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The Role of 'Quality Circles' in Enhancing Employee Participation and Organizational Efficiency in Educational Institutions

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ABSTRACT

This research paper explores the application of Quality Circles (QCs) within educational institutions, focusing on their role in enhancing employee participation and organizational efficiency. Originating from industrial Total Quality Management practices, QCs have evolved into participatory, collaborative forums where staff and students voluntarily engage in problem-solving and process improvement. Through a comprehensive review of literature and case studies, the paper highlights how QCs foster democratic dialogue, break hierarchical barriers, and promote shared ownership of institutional development. The findings underscore that QCs contribute significantly to improving communication, job satisfaction, and performance while nurturing essential skills like leadership, critical thinking, and teamwork. However, the study also recognizes several challenges to successful QC implementation in educational contexts, including resistance to change, time constraints, and lack of awareness or training. Recommendations are provided to help institutions embed QCs into their organizational culture, supported by leadership commitment and continuous capacity-building efforts. The paper concludes that with proper structure and support, QCs can serve as a sustainable tool for inclusive educational reform and continuous quality enhancement.

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INTRODUCTION

Quality Circles, also known as Quality Control Circles, are defined as groups of employees who perform similar or related work and who voluntarily meet on a regular basis to identify, analyze, and solve work-related problems (Duncan, 1982). These small groups typically consist of a minimum of three and a maximum of twelve members. Quality Circles enhance employee participation by involving diverse staff in problem-solving, fostering motivation and productivity. Their success relies on organizational support and commitment, ultimately leading to improved efficiency and a collaborative work culture within educational institutions (Shireen, 2014). The genesis of the Quality Circle concept can be traced back to Japan in the 1960s, with significant contributions from Professor Kaoru Ishikawa, often referred to as the father of Quality Circles. The foundational ideas were also influenced by the work of W. Edwards Deming in the 1950s, who praised Toyota as an early adopter of this practice. Initially prevalent in manufacturing industries as a means to rebuild and enhance production capabilities after World War II, the underlying principles of Quality Circles have since been recognized for their broader applicability across diverse sectors, including the field of education. The expansion of this concept into education indicates a growing understanding of the inherent value of employee contributions in complex, service-oriented environments.

In the context of educational institutions, employee participation encompasses the active involvement of all stakeholders, including teachers, administrators, and support staff, in decision-making and problem-solving processes that directly affect their work and the overall functioning of the institution. Employee participation and working environment positively impact quality circle implementation, while team spirit negatively influences it (B. Vijayalakshmi et al. 2019). Organizational productivity in this sector can be understood as the effective and efficient utilization of all available resources – human, financial, and material – to achieve the desired educational outcomes, which include student learning, satisfaction, and the overall performance of the institution (Jajoo & Kakkad, 2016). Engaging employees in these processes can lead to tangible improvements in the quality of teaching, more positive outcomes for students, and the cultivation of a more supportive and effective working environment. The increasing pressures on educational institutions to enhance both the quality and efficiency of their operations, coupled with the imperative to foster a highly engaged and diverse workforce, underscore the

contemporary relevance and significance of applying Quality Circle principles within this sector (Griffin, 1987).

The pursuit of quality in education has undergone a paradigm shift from mere quantitative assessments to more participatory, human-centric approaches that emphasize collaborative problem-solving, innovation, and ownership among stakeholders. One such participatory approach, borrowed from industrial settings and adapted for educational institutions, is the concept of **Quality Circles (QCs)**. Rooted in the Japanese philosophy of Kaizen (continuous improvement), Quality Circles were originally designed to enhance productivity, communication, and morale in manufacturing units (Spengler, 1984). Over time, the adaptability and relevance of QCs have led to their application in the education sector.

Quality Circles in education refer to small groups of teachers, students, or administrators who voluntarily come together on a regular basis to identify, analyze, and solve problems related to academic and institutional quality. The core philosophy of QCs in this context revolves around empowering participants to take active roles in improving their learning and teaching environments, thereby promoting accountability and engagement. Quality circles enhance employee participation by involving volunteers in structured problem-solving, fostering collaboration and motivation. This approach can lead to improved organizational efficiency in educational institutions by addressing work-related issues effectively, ultimately benefiting both staff and students (Duncan, 1982).

The key attraction of QCs lies in their democratic nature—every voice is valued, and decisions are taken collectively based on mutual respect and shared insights. In educational settings, where rigid hierarchies often stifle innovation and responsiveness, Quality Circles offer a refreshing alternative. Their application has been linked to improved student performance, enhanced teacher motivation, reduced absenteeism, and a more vibrant academic culture.

This paper explores the conceptual framework, implementation strategies, and practical outcomes of Quality Circles in education. Drawing insights from key studies and real-life applications, this work critically examines the viability and scalability of QCs as a long-term quality enhancement tool.

Objectives of the Study

1. To examine the concept and structure of Quality Circles in educational institutions.
2. To assess the outcomes of implementing Quality Circles in terms of student and institutional performance.

3. To discuss the challenges and implications of sustaining Quality Circles in schools and colleges.

REVIEW OF LITERATURES

Quality Circles (QCs), originating from Japanese Total Quality Management principles, have long been recognized for their potential in participatory management and employee involvement. In educational institutions, they serve as platforms for collective problem-solving, encouraging voluntary participation from staff and students alike (Vijayalakshmi & Yamuna, 2019). Empirical studies indicate that QCs positively influence employee engagement, team cohesion, and organizational productivity, though their impact on job satisfaction appears modest (Marks et al., 1986; Pereira & Osburn, 2007). Marks et al. (1986) found that while QWL perceptions among participants improved in areas directly linked to QC activities, general attitudes remained unchanged. Similarly, Agrawal (2018) conceptualized QCs as superior alternatives to traditional negotiation mechanisms, arguing that their emphasis on cooperation fosters employee creativity and empowerment. Research in industrial and educational settings supports the idea that quality circles lead to reduced absenteeism, improved communication, and enhanced job performance (Buch, 1992; Rath & Mohanty, 2018).

Additional studies highlight the contextual and psychological dimensions that influence the efficacy of QCs in education. Olaskoaga-Larrauri et al. (2022) stress that incongruence between institutional quality policies and the personal values of academic staff can undermine job satisfaction, even when participatory practices like QCs are in place. Prakash (2018) notes that quality constructs such as student learning, engagement, and satisfaction dominate the discourse in higher education, yet often lack integration with grassroots quality mechanisms like QCs. Barlow and Dale (1983) assert that while QCs are widely adopted in industrial contexts, their fundamental principles—voluntary participation, structured analysis, and team-based problem-solving—are transferable to educational environments. However, effectiveness is contingent on supportive leadership, shared values, and adequate training (Baker & Hartman, 2015). Despite the established benefits, studies also caution against overestimating the direct correlation between QCs and job satisfaction, pointing instead to broader factors like work environment, communication quality, and leadership support (Adam, 1991).

The reviewed literature underscores several areas for further investigation. While numerous studies affirm the positive influence of QCs on participation and performance, there is limited longitudinal research exploring their sustained impact in educational settings. Moreover, the mismatch between institutional quality initiatives and staff perceptions of "quality" remains an underexplored determinant of QC effectiveness. The majority of studies focus on productivity and performance metrics, but fewer

examine the nuanced psychological and cultural factors that mediate QC outcomes, such as organizational alignment, symbolic conflict, or intrinsic motivation. Additionally, while much attention has been given to QCs in technical or vocational education, comprehensive analyses within liberal arts or primary education institutions are still lacking. These gaps suggest a need for deeper, context-specific research to fully harness the potential of Quality Circles in transforming educational environments.

RESEARCH METHODOLOGY

This study employs a qualitative research approach using secondary data sources to analyze the role of Quality Circles (QCs) in organizational performance. Data is collected from existing literature, case studies, company reports, and industry publications to examine how QCs contribute to employee involvement, problem-solving, and continuous improvement. The study interprets patterns, themes, and insights from documented experiences and qualitative analyses, allowing for an in-depth understanding of the practical implications and effectiveness of QCs in diverse organizational contexts.

RESULTS

Quality Circles enhance employee participation by involving lower-level employees in decision-making, thereby improving organizational efficiency (BusheGervase, 1984). However, effective implementation requires supportive organizational structures and procedures, alongside training in social relations and organization theory, to truly foster participation. Let's discuss the results of my research based on the bibliographic study based on the review of literatures as under;

1) Understanding the Mechanism and Concept of Quality Circles

Quality Circles (QCs) operate on core principles that center on voluntary participation, teamwork, and continuous improvement. Rooted in the philosophy of Kaizen, they emphasize small, incremental changes driven by employees directly involved in their respective processes. This bottom-up approach values employees' practical knowledge, fostering ownership, motivation, and a sense of commitment. The structure of QCs promotes collaboration through regular meetings where team members collectively identify, analyze, and resolve work-related issues. The voluntary nature of participation is critical, as it encourages genuine engagement and cultivates a positive, empowered work culture aligned with participative and humanistic management philosophies. Quality Circles enhance employee participation by involving lower-level employees in decision-making, thereby improving organizational efficiency. However, effective implementation requires

supportive organizational structures and procedures, alongside training in social relations and organization theory, to truly foster participation (BusheGervase, 1984).

Typically comprising 3 to 12 members from similar functional areas, a Quality Circle includes roles such as a facilitator, leader, active members, and a sponsor from management. This structured yet flexible setup ensures effective problem-solving and communication. Beyond improving workplace processes and performance, QCs aim to develop employees by enhancing skills in leadership, critical thinking, and teamwork. By addressing real problems and implementing viable solutions, Quality Circles serve as both a productivity tool and a platform for human resource development, promoting a culture of innovation, trust, and continuous growth within organizations.

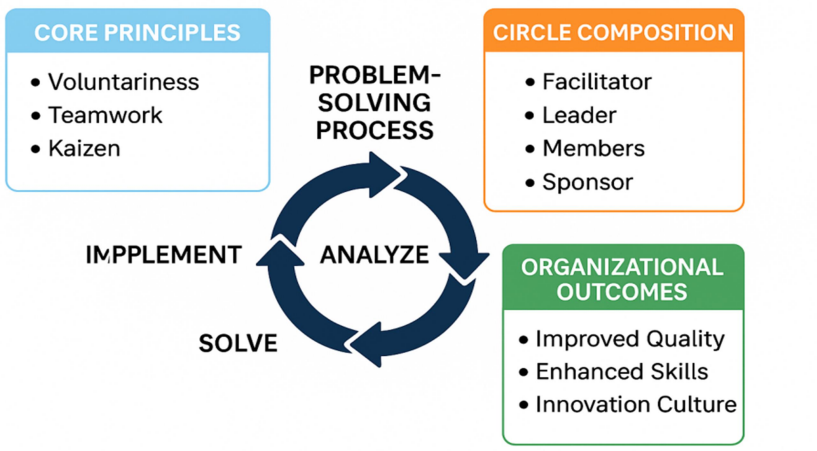

Fig. – 1: Operational Framework of Quality Circle

The primary objectives of implementing Quality Circles are multifaceted. Foremost is to identify, analyze, and ultimately solve problems that are related to the work environment and processes.[1] This problem-solving focus is directly linked to the broader goals of improving the overall quality, productivity, and performance of the organization.[2] Furthermore, Quality Circles aim to enhance employee motivation, engagement, and job satisfaction by making them feel valued and involved in making a difference. Participation in these circles also contributes to the development of crucial skills such as problem-solving, communication, and teamwork among the employees.[4] Ultimately, the implementation of Quality Circles seeks to foster a culture of continuous improvement and innovation within the organization, where employees are empowered to take ownership of quality-related challenges and proactively seek ways to enhance processes and outcomes.

Table 1: Key Principles of Quality Circles

Principle	Description
Voluntary Participation	Employees choose to participate based on their interest and commitment to improvement.
Teamwork and Collaboration	Members work together to identify, analyze, and solve problems, fostering a cooperative environment.
Continuous Improvement	A commitment to making ongoing, incremental improvements to processes and outcomes.
Employee Expertise	Recognition that employees directly involved in work have valuable insights and knowledge about their tasks.
Human Resource Development	Quality Circles serve as a platform for employees to develop new skills and enhance their potential.
Participatory Management	Alignment with management approaches that involve employees in decision-making processes.

Table 2: Roles and Responsibilities in a Quality Circle

Role	Responsibilities
Facilitator	Guides the circle's activities, ensures proper methodology is followed, and promotes effective participation.
Leader	Coordinates meetings, maintains focus on objectives, and acts as a liaison with

	management.
Member	Contributes ideas, participates actively in discussions, collects data, analyzes problems, and helps implement solutions.
Sponsor	Provides management support, resources, and authorization for the implementation of proposed solutions. Represents management's commitment to the Quality Circle process.

2) Understanding Quality Circles in Education

Quality Circles, as implemented in the education sector, are derived from their industrial origins, where they emerged as small groups of workers focused on quality improvement in manufacturing processes. QCs facilitate the development of essential skills such as leadership, teamwork, and communication, which empower employees to take initiative and ownership of their roles(Chapagain, 2006).

The adaptation to educational settings involved redefining "quality" from product-oriented to process-oriented—focusing on learning outcomes, student well-being, and teacher effectiveness.

In educational QCs, the participants are usually volunteers—students, teachers, or even parents—who come together regularly to identify and discuss problems affecting their school or classroom environment. They follow structured steps: identifying a problem, analyzing its root causes, brainstorming solutions, implementing change, and reviewing the outcomes. Such an approach encourages critical thinking, participatory decision-making, and leadership development. Quality circles enhance employee participation in educational institutions by fostering collaboration among staff to identify and solve problems. This collective effort improves organizational efficiency, promotes a sense of belonging, and satisfies employees' self-esteem through recognition and rewards (Dangwal, 2013). Students' Quality Circles, or Imece Circles, enhance employee participation and organizational efficiency by fostering collaboration and empowerment within educational institutions, contributing to the development of social capital and aligning with the principles of the Knowledge Society and Knowledge Economy (Ennals & Köksal, 2011). Typically, a student QC might meet weekly under the guidance of a facilitator (usually a teacher), discuss issues like poor attendance, low academic

performance, or classroom discipline, and propose solutions. Teacher QCs, on the other hand, may focus on curriculum delivery, classroom engagement, and pedagogical innovations .

3) **The Role of Quality Circles in Enhancing Employee Participation and Organizational Productivity in Education**

Quality Circles (QCs) serve as a structured platform in educational institutions to enhance employee involvement by fostering open communication among teachers, administrators, and staff. They help break down hierarchical barriers, encourage voluntary participation, and empower employees to contribute to institutional improvement. Effective implementation involves clear communication of goals, visible leadership support, relevant training, recognition of contributions, and addressing relevant issues within employees' spheres of influence (Elizur, 1990). Creating a supportive environment and a transparent system for acting on suggestions are also crucial.

The benefits of QCs include improved employee morale, job satisfaction, a sense of ownership, and stronger collaboration across departments. They enhance problem-solving abilities and stimulate creativity and innovation.

From an organizational standpoint, QCs can reduce operational costs by eliminating inefficiencies, improve educational outcomes, streamline workflows, and enhance resource utilization. They also indirectly boost productivity by reducing absenteeism and grievances. Key application areas include curriculum development, administrative efficiency, student support services, classroom management, and resource allocation. Overall, Quality Circles drive both employee engagement and institutional productivity.

Table 3: Benefits of Quality Circles in Education

Category	**Specific Benefits**
Enhanced Employee Participation	Increased morale and job satisfaction, Development of a sense of ownership and responsibility, Improved communication and collaboration among staff, Enhanced problem-solving capabilities, Increased creativity and innovation

Improved Organizational Productivity	Reduced operational costs, Improved quality of educational services and outcomes, Streamlined work processes and increased efficiency, Reduced absenteeism and grievances, Better resource utilization and management

4) Steps to be followed in implementing Quality circle in Education institutes

The successful implementation of Quality Circles within educational institutions requires a well-structured and carefully managed process. The initial phase involves the following **steps are involved in implementing Quality Circles (QCs) in educational institutions**,

A. **Build Management Commitment:** For a Quality Circle initiative to succeed, the first essential step is securing active support and commitment from the institution's leadership. This means more than just verbal approval—it involves dedicating time, resources, and authority to QC activities. Leadership must demonstrate belief in continuous improvement and employee participation.

- Gain executive-level endorsement.
- Embed Quality Circle philosophy in institutional policies.
- Ensure availability of resources and support systems.

B. **Form Quality Improvement Teams:** Create small groups—typically 5 to 10 members—based on departments or functional areas. These teams, or circles, are ideally made up of volunteers who are directly involved in the day-to-day operations and who understand the practical challenges in their area.

- **Organize cross-functional or departmental teams.**
- **Assign a facilitator or coordinator to guide the group.**
- **Encourage inclusiveness and voluntary participation.**

C. **Engage and Train Stakeholders:** All relevant stakeholders—including teachers, administrative staff, and support personnel—must be engaged in the QC process. Proper training is provided to build competency in problem-solving techniques, communication, group dynamics, and the use of quality tools.

- **Conduct awareness programs about QCs.**
- **Provide structured training in quality tools and PDCA cycle.**
- **Develop communication and team-building skills.**

D. **Identify and Analyze Problems:** Teams identify specific issues affecting their work environment, which are within their capacity to influence. Once a problem is selected, it is analyzed using quality tools to find root causes.

- **Use tools like Fishbone diagrams, Pareto charts, and flowcharts.**
- **Focus on issues that are recurring or high-impact.**
- **Validate problems with data and feedback.**

E. **Develop and Implement Solutions:** Based on analysis, teams brainstorm and develop potential solutions. The most feasible and impactful solutions are then implemented, often on a trial basis, to test their effectiveness.

- **Generate multiple solution ideas.**
- **Evaluate options using decision matrices.**
- **Pilot the best solutions with clear timelines and responsibilities.**

F. **Monitor Progress and Evaluate Results:** After implementation, the outcomes are monitored to ensure the solutions are effective. This stage uses metrics and feedback to track performance. Continuous improvement is emphasized, often using the PDCA (Plan–Do–Check–Act) cycle.

- **Define success indicators and gather data.**
- **Use PDCA for structured improvement.**
- **Make adjustments based on feedback and performance data.**

G. **Recognize and Share Success:** Recognizing contributions from Quality Circle teams boosts motivation and reinforces the culture of participation. Successful outcomes should be documented and shared across the institution to replicate good practices.

- **Celebrate team achievements.**
- **Share case studies and lessons learned.**
- **Incorporate feedback into future QC cycles.**

5) Case Studies of Successful Quality Circle Implementation in Educational Institutions:

The application of Quality Circles has demonstrated success in various educational settings, yielding positive impacts on both employee participation and organizational productivity. One notable example is the City Montessori School (CMS) in Lucknow, India, which pioneered the concept of Student Quality Circles (SQCs) in 1994. These circles, based on the original Total Quality Management philosophy, involve students working collaboratively to improve the quality of teaching and learning, as well as addressing issues related to the school environment. The success of SQCs at CMS has led to their adoption in numerous other countries, highlighting their potential to foster student engagement, develop leadership skills, and enhance the overall learning experience.

In higher education, Leuphana University in Germany has integrated Quality Circles as a central instrument for the ongoing development of studies and teaching. These circles bring together students and lecturers to discuss the strengths and weaknesses of degree programs, jointly developing them further and addressing current problems. The outcomes of these discussions are documented in teaching reports, and the agreed-upon measures are reviewed in subsequent Quality Circle meetings, demonstrating a commitment to continuous improvement in academic offerings.[63]

Another example comes from a study at the College of Engineering Pune, where a student-led Quality Circle identified 52 problems related to the teaching and learning process and the college premises. Through brainstorming and structured problem-solving techniques, they developed and implemented solutions, supported by tools like the PDCA cycle. This case study illustrated the effective implementation of Quality Circles in an educational institute, leading to positive results and contributing to the mutual growth of both the institute and the students.

Furthermore, a study at Trakya University School of Medicine in Turkey implemented Quality Circles among first-year medical students to address education-related problems and enhance student involvement.[60] The study found a significant increase in student satisfaction and an improvement in the perceived quality of learning after the one-year study period, highlighting the potential of Quality Circles to positively impact the student experience in higher education.

These case studies, along with others documented in research , demonstrate the diverse applications and positive outcomes that can be achieved through the thoughtful and well-supported implementation of Quality Circles in educational institutions across different levels and contexts.

Table 4: Examples of Quality Circle Applications and Outcomes in Education

Institution/Context	Application Area	Reported Outcomes
City Montessori School, India	Student Quality Circles	Enhanced student engagement, development of leadership skills, improved quality of teaching and learning.
Leuphana University, Germany	Quality Circles involving students and lecturers	Continuous improvement of degree programs, joint problem-solving, documented improvements in teaching.
College of Engineering Pune, India	Student Quality Circle	Identification and resolution of problems related to teaching, learning, and college premises, contributing to institutional growth.
Trakya University School of Medicine, Turkey	Quality Circles among medical students	Increased student satisfaction, improved perceived quality of learning.

DISCUSSION

The implementation of Quality Circles (QCs) in educational institutions holds transformative potential for enhancing both employee participation and organizational productivity. Rooted in principles of voluntary engagement, collaborative problem-solving, and continuous improvement, QCs empower educators, students, and administrative staff to play an active role in addressing institutional challenges. This inclusive and democratic process has been shown to improve communication, increase morale, reduce absenteeism, and promote a sense of ownership among participants. In particular, the integration of QCs in areas like curriculum planning, classroom management, and student services leads to tangible gains in teaching quality, learning outcomes, and institutional effectiveness. Moreover, by fostering life skills such as teamwork, critical thinking, and leadership, QCs also contribute to broader educational goals aligned with global standards like the Sustainable Development Goals.

Despite these advantages, educational institutions face several challenges when implementing QCs. Key barriers include lack of awareness, resistance to change from traditional hierarchical structures, time constraints, and difficulty in sustaining momentum without immediate visible results. Additionally, inadequate training in quality tools and problem-solving techniques can limit the impact of QCs. To address these issues, it is recommended that institutions embed QC practices into existing curricula, provide structured training for facilitators and members, and establish clear feedback loops to ensure that outcomes lead to actionable improvements. Celebrating successes and securing strong leadership commitment are also critical to institutionalizing QCs as a long-term quality enhancement strategy. By overcoming these challenges through thoughtful integration and support, QCs can serve as a vital instrument for creating participatory, responsive, and continuously improving educational environments.

CONCLUSION

Quality Circles present an innovative, participatory, and empowering approach to educational improvement. When implemented thoughtfully, they have the potential to transform school cultures, enhance student and teacher performance, and build a collaborative community of learners and educators. The evidence from various studies and practical examples suggests that QCs not only solve problems but also create leaders, build trust, and promote a deeper engagement with learning and teaching. While challenges to implementation exist, they are not insurmountable and can be addressed through strategic integration, training, and institutional support. the study highlights the significant impact of Quality Circles (QCs) on improving organizational effectiveness through enhanced employee participation, problem-solving, and communication. The implementation of QCs fosters a collaborative work environment where employees feel empowered to contribute to decision-making processes, leading to increased productivity, reduced operational inefficiencies, and improved quality outcomes. The research findings reaffirm that QCs not only promote a culture of continuous improvement but also enhance employee satisfaction and organizational harmony. Organizations that have embedded QCs into their operational framework demonstrate higher levels of innovation and responsiveness to workplace challenges.

To strengthen the role of QCs, organizations should invest in consistent training, encourage leadership support, and integrate QC outcomes into strategic planning. Furthermore, organizations can establish recognition mechanisms to reward effective QC contributions, which may boost motivation and long-term engagement. As for future research, deeper exploration into sector-specific challenges and the long-term sustainability of QCs in evolving work environments could provide valuable insights.

Comparative studies across industries or global contexts may also reveal best practices and strategies for optimizing QC implementation in diverse organizational cultures. As education systems worldwide grapple with issues of quality, inclusion, and accountability, Quality Circles offer a tested and versatile model that can make education not only more effective but also more humane.

REFERENCE

- Vijayalakshmi, B., & Yamuna, G. (2019). Quality Circle: A Study on Impact of Employee Participation, Team Spirit, Working Environment in Technical Educational Institutional Performance.
- Marks, M., Mirvis, P., Hackett, E., & Grady, J. (1986). Employee participation in a Quality Circle program: Impact on quality of work life, productivity, and absenteeism.. *Journal of Applied Psychology*, 71, 61-69. https://doi.org/10.1037/0021-9010.71.1.61.
- Agrawal, K. (2018). FUNCTIONALITY OF QUALITY CIRCLES IN ORGANIZATIONAL HARMONY: A STUDY ON EMPLOYEE PARTICIPANT BEHAVIOR.
- Rath, S., & Mohanty, I. (2018). Quality Circle: Influences On Quality Of Work Culture And Job Satisfaction.
- Pereira, G., & Osburn, H. (2007). Effects of Participation in Decision Making on Performance and Employee Attitudes: A Quality Circles Meta-analysis. *Journal of Business and Psychology*, 22, 145-153. https://doi.org/10.1007/S10869-007-9055-8.
- Adam, E. (1991). Quality Circle Performance. *Journal of Management*, 17, 25 - 39. https://doi.org/10.1177/014920639101700103.
- Baker, S., & Ed.D., B. (2015). Advisory Committees: Vocational Education's Quality Circles. *Journal of Health Occupations Education*, 9, 7.
- Buch, K. (1992). Quality Circles and Employee Withdrawal Behaviors: A Cross-Organizational Study. *The Journal of Applied Behavioral Science*, 28, 62 - 73. https://doi.org/10.1177/0021886392281007.
- Barlow, E., & Dale, B. (1983). A Quality Circle Case Study. *Industrial Management and Data Systems*, 83, 23-28. https://doi.org/10.1108/EB057315.

- Olaskoaga-Larrauri, J., Rodríguez-Armenta, C., & Marúm-Espinosa, E. (2022). Disagreement in the Conceptualization of Educational Quality and Job Satisfaction. *Social Sciences*. https://doi.org/10.3390/socsci11070287.
- Prakash, G. (2018). Quality in higher education institutions: insights from the literature. *The TQM Journal*. https://doi.org/10.1108/TQM-04-2017-0043.
- Spengler, M. L. (1984). *Improved organizational performance through quality circles*. https://vtechworks.lib.vt.edu/handle/10919/75645
- Shireen, N. (2014). *Quality Circle: A Fundamental Unit of Increase Profitability*. http://www.researchpublish.com/download.php?file=Quality%20Circle-235.pdf&act=book
- Jajoo, N., & Kakkad, A. (2016). Case Study: Sustaining and Institutionalizing Quality Circles. *Journal for Quality and Participation*, *39*. http://asq.org/quality-participation/2016/04/social-responsibility/case-study-sustaining-and-institutionalizing-quality-circles.pdf
- BusheGervase, R. (1984). Quality Circles in Quality of Work Life Projects: Problems and Prospects for Increasing Employee Participation. *Canadian Journal of Community Mental Health*, *3*(2), 101–113. https://doi.org/10.7870/CJCMH-1984-0019
- Elizur, D. (1990). Quality Circles and Quality of Work Life. *International Journal of Manpower*, *11*(6), 3–7. https://doi.org/10.1108/01437729010136998
- Ennals, R., & Köksal, H. (2011). *Creating collaborative advantage through students' quality circles*. https://eprints.kingston.ac.uk/id/eprint/19236/
- Dangwal, P. G. (2013). Quality circle - Concept and the Indian story. *International Journal of Managment, IT and Engineering*, *3*(10), 282–295. http://www.indianjournals.com/ijor.aspx?target=ijor:ijmie&volume=3&issue=10&article=022&type=pdf
- Duncan, I. B. (1982). *Quality Circles: A Practical Guide*. https://link.springer.com/content/pdf/10.1057%2Fjors.1983.110.pdf
- Griffin, R. W. (1987). *A Longitudinal Assessment of the Effectiveness of Quality Circles*. *1987*(1), 191–195. https://doi.org/10.5465/AMBPP.1987.17534134