



## ISO 9001:2015 QUALITY MANAGEMENT SYSTEM IN REALIZING SCHOOL CULTURE TRANSFORMATION AT SMKN 1 SURABAYA

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### Article Info

#### Keywords:

ISO 9001:2015, School Quality Culture, Quality management system

### ABSTRACT

Improving the quality of education is a primary requirement in the era of globalization and the Industrial Revolution 4.0. One strategic effort undertaken by schools is the implementation of the ISO 9001:2015 Quality Management System (QMS). This study aims to analyze the implementation of ISO 9001:2015 in realizing a quality culture transformation at SMK Negeri 1 Surabaya, focusing on the implementation of ISO principles, organizational culture changes, and supporting and inhibiting factors. This study used a descriptive qualitative approach through interviews, observation, and documentation. The results show that the implementation of ISO 9001:2015 at SMK Negeri 1 Surabaya was carried out systematically through quality policies, standard operating procedures (SOPs), internal audits, and management reviews. The principles of customer focus, leadership, and continuous improvement contributed significantly to improved school performance and the growth of a quality culture oriented towards accountability, openness, and continuous improvement. The transformation of organizational culture is evident in the increased quality awareness of the school community and cross-unit collaboration. Key success factors include visionary leadership, active participation of the school community, and support from industry partners, while obstacles include resistance to change and a lack of understanding of ISO principles. Overall, the implementation of ISO 9001:2015 at SMK Negeri 1 Surabaya has proven to be a significant catalyst in realizing the transformation of the school's quality culture. This system not only strengthens governance and managerial effectiveness but also changes the mindset of the school community to be more reflective, collaborative, and oriented towards sustainable quality. This research implies that strengthening human resource competencies and leadership commitment are key to the successful implementation of an ISO-based quality system in vocational education units.

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## 1. INTRODUCTION

In the era of globalization and the Industrial Revolution 4.0, the world of education is required to produce superior, adaptive, and competitive human resources amid rapid changes. Schools, as formal educational

institutions, play a strategic role in shaping students' character and competence with a quality oriented mindset. Therefore, the implementation of a Quality Management System (QMS) has become a fundamental necessity for every educational institution that aims to ensure that the educational process runs effectively, efficiently, and sustainably (Sallis, 2015). The ISO 9001:2015 Quality Management System serves as one of the international standards that can assist educational institutions in managing all their processes in a measurable, well-documented, and continuously improving (Goetsch & Davis, 2016) manner.

The implementation of ISO 9001:2015 in schools, particularly vocational high schools (SMK), is not merely a fulfillment of administrative standards but also a step toward transforming a quality culture. This transformation requires a paradigm shift from all school members from principals and teachers to administrative staff to make quality a core value in every teaching and service activity (Deming, 2018). Thus, a quality culture is not merely understood as a series of technical procedures but becomes a collective habit that drives schools to continually innovate and improve (Tjiptono & Diana, 2019).

SMK Negeri 1 Surabaya is one of the vocational education institutions that has implemented ISO 9001:2015 as part of its educational quality improvement strategy. The implementation of this standard reflects the school's commitment to ensuring the quality of educational services, structuring transparent management systems, and fostering quality awareness across all levels of the organization. Through the ISO 9001:2015 QMS implementation, SMK Negeri 1 Surabaya strives to create a governance system oriented toward customer satisfaction students, parents, business and industry partners, and the general public while also fostering a strong and sustainable quality culture.

However, the process of quality culture transformation through ISO 9001:2015 implementation is not an easy one. Visionary leadership, shared commitment, and consistent evaluation systems are required to ensure that quality principles are internalized into every aspect of school life (Oakland, 2014). The main challenges often lie in resistance to change, lack of understanding of quality importance, and weak monitoring and continuous improvement mechanisms (Sallis, 2015). Therefore, studying the implementation of the ISO 9001:2015 QMS in the context of quality culture transformation at SMK Negeri 1 Surabaya becomes essential. This study aims to provide an empirical picture of how the international quality standards are implemented, their effectiveness in shaping school quality culture, and the supporting and inhibiting factors influencing the process.

Based on this background, this study aims to analyze the implementation of the ISO 9001:2015 Quality Management System in realizing quality culture transformation at SMK Negeri 1 Surabaya. Specifically, it seeks to: (1) describe the implementation of the ISO 9001:2015 QMS in school management; (2) identify organizational cultural changes that occur as a result of this implementation; and (3) describe the supporting and inhibiting factors in the process of transforming the school's quality culture. The results of this study are expected to contribute to the development of sustainable educational quality management models and serve as a reference for other schools seeking to build a quality culture based on international standards.

## 2. RESEARCH METHODS

This study employed a descriptive qualitative approach to gain a deep understanding of the implementation process of the ISO 9001:2015 Quality Management System (QMS) in realizing quality culture transformation at SMK Negeri 1 Surabaya. The qualitative approach was chosen because it allows for the exploration of meaning, perceptions, and experiences of the research subjects in a contextual and holistic manner (Creswell, 2018). Through this approach, the researcher sought to trace how ISO 9001:2015 standards were applied in the school's managerial practices and how this implementation affected changes in values, attitudes, and behaviors of school members in building a sustainable quality culture.

This study was designed as a case study, as it focused on one educational institution SMK Negeri 1 Surabaya which has consistently implemented the ISO 9001:2015 QMS. Thus, the study not only describes the technical aspects of quality system implementation but also examines the social and cultural dynamics accompanying the school's quality transformation process.

The research subjects included the principal, vice principal for quality management, teachers, and administrative staff. Data collection techniques consisted of in-depth interviews, participatory observation, and documentation study. Semi-structured interviews were conducted to allow flexibility in exploring the experiences and perceptions of informants (Sugiyono, 2019). Observation was used to understand how ISO 9001:2015 was implemented in daily school activities, such as teaching and learning, quality meetings, and internal evaluations. Documentation study involved analyzing various supporting documents such as quality manuals, standard operating procedures (SOPs), internal audit reports, and management review minutes, which served as evidence of QMS implementation at SMK Negeri 1 Surabaya.

Data analysis followed Miles and Huberman's interactive model, which consists of three main components: data reduction, data display, and conclusion drawing/verification (Miles, Huberman, & Saldaña, 2019). Data

reduction was done by selecting, focusing, and simplifying raw data into relevant information aligned with the research focus. Data display was carried out through descriptive narratives illustrating the relationship between QMS implementation and the formation of school quality culture. Conclusions were drawn gradually and iteratively to ensure the validity of findings that accurately reflected field conditions.

To ensure data trustworthiness, the study adopted Lincoln and Guba's (1985) four qualitative validity criteria: credibility, transferability, dependability, and confirmability. Credibility was maintained through source and technique triangulation, member checking, and prolonged engagement in the field. Transferability was achieved by providing rich contextual descriptions to allow applicability in similar contexts. Dependability and confirmability were ensured through an audit trail documenting all research processes from data collection to analysis (Creswell, 2018). Through these principles, the study aimed for a high level of reliability and objectivity.

Overall, this qualitative method allowed the researcher to understand ISO 9001:2015 implementation comprehensively, not only from the technical aspects of quality management but also from social, cultural, and psychological dimensions that shape school quality culture. This approach was expected to yield conceptual and practical contributions to the development of quality management systems in other educational institutions pursuing school quality transformation.

### 3. RESULT AND ANALYSIS

#### **Implementation of ISO 9001:2015 Quality Management System in School Management**

Observations at SMK Negeri 1 Surabaya showed that the implementation of the quality management system in the vocational school environment was conducted through systematic and multi-layered processes, beginning with the establishment of quality policies, development of quality manuals and SOPs, implementation of internal audits, and management reviews as part of the continuous improvement cycle. The school's implementation reflected how the core principles of ISO 9001:2015 customer focus, leadership, process approach, evidence-based decision making, and continuous improvement were translated into operational school activities.

The customer focus principle was evident in the school's efforts to meet the needs and expectations of stakeholders such as students, parents, industries, and the wider community. This was implemented through customer satisfaction surveys, improvement of administrative services, and curriculum alignment with industry demands.

The leadership principle was demonstrated by the principal acting as the main driver of the quality system, leading the internal quality management team, and modeling discipline and consistency in SOP implementation. The process approach was applied by mapping each educational process as a connected sequence—from lesson planning and classroom practice to evaluation guided by documented quality procedures. Internal audits were conducted regularly to verify compliance with established procedures, and the results informed management reviews led by the principal to determine corrective and preventive actions. This audit-review cycle encouraged the school to continuously improve, as emphasized in ISO principles.

Overall, ISO 9001:2015 implementation at SMK Negeri 1 Surabaya has served as a vital instrument in strengthening governance and creating transparent and accountable work patterns. Nevertheless, its success heavily depends on leadership commitment and the active participation of all school members since the system can only function effectively when it becomes a work culture rather than mere administrative compliance.

Beyond technical aspects, success was also determined by quality awareness among school members. This awareness was built through socialization programs, internal auditor training, and mentoring by external certification bodies. These processes fostered continuous learning cycles that encouraged teachers and staff to think systematically, understand cause effect relationships between processes and outcomes, and innovate in teaching. Thus, ISO implementation affected not only administrative management but also pedagogical practices such as applying quality standards in lesson plan preparation, learning evaluation, and teaching factory operations.

Moreover, ISO 9001:2015 helped strengthen evidence-based management in the school. Strategic decisions such as priority program planning, budgeting, and performance evaluation were based on documented data and quality indicators, minimizing subjectivity and enhancing organizational transparency.

#### **Organizational Culture Change as an Impact of System Implementation**

The findings indicated that ISO 9001:2015 implementation at SMK Negeri 1 Surabaya directly influenced organizational culture transformation. Prior to implementation, many activities were routine and individualistic without clear benchmarks. After ISO adoption, a new awareness emerged that every process must be measurable, documented, and objectively evaluated.

Cultural change appeared in three key aspects:

- a. work behavior
- b. communication and collaboration patterns
- c. orientation toward results and customer satisfaction.

Teachers and staff showed improved discipline, awareness of audit schedules, and initiative in refining teaching processes using data. Inter-unit communication and collaboration also increased due to the system's demand for cross-departmental coordination. Decision making based on audit and evaluation data reflected a shift toward a culture of continuous improvement.

The school also developed shared values of shared vision and organizational learning through internal training, best practice sharing, and collaboration with industry partners in quality management forums. Although cultural transformation takes time and consistent support, the process has built collective awareness to learn and improve continuously. Some challenges remain, such as perceptions of ISO as administrative burden and difficulty adapting to documentation based workflows. Therefore, continuous guidance and transformational leadership are essential to sustain genuine quality culture.

The transformation also enhanced sense of belonging among school members, strengthening loyalty and moral responsibility to maintain quality standards and certification. In the vocational education context, ISO implementation improved relationships with industries through joint curriculum design, internships, and graduate placement strengthening the school's position as a reliable industrial partner.

### **Supporting and Inhibiting Factors of School Quality Culture Transformation**

Several key supporting factors were identified:

- a. **Strong and Visionary Leadership**  
The principal's transformational leadership played a crucial role in motivating staff and ensuring consistent quality practices.
- b. **Active Participation of the School Community**  
Engagement in audits, training, and reflection forums accelerated cultural internalization.
- c. **Clear Structure and Procedures**  
The existence of manuals, SOPs, and work instructions ensured uniform processes and transparency.
- d. **Support from Industry and Government**  
Collaboration with local industries and the Surabaya Education Office maintained curriculum relevance and graduate quality.

Externally, government policies also supported implementation through training and technical assistance, while professional forums such as the principals' network and subject teacher groups (MGMP) facilitated knowledge sharing and benchmarking. To overcome resistance, the school balanced procedural compliance with pedagogical innovation—integrating quality principles into lesson study and project-based learning. The school also strengthened digital quality management, using platforms such as SIM-Mutu or Google Workspace for Education to streamline reporting and internal audits.

In summary, ISO 9001:2015 implementation not only improved management and service quality but also fundamentally changed organizational culture. It became an instrument of transformation across structural (management), cultural (values and work ethic), and social (participation) dimensions. By internalizing quality principles, the school achieved harmony between compliance and innovation, positioning SMK Negeri 1 Surabaya as a model of sustainable quality culture in Indonesian vocational education.

## **4. CONCLUSION**

Based on the analysis and discussion, the implementation of ISO 9001:2015 QMS at SMK Negeri 1 Surabaya has played a significant role in building professional, transparent, and continuously improving school governance. The application of ISO principles customer focus, leadership, process approach, evidence based decision making, and continuous improvement has created a systematic managerial framework ensuring that educational processes run according to standards, are well-documented, and objectively evaluated. The transformation of quality culture is evident in the shift of mindsets, behaviors, and work systems across the school community from administrative routines toward reflective, collaborative, and data-based practices. School members have become more open to evaluation, more aware of customer satisfaction, and more committed to making quality the core value of education. Success factors include visionary leadership, active participation, and strong external support. Challenges remain in the form of limited understanding of ISO principles, resistance to change, and suboptimal audit follow-up. These findings suggest that quality systems cannot stand alone as administrative tools but must be supported by shared commitment and value internalization. Therefore, the ISO 9001:2015 implementation at SMK Negeri 1 Surabaya has proven to be an essential catalyst for transforming the school's quality culture. It not only improves managerial procedures but also reshapes the professional mindset of the entire school community. Future improvement requires strengthening human resource capacity, digitalizing quality systems, and maintaining consistent monitoring through audits and management reviews to ensure sustainability and adaptability amid educational and industrial changes.

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