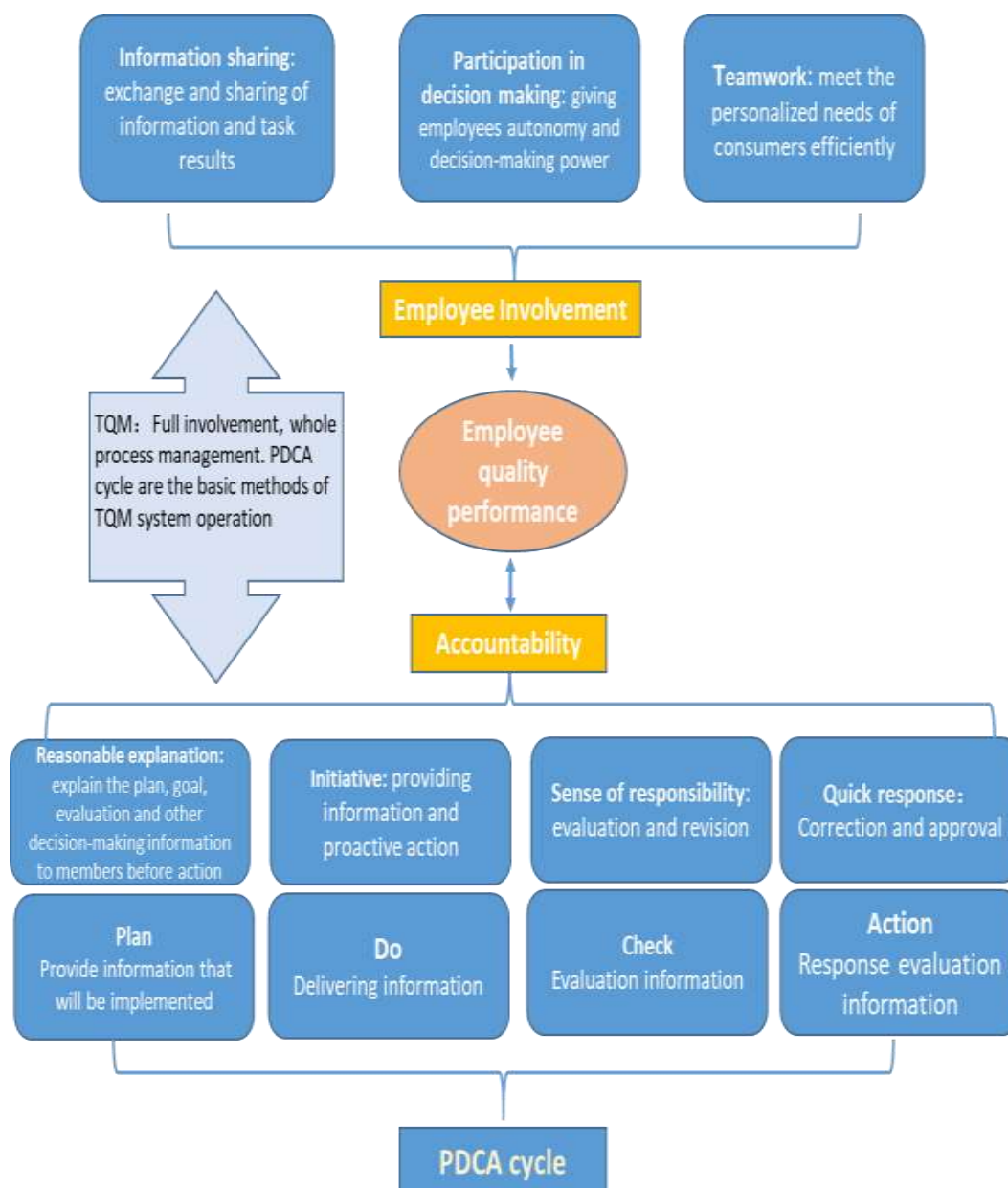


Figure 1. The elements of employee involvement and accountability in TQM and the corresponding relationship with employee performance

SUGGESTIONS TO IMPROVE TQM INVOLVEMENT AND QM PERFORMANCE OF EMPLOYEES

Based on the above analysis, this research puts forward the following suggestions to improve TQM employee involvement, accountability, and work performance:

Utilize information platform to realize quality information sharing

The company utilizes the information network platform and intelligent terminal (wechat) to integrate purchasing, R&D, production, marketing, warehousing, and other management information resources, accelerating the speed of internal quality information dissemination.

The official account of the WeChat public platform is used to carry out quality propaganda, organize various quality related activities, such as posters, disqualified products display, quality results network conferences, quality thematic network seminars, and so on, so that employees can share quality information to improve their quality performance.

Establish a sound quality information collection and management system, require the staff of each

department to report the work progress to the superior on a regular and timely basis through the network, and share the work results with colleagues. The company's senior leaders should pay attention to the work reports shared by all departments in time and deal with the abnormal feedback information in time.

Professional training to improve skills and enhance the ability to participate in decision-making

Focus on training staff quality management tools and skills, especially the quality management team training of production line. Breakthrough the internal hierarchy barriers and help improve the involvement of grassroots employees.

Improve the level of teamwork

It is suggested to implement the corresponding improvement measures from the three aspects of member relationship, team thinking and team action:

1. Improve the team relationship, regularly hold group training or entertainment activities of the quality group, and build a team culture atmosphere of self-management, trust, and cooperation.
2. Through improving thinking, members can systematically understand the core spirit of TQM and strengthen the sense of teamwork.
3. (3) By improving the team development actions, such as establishing information sharing, full authorization, and flexible work design, employees can enjoy TQM involvement's autonomy and decision-making power, establish a fair reward and punishment mechanism, and stimulate the enthusiasm of the team cooperation.

Perceived Supervisory Support (PSS)

PSS has a strong driving force for the effective operation of enterprise quality management systems. The attitude and accountability of leaders to quality management determine the enthusiasm of staff involvement and the guarantee of human and material resources. The accountability of employee involvement depends on the fairness of involvement procedures, the concern and support of supervisors, the fair rewards and punishments of performance evaluation, and the good teamwork atmosphere brought by organizational support. The key lies in the supervisor's support.

Establish the evaluation and accountability mechanism matching the accountability and quality performance

Employee accountability will greatly affect the effectiveness of quality management practice. At the same time, employee accountability itself will be affected by external incentives, which may be explicit, such as bonus, or implicit, such as situational atmosphere, the satisfaction of expectations, being respected, and work autonomy. Therefore, building a positive atmosphere for employees to participate in management independently and a fair evaluation and accountability mechanism is an important measure to mobilize the accountability of all employees to participate in TQM practice and improve the effectiveness of the quality system.

LIMITATIONS AND RECOMMENDATIONS

This research only revealed the deep-seated reasons and mechanism of employee involvement on quality performance from theoretical research and lacked empirical research to prove it. This research only studies the influencing factors of job performance from the individual level of employees which can help enterprise managers to eliminate the adverse factors affecting employees' job performance from the micro-level and create a positive and efficient working environment. However, this research still has some limitations from the company's overall level because the influencing factors are complex.

As a subjective variable influencing quality performance, the influence mechanism of the employee accountability factor is more complex, and its influence degree needs to be further determined. In addition to accountability subjective factors, could other factors, such as personal motivation and learning ability,

affect employees' quality performance? Besides employee involvement, leadership style, work proficiency, performance appraisal mode, and other systematic factors may affect individual quality performance. Further research is needed.

CONCLUSION

Based on the findings of the study, the following are the conclusions:

1. In the practice of TQM, the level of employee involvement will be very high. It is mainly reflected in information sharing, decision-making involvement, and team cooperation. In the Internet era, the importance of information sharing is becoming more and more obvious. Decision-making involvement realizes the unity of employees' rights and responsibilities and is conducive to improving employees' involvement in quality management. Team cooperation is more conducive to individual advantage and has a significant impact on improving product quality.
2. The level of individual accountability is directly proportional to job performance. Employee accountability mainly reflects employees' subjective factors, which is reflected in the requirements of individual accountability and the accountability to others and the company. Accountability includes four dimensions: reasonable explanation, initiative, accountability consciousness, and quick response. It corresponds with the PDCA cycle, the basic method of TQM system operation. It also proves that the accountability (attitude variable) of employees participating in quality management is logically matched with quality management involvement (behavior variable).
3. Quality performance management is not only the supervision of employees but also the incentive. Therefore, the employee performance evaluation index includes the achievement of quality task objectives and the evaluation index of employees out of role mutual aid behavior and environmental adaptability.
4. On the whole, employee involvement (behavior variable) and accountability (attitude variable) impact individual quality performance. Employee involvement has a direct impact, while accountability has an indirect impact.

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