

CRITICAL SUCCESS FACTORS (CSF) FOR THE ISO 9001 IMPLEMENTATION IN UIN SUNAN KALIJAGA YOGYAKARTA

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Abstract

This study attempts to identify factors that are considered critical for the implementation of ISO 9001 in UIN Sunan Kalijaga Yogyakarta. In this study, data were obtained from interview and observation of documents related to the implementation of ISO 9001 in UIN Sunan Kalijaga Yogyakarta. The content analysis was used as an interpretation method for qualitative interviews data. Finding shows a number of factors that are considered critical in the implementation of ISO 9001. They are top management commitment and support, training, culture change, continuous improvement and performance measurement. Top management commitment and support is an important role for the success and sustainability of ISO 9001. The support can be in a form of their active participation in quality management activities. In addition, the provision of adequate resources as well as supporting quality policies is also critical for the ISO 9001 implementation in UIN Sunan Kalijaga. The other critical factor is the culture change that perceived as a strong foundation for the success of ISO 9001 implementation.

Keywords: *Critical Success Factors, ISO 9001, quality management system*

A. Introduction

ISO 9001 quality management system was first implemented in large scale manufacturing industries. Following this, service industries are also certifying to ISO 9001 in order to meet their customer expectations. Several studies on the implementation of ISO 9001 both in manufacturing and service industries are often found in scientific journals nationally and internationally. In Indonesia, as well as in other countries, ISO 9001 was first implemented in large export-oriented industry. Most of industries in Indonesia achieved ISO 9001 certification because of customer pressure, particularly from western markets. The situation has similarities with other countries where customers drive companies to have ISO 9001 in place.

In 2000, the education sector such as universities realized the importance of ISO 9001 for the improvement of their customer services. For instance, Universiti Sains

Malaysia in Malaysia has ISO 9001 certification for the management of their library followed by human resources department which certified to ISO 9001 in 2001. As reported internally, there were significant changes with respect to the service provision to their stakeholders after they granted to ISO 9001 certification.

UIN Sunan Kalijaga has certified to ISO 9001 in 2009 for the academic management system of higher education services. Here, the certification is for seven faculties and *Pusat Administrasi Umum* (PAU). Through ISO 9001 certification, it can be said that UIN Sunan Kalijaga has been successfully meets the quality standards in term of academic management. However, efforts are being made to achieve the certification should not be quit after obtained it. Top management of UIN Sunan Kalijaga should know the factors that categorized critical for the implementation and sustainability of the quality management system. This is because the cost of preparation and the implementation of ISO 9001 are huge. Additionally, the top management should also know the factors that may hinder the successful implementation of ISO 9001 in UIN Sunan Kalijaga.

This study has main objective to identify the critical factors of ISO 9001 implementation in UIN Sunan Kalijaga. Critical success factors for implementation of ISO 9001 can be defined as factors that should be in the work environment to facilitate the implementation of ISO 9001 QMS. Through the identification of CSFs, it is expected that UIN Sunan Kalijaga will be aware to the CSFs in order to maintain the certification.

B. Literature Review

There are two important aspects to be discussed in this section. They are history of quality management system, and several researches on the implementation and maintenance of ISO 9001.

As widely discussed in the literature, ISO 9000 is an important feature in the evolution of quality management, especially for products sold in European markets. ISO

9000 certification has a goal to help companies fulfill their customer expectation through appropriate product standards (Basu and Wright, 2003). ISO standards and the revised are under control of the International Organisation for Standardisation (ISO). The first version of the ISO 9000 was ISO 9000:1987 which based on BS 5750:1979. This standard provides guidance on the ISO 9000 series concept and its applications (Tricker and Sherring-Lucas, 2005). In the meantime, there was some improvement made to the standard such as ISO 9000:1994 quality management which consisted of ISO 9001, ISO 9002, ISO 9003 and ISO 9004. The ISO has undergone several revisions and in 2000 formally known as ISO 9001:2000 which was the combination of the three previous series of ISO 9001, 9002 and 9003 (Tricker and Sherring-Lucas, 2005). According to the information gained from the ISO website, the latest version of ISO 9001 is ISO 9001:2008 (ISO, 2012).

Apart from being a quality standard that is quite important for the industry, the ISO 9000 certification also attracted the attention of researchers. Research on ISO 9000 implementation has been conducted by researchers in various countries such as in Australia by Terziovski et.al (1995, 1997); Terziovski and Samson (1999); and Terziovski et.al (2003). Terziovski et.al (1997) investigated whether ISO 9000 certification has a positive influence on company performance. They also investigated whether the relationship between ISO 9000 certification and company performance occurred in companies that fully and partially implemented TQM.

Other studies on ISO were emphasized on the identification of ISO 9001 critical factors, for example, Low and Omar (1997), Cheng and Tummala (1998), Chin et.al (2000), and Wahid and Corner (2009). However, none of those studies are focused on the identification the critical factors of ISO 9001 implementation in the education sector. Table 1 presents a summary of studies related to critical factors of ISO 9001 implementation.

Table 1. Prior research related to critical factors of ISO 9001 implementation

Researcher	Critical Success Factors	Type of industry
Low and Omar (1997)	Commitment and support of top level management Technical experts for quality management Socio-cultural aspects of quality management Productive relationships	Manufacture
Cheng and Tummala (1998)	The participation of employees (management, supervisors, staff and operator)	Manufacture
Chin et.al (2000)	Management commitment and support Team work ISO recognition throughout organization	Manufacture
Wahid and Corner (2009)	Top level management commitment Participation and involvement of workers Team work Continuous improvement Reward system Understanding of the ISO 9000 Performance measurement Communication	Service

Source: adapted from Wahid and Corner (2009, p. 889)

Wahid and Corner (2009) conducted a research in service companies in Malaysia to identify the critical factors of ISO 9001 implementation. The methods used in data collection were interviews with the parties relating to the implementation of ISO 9001. Analysis of qualitative data using thematic analysis was able to identify several critical factors of ISO 9001 implementation. Those factors were top management commitment, employee participation and involvement, teamwork, continuous improvement, reward systems, understanding of ISO 9001, performance measurement and communication. This study ranked the top management support and involvement as factors that are considered most critical. It was obtained from the 83.33% of the respondents interviewed stated that the success and sustainability of ISO 9001 is influenced by top management. This study established the three factors that were considered most critical in the implementation of ISO 9001 which seen from the

percentage of respondents who expressed these factors during the interview. The most influential factors were top management support and involvement, understanding of ISO 9001 and continuous improvement.

C. Methods

There were two main techniques of data collection used in this study. First, the secondary data was collected through a literature review to map the CSF implementation of ISO 9001 from previous studies. Thus, a review of the ISO 9001 documents in UIN Sunan Kalijaga was also conducted. The documents were mainly from the Internal Quality Audit (AMI) and *Tindak Lanjut Perbaikan* (TLP). This secondary data was obtained from the Quality Assurance Unit (UPM) which is located in the Chancellery Building of UIN Sunan Kalijaga (PAU).

Second, the primary data were gained through face-to-face interviews with people from Quality Assurance Unit (UPM) of UIN Sunan Kalijaga. Nature of the interview was anonymous, which means the name of the interviewees were not included in the report and publications. Interviews were conducted for approximately two weeks, using semi-structured type of interview. The reason for choosing the semi-structured interview is to obtain depth information from related parties. In addition it gives freedom to the interviewees to explain things that were not previously thought by interviewer.

Furthermore, the methods used to analyze qualitative data collected through interviews and ISO 9001 documents is content analysis technique. According to Berg (1995), researchers are normally analyzing words, themes, characters, concepts and semantics of the text. Almost the same to thematic analysis which according to Braun and Clarke (2006) defines as a method to analyze qualitative data through the stages of coding, themes creation, and grouped the qualitative data obtained according to theme.

D. Data Analysis and Findings

This section will discuss the summary of the data obtained from both UPM and interviews. It is followed by analysis and discussion.

Data

Mostly of data gathered in this study were from Internal Quality Audit (AMI) and *Tindak Lanjut Perbaikan* (TLP) documents for year 2010. The data are stored in the Quality Assurance Unit (UPM) of UIN Sunan Kalijaga. Summary of data obtained from AMI shown in Table 2 but they do not reflect the number of problems.

Table 2 Summary of Internal Quality Audit (AMI)

No.	Type of non-conformities
1.	Teaching less than 90% in one semester
2.	Lecture journal is not filled
3.	Student - lecturer contract is not filled
4.	Lecture journal is not signed
5.	Date of their lectures are not written
6.	Mismatch between the proposed SAP and day-to-day lectures
7.	SAP for the ongoing semester is not validated by the competent authority (Head of Department & Dean)
9.	All SAP has not signed by Dean
10.	Lack of published scientific papers in the international journals
11.	Few articles published in an accredited national journal
12.	No comprehensive measurements of faculty performance, including teaching, research and community service
13.	Graduates work within their field of study is quite low (only 46.15% of 70% as target)
14.	On-time graduation rate < 80% GPA < 3 is quite high

Source: Internal Quality Audit documents (2010)

In addition to secondary data obtained through Internal Quality Audit (AMI) and *Tindak Lanjut Perbaikan* (TLP) documents, the results of interviews with the involved parties regarding the implementation of ISO 9001 in UIN Sunan Kalijaga are listed as follows:

1. "... audit is considered a formality. 'Overnight' preparation for an audit is habit here..."

2. *"... culture must be changed to support the implementation of ISO 9001 in UIN. "*
3. *"Improvement actions are not optimal-- if it is figured as PDCA cycle (Plan-Do-Check-Action, it is disconnected in some ways -- stopped after know the problems (Check) without any action to solve them.... "*
4. *"... there are faculties who request one of their teaching staff (who is an internal auditor) to help in preparation for an internal audit in the faculty. It is not good cause may violate the independence of auditors"*
5. *"There are faculties who felt that after ISO 9001 certification obtained, the journey is over. This perception must be straightened out "*
6. *"The need for periodic training (for leaders) to ensure a continuing commitment to the implementation of ISO 9001 in UIN."*
7. *"There are faculty leaders who do not commit to ISO 9001. It is based on evidence which found the repeated problems during the two consecutive audits.... "*

Interviews were conducted about thirty minutes which involved several internal auditors and people in charge of the quality system in some faculties. The interview was conducted as anonymous which means it does not publish the name of the interviewees in the research report and publications. As mentioned previously, this study used a semi-structured interview to give independence of the interviewees in explaining his/her views. However, researcher guided the interview to focus on factors that were considered critical for the successful implementation and sustainability of ISO 9001.

Analysis

According to Berg (1995), researchers usually take consideration into words, themes, characters, concepts, and semantics of the text for the content analysis. This study as described previously was using content analysis which considers the basic theme derived from the interviews.

By using content analysis, a summary of findings -- internal audit major or minor nonconformities -- were analyzed. Themes that emerged from the interviews are described below.

Culture

"...audit is considered a formality. 'Overnight' preparation for an audit is habit here.... "

"...culture must be changed to support the implementation of ISO 9001 in UIN."

"...there are faculties who request one of their teaching staff (who is an internal auditor) to help in preparation for an internal audit in the faculty. It is not good cause may violate the independence of auditors...."

Improvement

"Improvement actions are not optimal-- if it is figured as PDCA cycle (Plan-Do-Check-Action, it is disconnected in some ways -- stopped after know the problems (Check) without any action to solve them.... "

"There are faculties who felt that after ISO 9001 certification obtained, the journey is over. This perception must be straightened out...."

Training

"The need for periodic training (for leaders) to ensure a continuing commitment to the implementation of ISO 9001 in UIN."

Top management support and involvement

"There are faculty leaders who do not commit to ISO 9001. It is based on evidence which found the repeated problems during the two consecutive audits.... "

E. Discussions

From the qualitative data analysis, it was found that critical factors of ISO 9001 implementation in UIN Sunan Kalijaga are as follows:

1. Top management commitment and support
1. Training
2. Culture change
3. Continuous improvement
4. Performance measurement

There are some similarities with prior research conducted by Chin et.al (2000), and Wahid and Corner (2009) that established top management commitment and support as critical factor. It should be highlighted that top management commitment and support can be in a form of policy change made by top management to support the implementation of ISO 9001. In addition, leaders should support the implementation of ISO 9001 by providing adequate resources. It is also emphasized by Wahid and Corner (2009) that top management supports the ISO 9001 through their participation to the *Management Review Meeting* and *Quality and Improvement Initiatives Committees*.

This study determined that training is also one of the critical factors that assure the sustainability of ISO 9001 in UIN Sunan Kalijaga. This is also justified by the interviews results which highlighted the lack of training or induction to the new officers in UIN Sunan Kalijaga. Researchers also found that the training provision should be continuous and comprehensive. Trainings on ISO 9001 awareness are important for bottom level to know the benefits of ISO 9001. The existences of these trainings are also expected as the way to change their work culture. With regards to regular audits, for instance, employees should not be fear if they cultivate ‘document what you do, do what you document’.

Another critical factor is the culture change that must precedence in the implementation of ISO 9001. Researcher believes that culture change is affecting the sustainability of ISO 9001 implementation in UIN Sunan Kalijaga. With regards to the culture, it is good for the leaders to think how to change it. For example, the rewards will provide motivation for employees to work better. In addition, granting awards to outstanding units/departments in term of performance may assist in culture

improvement. This was done by the Universiti Sains Malaysia in Malaysia, where they provide a quality award for the best quality service units in the university. Their assessment was not only at the time of audit, but also having some incidental inspections to assure the implementation of ISO 9001 in each unit/department.

Thus, continuous improvement was also considered a critical factor for implementation of ISO 9001 in UIN Sunan Kalijaga. It was based on some unfilled forms enclosed in TLP document. It can be said that the audited unit/department did not really solve the problems. This serious issue should be eliminated in order to preserve the ISO 9001 certification. Further, leaders must be clear about the audit findings and solve the problem immediately based on the given time, usually one week.

Performance measurement was also a critical factor in the implementation of ISO 9001 in UIN Sunan Kalijaga. The focus of performance measurement is to identify current progress with the goal to be achieved. Moreover, it is also possible to compare current performance with internal and external standards. Back to the findings of AMI, there were no publications in the international journal at the Faculty of 'X'. This is contrary to the core values of UIN Sunan Kalijaga where one of them states that academics should be excellent in scientific writing, researching, and others. Based on this fact, leader must be responsive to address these situations for instance by providing regular training to improve academics' publications.

F. Conclusion

This study has identified factors that are considered critical to the success and sustainability of ISO 9001 in UIN Sunan Kalijaga. These factors are:

1. Top management commitment and support
2. Training
3. Culture change
4. Continuous improvement
5. Performance measurement

As explained in the previous section, the above factors should be considered for the sustainability of ISO 9001. For instance, training should be delivered in regular basis particularly for new management people in UIN Sunan Kalijaga. Through this, it is expected to increase commitment of new people to ISO 9001.

Some limitations exist in this study e.g. small number of respondents and were confined to internal auditors. Further study should also consider the external auditors as interviewees.

A research on measurement of university's performance after certified to ISO 9001 would be a valuable issue to investigate. As we may know that the benefits of ISO 9001 standard are still doubted, particularly for organizational performance improvement.

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