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Strengthening Educational Quality through the Implementation of ISO 9001:2008 Quality Management Systems at FKIP Pematangsiantar Senior High School

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Abstract: The implementation of a Quality Management System (QMS) based on ISO 9001:2008 is widely recognized as an organizational strategy for promoting educational quality and improving institutional performance. This study examines the implementation of ISO 9001:2008 at FKIP Pematangsiantar Senior High School and analyzes the supporting and inhibiting factors influencing its effectiveness. A descriptive qualitative research design was employed. Data were collected through direct observation, interviews, and document analysis, with particular attention to the management responsibility component and the application of quality management principles in school administration. The findings indicate that the school has implemented the ISO 9001:2008 QMS through various managerial and operational activities. The implementation levels of the eight quality management principles were identified as follows: customer focus (87.9%), leadership (75.3%), employee involvement (86.7%), process approach (82%), system approach to management (85%), continual improvement (85.3%), factual approach to decision-making (74%), and supplier relationship management (84.6%). These findings indicate that ISO 9001:2008 implementation has contributed to the improvement of educational services and organizational performance. However, the factual approach to decision-making remains the weakest area because of limited data management, utilization, and analysis. Accordingly, strengthening data collection systems, improving data management practices, and implementing regular performance evaluations are essential. The study concludes that ISO 9001:2008 provides a significant foundation for continuous quality improvement and supports the development of more effective and systematic educational management practices at FKIP Pematangsiantar Senior High School.
Keywords: ISO 9001:2008; Quality Management System; Educational Quality; Continuous Improvement; School Management.

INTRODUCTION

Education is a fundamental component of human development and a critical foundation for social progress. Through education, individuals acquire knowledge, skills, and values that support the development of competent, productive, and competitive human resources. In the context of globalization

and increasing institutional demands, educational organizations are required not only to deliver learning services but also to demonstrate effective management, accountability, and the capacity to improve continuously. However, educational institutions have often been characterized as organizations that respond relatively slowly to change and innovation compared with business and industrial sectors. This condition presents an important challenge for educational institutions seeking to strengthen organizational performance and improve the quality of educational services in a sustainable manner. The improvement of educational quality is influenced by a range of interconnected institutional factors, including leadership, organizational management, resource management, administrative processes, and the systematic evaluation of institutional performance. The quality of education cannot therefore be separated from the effectiveness of the management system used by an educational institution. Research on school quality management has demonstrated that quality management systems can contribute to improvements in documentation, management processes, resource management, evaluation, and user satisfaction when implemented consistently (Arribas Díaz & Martínez-Mediano, 2018). Furthermore, educational quality improvement requires systematic management practices that enable institutions to identify problems, monitor performance, and undertake corrective and developmental actions on a continuous basis.

In Indonesia, various government programs have been implemented to improve the quality of education, including curriculum reform, the development of educational facilities and infrastructure, the provision of learning resources, and the enhancement of teacher and educational personnel professionalism. Nevertheless, the existence of such programs does not automatically guarantee optimal educational outcomes. The effectiveness of educational improvement initiatives is also determined by the capacity of educational institutions to manage resources, organize institutional processes, and establish a culture of continuous improvement. Consequently, the development of an effective quality management framework remains an important strategic concern for educational institutions. Quality management systems have increasingly been recognized as a systematic approach to improving organizational effectiveness and educational service quality. A quality management system does not merely emphasize the formulation of standards or the preparation of administrative documents; rather, it requires the integration of quality principles into organizational processes, performance monitoring, evaluation, and continuous improvement. ISO 9001:2008 is one of the internationally recognized frameworks that provides a structured approach for organizations to establish a documented quality management system oriented toward customer requirements and continual

improvement (International Organization for Standardization [ISO], 2008). In educational institutions, the implementation of ISO-based quality management is expected to strengthen institutional consistency, clarify organizational responsibilities, improve process control, and support the delivery of more reliable educational services.

The relevance of ISO-based quality management to education has been supported by previous empirical research. Arribas Díaz and Martínez-Mediano (2018) found that ISO-based quality management systems in primary and secondary schools were associated with improvements in documentation, management, resource utilization, evaluation, continuous improvement, and user satisfaction. Their findings also indicated that schools with higher levels of quality management implementation demonstrated better educational outcomes and more positive user perceptions. Similarly, research by Tarmizi (2019) showed that the implementation of ISO 9001:2008 in a vocational school was generally effective and contributed to the improvement of educational service quality through organizational discipline, a supportive work culture, and the active involvement of human resources. These findings indicate that ISO implementation can function as a strategic management instrument for strengthening educational quality when it is integrated into the daily operations of the institution. Within the ISO 9001:2008 framework, quality management is based on eight fundamental principles: customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision-making, and mutually beneficial supplier relationships (ISO, 2008). The application of these principles in school management is expected to promote a culture of quality, accountability, and institutional responsibility. Customer focus, for example, requires educational institutions to understand and respond to the needs and expectations of students, parents, and other stakeholders. Leadership is essential in establishing direction and ensuring organizational commitment to quality. Likewise, employee involvement and a process-oriented approach are important for ensuring that quality improvement is not limited to school management but becomes a shared responsibility across the institution.

The implementation of a quality management system must be accompanied by systematic evaluation. Evaluation provides empirical information concerning the extent to which quality principles and procedures have been implemented and enables institutions to identify strengths, weaknesses, and areas requiring improvement. Evidence from research on ISO implementation in schools suggests that the impact of quality management systems is not uniform across all organizational dimensions. For example, the implementation of ISO 9001 has been associated with improvements in

teaching and learning processes, particularly in classroom teaching, evaluation, and tutorial activities (Rodríguez-Mantilla et al., 2019). Other research has also found that ISO implementation can influence school climate and satisfaction among members of the educational community, although the magnitude of the impact may vary across institutional contexts (Martínez-Zarzuelo et al., 2022). These findings emphasize the importance of evaluating ISO implementation based on specific quality principles and institutional conditions rather than assuming that certification alone guarantees educational quality.

SMA Kampus FKIP Pematangsiantar is one of the educational institutions that has implemented the ISO 9001:2008 Quality Management System and obtained ISO certification in 2016. The implementation of this system forms part of the school's strategic efforts to realize its vision, mission, and institutional objectives. As an ISO-certified educational institution, the school is expected to apply quality-oriented management principles throughout its managerial and operational activities. In particular, the application of customer-focused management is expected to be reflected in the teaching and learning process and in the provision of educational services. This commitment is supported by the use of teacher quality documents covering instructional planning, classroom implementation, assessment, analysis of learning outcomes, and remedial and enrichment activities. The consistent implementation of these documents is intended to ensure that instructional processes are conducted systematically and in accordance with established quality requirements.

Nevertheless, the implementation of ISO 9001:2008 in educational institutions may encounter various challenges. Previous research has identified differences in organizational perceptions, variations in human resource capacity, and the need for strong leadership commitment as important factors influencing the implementation of ISO-based quality management systems (Herman & Lisa, 2025). In addition, the implementation of ISO may generate administrative burdens and may be affected by a top-down management culture if quality practices are not sufficiently internalized by members of the organization (Arribas Díaz & Martínez-Mediano, 2018). The effectiveness of quality management therefore depends not only on the existence of certification or documented procedures but also on the extent to which quality principles are translated into actual institutional practices. Based on these considerations, systematic research is needed to evaluate the implementation of ISO 9001:2008 and identify the aspects that support or constrain its effectiveness in educational institutions. Such an evaluation is particularly relevant to SMA Kampus FKIP Pematangsiantar, which has implemented the ISO 9001:2008 Quality Management System as part of its institutional quality improvement strategy. Therefore, this study examines the implementation of ISO 9001:2008 at SMA

Kampus FKIP Pematangsiantar, with particular attention to the implementation of quality management principles and the factors influencing the effectiveness of the system. The findings are expected to provide empirical information for strengthening quality management practices and supporting the continuous improvement of educational quality at the school.

RESEARCH METHODOLOGY

Research Design

This study employed a descriptive mixed-methods research design to obtain a comprehensive understanding of the implementation of the ISO 9001:2008 Quality Management System (QMS) at SMA Kampus FKIP Pematangsiantar. The mixed-methods approach was selected because the research required the integration of quantitative and qualitative data to describe the level of implementation of quality management principles and to identify the obstacles encountered during the implementation process. The quantitative component was used to measure the implementation of the eight quality management principles based on questionnaire data and supporting documentary evidence. Meanwhile, the qualitative component was used to obtain in-depth information regarding the implementation process, the challenges faced by the school, and possible strategies for improving the quality management system. The integration of both forms of data enabled the researcher to obtain a more complete and contextual understanding of the research problem. Mixed-methods research involves the systematic integration of quantitative and qualitative approaches in the collection, analysis, and interpretation of data within a single study (Creswell & Plano Clark, 2018). In accordance with this perspective, the present study combined quantitative descriptive analysis with qualitative findings obtained through interviews and document analysis. The quantitative findings provided an overview of the implementation level of ISO 9001:2008, while the qualitative data were used to clarify and strengthen the interpretation of the quantitative results.

Research Setting and Period

The research was conducted at SMA Kampus FKIP Pematangsiantar. The research activities were carried out over a four-month period, from September to December 2025. The selection of the research site was since the school had implemented the ISO 9001:2008 Quality Management System and had obtained ISO certification in 2016. Therefore, the school was considered relevant for examining the implementation of ISO-based quality management in an educational institution.

Research Subjects and Sample

The research subjects were selected based on their direct or indirect involvement in the implementation and utilization of the ISO 9001:2008 Quality Management System at the school. The research participants consisted of the principal, vice principals, teachers, students, and parents. The principal and vice principals were included as key informants because of their managerial responsibilities in the implementation of the quality management system. Teachers, students, and parents were selected as respondents to provide information concerning the implementation of quality management principles and the quality of educational services.

The sampling procedure was adjusted to the characteristics of each research subject. The principal and vice principals were selected purposively because of their strategic roles in school management. The teacher, student, and parent samples were selected to represent the relevant groups involved in the educational process and the utilization of school services. The distribution of the research population and sample is presented in Table 1.

Table 1. Research Population and Sample

Research Subjects	Population	Sample
Principal	1	1
Vice Principals	2	2
Teachers	32	25
Students	285	122
Parents	570	115
Total	890	265

Data Collection Techniques

Data were collected using questionnaires, interviews, and document analysis. The use of multiple data collection techniques was intended to obtain comprehensive information and strengthen the credibility of the research findings through data triangulation. The questionnaire was used to collect quantitative data concerning the implementation of the eight quality management principles of ISO 9001:2008. The questionnaire was distributed to the selected respondents and was designed to obtain measurable information regarding the extent to which the principles were implemented in the school. Interviews were conducted with selected key informants, particularly the principal and vice principals, and other relevant participants when necessary.

The interviews were intended to obtain more detailed information concerning the implementation process, supporting factors, obstacles, and strategies for improving the ISO 9001:2008 Quality Management System. Document analysis was conducted by examining documents related to the implementation of the quality management system. The documents included relevant quality management documents, teacher quality documents, instructional planning documents, assessment-related documents, and other institutional records related to the implementation of ISO 9001:2008. Documentary evidence was used to complement the questionnaire and interview data.

Research Instruments

The research instruments consisted of a questionnaire, an interview guide, and a document analysis guideline. The questionnaire was developed based on the eight quality management principles of ISO 9001:2008, namely customer focus, leadership, involvement of people, process approach, system approach to management, continual improvement, factual approach to decision-making, and mutually beneficial supplier relationships (International Organization for Standardization, 2008). The validity of the questionnaire was assessed through construct validity. The questionnaire items were developed based on relevant theoretical concepts and the quality management principles contained in ISO 9001:2008. The instrument was subsequently reviewed by experts through an expert judgment process to assess the relevance and clarity of the items. A pilot test was then conducted to determine the empirical validity of the questionnaire items.

Items that fulfilled the validity criteria were included in the final questionnaire. Reliability testing was subsequently conducted to determine the consistency of the instrument. An instrument is considered reliable when it produces consistent results when used to measure the same construct. In this study, the reliability criterion was set at (r {11} \geq 0.70), indicating an acceptable level of internal consistency.

Data Analysis

The quantitative data were analyzed using descriptive statistical techniques. Descriptive statistics were used to present and describe the characteristics of the collected data without extending the findings beyond the research sample (Sugiyono, 2013). The quantitative analysis began with the coding and entry of questionnaire data into the Statistical Package for the Social Sciences (SPSS) version 22. The researcher calculated the total scores obtained from the questionnaire responses and supporting documentary data. The descriptive statistical analysis included the calculation of the mean, median, mode, deciles, percentiles, measures of data distribution, and standard deviation.

The percentage of implementation for each quality management principle was then determined and presented in numerical form. The quantitative findings were presented in tables and narrative descriptions to facilitate interpretation. The implementation scores for the eight ISO 9001:2008 quality management principles were subsequently compared descriptively to identify the principles with the highest and lowest levels of implementation.

Qualitative data obtained from interviews and document analysis were analyzed through data reduction, data display, and conclusion drawing. The interview data were reviewed, organized, and grouped according to the research focus. Relevant information concerning the implementation process, supporting factors, obstacles, and improvement strategies was identified and interpreted.

Data Integration and Identification of Implementation Obstacles

The integration of quantitative and qualitative data was conducted during the interpretation stage. Quantitative results were used to identify the level of implementation of the ISO 9001:2008 quality management principles, while qualitative findings were used to explain the conditions underlying the quantitative results. This integration enabled the researcher to obtain a more comprehensive understanding of the implementation of the quality management system. The obstacles to ISO 9001:2008 implementation were identified by considering the quantitative results, particularly the quality management principles with relatively lower implementation scores, and the qualitative information obtained through interviews and document analysis. The integration of these data sources provided a basis for identifying the main challenges affecting the effectiveness of the quality management system. After the implementation obstacles had been identified, improvement strategies were formulated by referring to the relevant requirements and principles of ISO 9001:2008. The proposed strategies were also based on information obtained from the interviews and documentary evidence. These strategies were intended to provide practical recommendations for strengthening the implementation of the quality management system at SMA Kampus FKIP Pematangsiantar.

Ethical Considerations

The research process was conducted by considering the ethical principles of educational research. Participants were informed about the purpose of the research and the use of the information collected. The data obtained from the respondents were used solely for research purposes. The researcher also maintained the confidentiality of information provided by the participants and presented the research findings objectively based on the collected data.

Research Conclusion Procedure

The final stage of the research involved drawing conclusions based on the results of data analysis and interpretation. The conclusions were formulated by referring to the research objectives and questions. The analysis and interpretation process played a central role in transforming the collected data into meaningful findings concerning the implementation of the ISO 9001:2008 Quality Management System, the obstacles encountered, and the strategies required to support continuous improvement in educational quality.

RESULTS AND DISCUSSION

Research Results

The findings of this study provide an overview of the implementation of the ISO 9001:2008 Quality Management System (QMS) based on the eight quality management principles. The results were obtained by integrating information from questionnaires, teacher quality document analysis, and interviews with relevant participants. This approach enabled the researcher to assess the implementation of the quality management system from multiple perspectives.

Customer Focus

The customer focus principle achieved an overall implementation score of **83.95%**, indicating a high level of implementation within the school quality management system. The score was derived from the combined results of teacher quality document analysis and questionnaires administered to the Quality Management Representative (QMR), principal, vice principals and School Quality Assurance Team (WKS and KUK), and students. The findings indicate that customer-oriented quality management has been implemented across various aspects of school management and educational services.

Table 2. Implementation of the Customer Focus Principle

No.	Data Source	Implementation Score
1	Teacher Quality Document	94.60%
2	QMR Questionnaire	80.00%
3	Principal Questionnaire	80.00%
4	WKS and KUK Questionnaire	74.18%
5	Student Questionnaire	76.38%
Overall Achievement		**83.95%**

The highest score was obtained from the analysis of teacher quality documents, reaching **94.60%**. This result may be associated with the fact that the documents analyzed originated from the odd semester of the 2024/2025 academic year, during which teachers had generally completed and maintained the required quality documentation. Interview findings from the QMR further indicated that customer satisfaction represents the ultimate objective of implementing the ISO 9001:2008 QMS.

The school had conducted customer satisfaction surveys, particularly during report card distribution and parent–teacher meetings. However, the survey results had not yet been systematically analyzed because of limited human resources responsible for processing the data. Consequently, the actual level of stakeholder satisfaction could not be determined comprehensively.

Leadership

The leadership principle achieved an overall implementation score of **65.53%**. The assessment was based on data obtained from the QMR, WKS and KUK, and student questionnaires.

Table 3. Implementation of the Leadership Principle

No.	Data Source	Implementation Score
1	QMR Questionnaire	60.00%
2	WKS and KUK Questionnaire	68.60%
3	Student Questionnaire	70.36%
Overall Achievement		**65.53%**

The findings indicate that the implementation of the leadership principle requires further strengthening. The relatively low score reflects limitations in the direct involvement of school leadership in several quality management activities. Nevertheless, interview findings with the QMR revealed that the principal demonstrates a strong commitment to the implementation of the ISO 9001:2008 QMS. The continued implementation of the quality management system at the school provides evidence of this commitment.

The primary obstacle identified was the principal's extensive workload and administrative responsibilities. These circumstances occasionally limited the principal's direct involvement in certain QMS-related activities. To address this limitation, responsibilities were shared with the vice principals, who assisted in

completing tasks related to the implementation and monitoring of the ISO 9001:2008 QMS.

Employee Involvement

The employee involvement principle obtained an overall implementation score of **76.67%**. The data were collected from questionnaires administered to the QMR, principal, WKS and KUK, parents, and students.

Table 4. Implementation of Employee Involvement

No.	Data Source	Implementation Score
1	QMR Questionnaire	75.56%
2	Principal Questionnaire	77.78%
3	WKS and KUK Questionnaire	75.83%
4	Parent Questionnaire	68.51%
5	Student Questionnaire	69.74%
Overall Achievement		**76.67%**

The relatively small differences among the scores obtained from the various respondent groups indicate a generally consistent perception of employee involvement in the implementation of the ISO 9001:2008 QMS. The findings suggest that the quality management system has involved various members of the school community, although continued efforts are required to strengthen awareness and participation among all educational personnel.

Process Approach, System Approach, Factual Decision-Making, and Supplier Relationships

The implementation of four additional quality management principles was assessed using the QMR questionnaire. The results are presented in Table 5.

Table 5. QMR Assessment of Selected ISO 9001:2008 Principles

No.	Quality Management Principle	Implementation Score
1	Process Approach	72.00%
2	System Approach to Management	75.00%
3	Factual Approach to Decision-Making	64.00%
4	Mutually Beneficial Supplier Relationships	74.64%

The process approach achieved an implementation score of **72.00%**, indicating that the quality management system has been implemented through a process-oriented management framework. The system approach to management achieved a higher score of **75.00%**, suggesting that the school has made efforts to manage quality-related activities as interconnected organizational processes.

The factual approach to decision-making obtained the lowest score at **64.00%**. This finding indicates that the use of accurate and systematically analyzed data in decision-making remains a major challenge. Meanwhile, the principle of mutually beneficial supplier relationships achieved an implementation score of **74.64%**. Although the principle was generally implemented, the control and monitoring of purchased products and supplier-related processes require further improvement.

Overall, the implementation levels of the eight ISO 9001:2008 quality management principles varied across the school. The highest level of implementation was observed in customer focus, followed by employee involvement, continual improvement, system approach to management, supplier relationships, process approach, leadership, and factual decision-making. The overall average implementation score of the eight principles was **73.35%**.

The findings indicate that the factual approach to decision-making represents the most significant area requiring improvement. Several measures are therefore necessary, including the establishment of relevant quality management indicators, the systematic collection of accurate data, the development of effective data management procedures, and the regular analysis of organizational performance data. These measures are expected to strengthen evidence-based decision-making and improve the overall effectiveness of the quality management system.

Discussion

The findings of this study indicate that the implementation of the ISO 9001:2008 Quality Management System (QMS) at SMA Kampus FKIP Pematangsiantar varies across the quality management principles. The differences in implementation scores provide important information regarding the strengths and areas requiring improvement within the school's quality management system. The **customer focus principle** was primarily assessed using the student questionnaire. A considerable difference was identified between the results of the student questionnaire and the analysis of teacher quality documents. This difference may be attributed to the fact that the teacher quality documents analyzed were from the odd semester of the 2024/2025 academic year, during which teachers had generally completed the required documentation. In contrast, the student questionnaire reflected the actual

perceptions of students as recipients of educational services. Nevertheless, the results obtained from the student, vice principal, QMR, and principal questionnaires were relatively similar. This consistency suggests that the implementation of customer-oriented management was perceived relatively similarly by the different respondent groups. The interview with the QMR further revealed that customer satisfaction represents the ultimate objective of implementing the ISO 9001:2008 QMS. The school had conducted customer satisfaction surveys when parents visited the school to receive student report cards and participate in parent–teacher meetings. However, the survey results had not yet been systematically analyzed. As a result, the actual level of customer satisfaction could not be determined accurately. This finding indicates that the school has initiated a customer-oriented quality management process, but the feedback mechanism has not yet been fully integrated into a systematic evaluation and improvement cycle. The **leadership principle** was assessed primarily through questionnaires administered to the vice principal and heads of work units. The results obtained from the student, QMR, vice principal, and work unit head questionnaires showed relatively small differences. This consistency indicates that the results from the QMR and student questionnaires generally support the assessment of ISO 9001:2008 implementation based on the vice principal and work unit head questionnaires. Interview findings with the QMR also demonstrated that the principal has a strong commitment to implementing the ISO 9001:2008 QMS. The continued implementation of the ISO-based quality management system at the school serves as evidence of this commitment.

However, the main obstacle affecting the leadership principle is the principal's extensive workload and administrative responsibilities. The principal's limited time occasionally affects direct involvement in certain ISO-related activities. To address this challenge, the vice principals assist the principal in carrying out tasks associated with the implementation and monitoring of the ISO 9001:2008 QMS. This delegation of responsibility contributes to the continuity of quality management activities within the school. The employee involvement principle was assessed using the student questionnaire as the primary instrument and was supported by questionnaires administered to the QMR, vice principal, work unit heads, and principal. The differences among the results obtained from these respondent groups were relatively small. This finding suggests that the assessment of ISO 9001:2008 implementation based on the QMR, vice principal, work unit head, and principal questionnaires is generally consistent with the results of the student questionnaire. The relatively consistent findings indicate that the implementation of the quality management system has involved various members of the school community. The process

approach achieved an implementation level of 72%. This finding indicates that the ISO 9001:2008 QMS has been implemented through a process-oriented management approach. The system approach to management achieved a higher implementation level of 75%, indicating that the school has attempted to manage its quality-related activities as interconnected elements within an institutional system. These findings suggest that the implementation of ISO 9001:2008 has encouraged the school to organize its quality management activities in a more structured and systematic manner. The continual improvement principle was primarily assessed using the QMR questionnaire. The results obtained from the QMR, principal, vice principal, and work unit head questionnaires showed differences in perception. The QMR reported a higher level of implementation than the other respondents. This difference may be explained by the QMR's greater familiarity with the improvement activities and processes associated with the ISO 9001:2008 QMS. The findings indicate that the QMR has a more comprehensive understanding of the improvement activities implemented within the quality management system. Nevertheless, the implementation of continual improvement requires stronger ISO awareness among educators. More effective quality management awareness programs are therefore needed to ensure that educators understand and actively participate in continuous improvement processes.

The factual approach to decision-making was assessed using the QMR questionnaire and achieved an implementation level of 64%. This result represents the lowest implementation score among the quality management principles examined. The finding indicates that the use of factual and systematically analyzed data in decision-making remains a significant challenge for the school. The relatively low score suggests that data collection, data management, and data analysis have not yet been implemented optimally as the basis for institutional decision-making. The principle of mutually beneficial supplier relationships was assessed primarily using the questionnaire administered to the QMR, vice principal, and work unit heads. The relatively small differences among the results indicate a consistent perception of the implementation of this principle. However, the findings suggest that supplier control, particularly in relation to purchased products, still requires improvement. More systematic monitoring of suppliers and purchased products is necessary to ensure that external resources support the achievement of the school's quality objectives.

The main obstacles to the implementation of ISO 9001:2008 management principles were identified by examining the lowest implementation score obtained from the data analysis. Based on this criterion, the factual approach to decision-making was identified as the principal area requiring

improvement. This finding indicates that the school needs to strengthen its evidence-based management practices. In accordance with the requirements of the ISO 9001:2008 Quality Management System, improvement efforts should include the determination of relevant quality indicators, the systematic collection of accurate and appropriate data, and the analysis of data related to the effectiveness of the quality management system. Therefore, the improvement of data management and evidence-based decision-making should become a priority in strengthening the implementation of ISO 9001:2008 at SMA Kampus FKIP Pematangsiantar. By developing relevant indicators, establishing effective data collection mechanisms, and conducting systematic data analysis, the school can improve the accuracy of decision-making and strengthen the effectiveness of its quality management system. These efforts are expected to support the continuous improvement of educational quality and the achievement of the school's institutional objectives.

CONCLUSION

Based on the results of the data analysis and discussion, it can be concluded that the ISO 9001:2008 Quality Management System (QMS) has been implemented at SMA Kampus FKIP Pematangsiantar through the application of the eight quality management principles. The implementation scores were recorded as follows: customer focus (87.9%), leadership (75.3%), involvement of people (86.7%), process approach (82%), system approach to management (85%), continual improvement (85.3%), factual approach to decision-making (74%), and mutually beneficial supplier relationships (84.6%). The main obstacle identified in the implementation of the ISO 9001:2008 QMS was the limited effectiveness of the factual approach to decision-making. The school needs to strengthen its data-based management practices by establishing relevant data indicators, collecting accurate and appropriate data, and systematically analyzing data related to the effectiveness of the quality management system. These measures are essential for improving the accuracy of decision-making and supporting continuous quality improvement. In an effort to enhance customer satisfaction, particularly among students, SMA Kampus FKIP Pematangsiantar provides additional learning programs and supplementary instructional activities. These programs are provided not only for the three nationally tested subjects—Mathematics, Indonesian Language, and English—but also as part of the school's broader commitment to improving educational services and supporting student achievement. The study recommends that the school consistently develop and strengthen a sustainable culture of quality. All members of the school community should receive continuous awareness and socialization regarding the implementation of the ISO 9001:2008 QMS so that quality management principles are understood and implemented comprehensively.

Continuous commitment, effective communication, systematic evaluation, and evidence-based decision-making are essential to ensure that the ISO 9001:2008 QMS contributes optimally to the continuous improvement of educational quality at SMA Kampus FKIP Pematangsiantar.■

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