

Employees' Reactions and Factors in the Implementation of ISO 9000 in Manufacturing Companies

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ABSTRACT

ISO 9000 has taken a sizeable portion of the global industry, especially in the manufacturing industry by storm since its inception in 1987. Many problems associated with ISO 9000 implementation emanated from the reliance of belief or faith while neglecting the direct relationship to employee's roles and responsibilities. This study explores and discusses issues in the implementation of ISO 9000 at the employees' level. The issues encompass employees' reaction towards ISO 9000 and general employee factors in the implementation of ISO 9000. The issues were gathered from existing literature and verified by local manufacturing companies via questionnaires. The questionnaire response rate was 38.8% or 50 responses out of the 129 questionnaires sent. The results from the findings indicated the important employee issues in the successful implementation of ISO 9000 are commitment, teamwork, training and involvement, amongst others. It is believed this study will further enhance understanding and place importance in the issues concerning employees of a company implementing ISO 9000.

Keywords: ISO 9000, employees issues, employees factors, implementation

INTRODUCTION

In the highly competitive business environment today, there exists little debate on the merits of quality and what better or improved quality will mean to a company. The existence of standards since centuries ago contributes in achieving consistent levels of quality. One such quality system standards is ISO 9000. Since 1987, ISO 9000 has instigated a need to review the way manufacturing companies operates locally.

However, at the employees' level, quality can mean an abstract concept that resembles closely to routines that rely heavily on a belief or faith that strictly follows prescribed procedures. The inherent characteristics of a quality program such as ISO 9000 demand employees to accept the quality pronouncements and somehow or another, the desired results will be attained.

The most valuable assets in any organisation are the employees. When an organisation plans to implement ISO 9000, thorough planning and understanding as well as preparation are required. However, it is only natural for issues and problems to crop up in the implementation step, and this may invite lengthy discussions or studies. Hence, the study of such issues, especially pertaining to employees, is significant and should not be left out in the aspect of the success of the implementation plan.

METHODOLOGY

This study is of *literature* and *survey-based*. The core of this project is *ongoing literature study*. Besides that, a survey was done to find the actual situation in the industry. Basically, the steps, excluding the literature study, include the design of the questionnaire, company sampling, and questionnaire send out. Following that, the responses from the questionnaires were collected, compiled, studied and discussed. Finally, the main

findings are highlighted.

Literature Study

An understanding of the basics of ISO 9000 is essential for this study. Hence, the necessary knowledge and information of the ISO 9000 quality systems were acquired through books, periodicals, the internet and other sources of information. A lot of authors has written books on the topic ISO 9000 and also the implementation issues.

Questionnaire Design

A questionnaire was designed to gather information for analysis and discussion. The questions were divided into several sections in accordance with the issues gathered from the literature review as the analysis and discussions will be made based on these sections later on. The questionnaire consisted of mainly open-ended questions to cater for a wide variety of responses from the respondents. It was designed in such a way so that the respondents would not have to think hard; possible answers were provided for them to choose. The drafts of the questionnaire were then examined and the weaknesses of the questionnaire were rectified before the approved questionnaires were sent out via post.

Company Sampling

Only companies with ISO 9000 certification were chosen to answer the questionnaire. The companies were randomly chosen from Sirim QAS Directory of Certified Products and Companies 1998 as well as newspaper congratulatory advertisements. According to the directory, there are about 1200 listed companies, of which more than 95% are manufacturing companies. The sample size was about 10% or 129 companies.

Data Analysis, Discussion and Conclusion

The raw data from the questionnaires were gathered and analysed. The percentage of the respondents' views was calculated. Necessary graphs, tables or other visual aids were presented. The outcome of the analysis was then compared with the literature review and discussed. This was done in accordance with the sections of the questionnaire. Following that, a conclusion was made.

ANALYSIS OF RESULTS AND DISCUSSIONS

The response rate is 38.8% or 50 valid responses out of the 129 questionnaires sent. This rate is reasonably good; judging from the history of questionnaire-based response which invariably shows a low rate of response from companies. The questionnaire respondents are management representatives for ISO 9000, who are mostly the quality manager of the companies. Although there are 7 sections in the questionnaire, only two sections are discussed here: **employees' reaction** and **general employee factors**.

Employees' Reaction

This part concentrated on the employees' reaction when the company's decision to seek ISO 9000 certification was made known to them. There were three major questions.

i) Fear of the Unknown

The first question asked the respondents whether they think resistance by fear of the unknown is human nature. This question obtained favourable answers (strongly agree/

agree) of 78.0% with low negative respond of 4.0%. The rate of uncertainty (maybe/not sure/undecided) is 18.0%.

The results are in line with the fact of the people's natural ability to resist change (Lamprechth 1993). People always fear things or events they do not know or understand. Humans tend to be homeostatic. That is, they tend to maintain equilibrium in all matters affecting their well being (Small 1997). ISO 9000 registration results in change. Documentation has to be developed. The quality should be planned. Audits are conducted. Corrective and preventive actions are implemented. Change is difficult. Probably, the most critical element in ensuring the success of ISO 9000 implementation and continuing quality is how well the reason for quality has been communicated to employees. Registration failure can be identified by resistance to change and organisational obstacles (Hutchins 1997). The nub of the issue of unavoidable resistance to change should be limited if explanation of the 'what' and 'why' of ISO is carried out before implementation (Lamprechth 1993). No fear of the registration process should be conveyed. The focus must be on how the company will address its ISO 9000 implementation process (Wilson 1996).

ii) *Misconceptions, Objections and Feedback*

The next question was about the various misconceptions, objections and feedback from the employees. Some of the statements are reflected in the respondents organisation, while some others are not. From the analysis, it can be seen a preponderant amount of the employees gave negative feedback as 60.0% of the responses indicate so. However,

TABLE 1
Employees' reaction

No	Reaction	Feedback rate
1	Have to make little adjustment at work	50.0%
2	ISO 9000 is additional standard	40.0%
3	ISO 9000 is motivator	38.0%
4	ISO 9000 is a burden/extra work	34.0%
5	ISO 9000 does not have anything to do with me	21.3%
6	ISO 9000 is restrictive because of form filling	19.1%
7	ISO 9000 is soulless and not people friendly	18.0%
8	ISO 9000 is a waste of time	18.0%
9	ISO 9000 deviates from my job	8.00%
10	ISO 9000 is impossible to achieve	4.00%

20.0% of the responses were undecided, and another 20.0 % did not give negative feedback. The rate for the employees reactions is as ranked in Table 1.

It can be seen that most of the agreeable feedback above is low in the respondents' company. Half (50.0%) of the employees have to make **little adjustment** in work, while about one third (34.0%) think otherwise.

From the analysis, quite a number (40.0%) of employees treat ISO 9000 as an **additional standard** while almost equally as much (30.0%) do not think so and about another one third (30.0%) are undecided. This shows a large disparity between the respondents' opinion which deviates from what Lamprechth (1993) said. Lamprechth said many employees treat the ISO 9000 series as nothing more than an additional set of standards to an already long list of standards. The same goes for the next point. 38.0%

of the respondents' employees regard ISO 9000 as a **motivator**, but 34.0% of them are undecided and 28.0% of them do not think so. The next feedback is equally similar, with 34.0% responded their employees find ISO 9000 as a **burden/trouble/extra work**, 26.0% are undecided, and 40.0% replied negatively. It seemed there exists a tri-polar view on these three points, as shown by the almost one-third answers for each agree, undecided and disagree. One possible explanation is that the employees' responses are the result of many other complex factors, one which being the initial attitude of the employees toward ISO 9000.

The analysis also shows about two out of ten (21.3%) of employees regard ISO 9000 as something that **did not have anything to do with them**, three out of ten (30.0%) are not sure, and almost half (48.9%) do not think so. The trend was also found in the restriction due to form filling, with 19.1% responses find **form filling** restrictive, 31.9% are undecided, while 48.9% do not think so. As for the point of ISO 9000 being **soulless and not people friendly**, 18.0%, 44.0% and 38.0% positive, unsure and negative answers were given respectively. The three points as highlighted here are generally not as perceived by the employees as pointed out by Jackson and Ashton (1995), judging from the higher "disagree" ratio.

The next three points of ISO 9000 being something that is **impossible to achieve**, **waste of time** and **different and deviate** from the employees' duty received largely negative answers with 86.0%, 62.0% and 66.0% opposing to the statements. This shows the employees do not view ISO 9000 as impossibility, waste of time, and something different from their duty.

It can be seen there exist negative feedback from the employees. Some of the feedback is inter-related. The reactions and resistance from nay saying employees are not unexpected. As discussed earlier, resistance to change is human nature. Hence, in implementing ISO 9000, the management should address this issue and counter it at the initial stage of the project. How this can be done is explored in the next question.

iii) Misconception and Resistance Correction

The following question asked whether there was a need to correct misconception or resistance among the employees. The responses are as shown in *Figure 1*.

The following part of the question inquired the best way to correct resistance among the employees. The methods, as chosen by the respondents, are as ranked in Table 2.

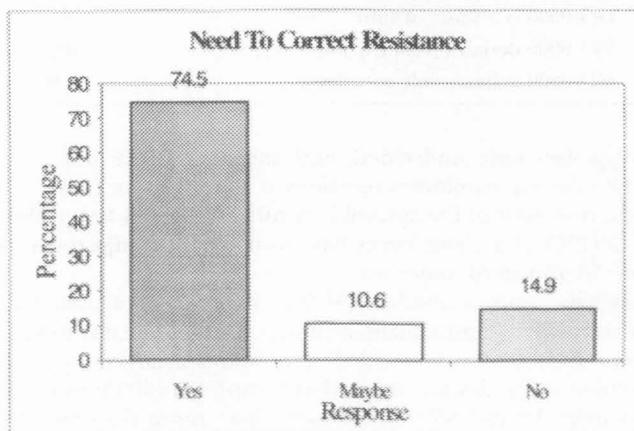


Fig. 1. Need to correct resistance

TABLE 2
Best way to correct resistance

No	Method	Agreeable answer
1	Awareness programmes	100.0%
2	Meeting/seminar	96.9%
3	Explain benefits of ISO 9000	94.9%
4	Coaxing/reasoning	75.0%
5	Testimony from other	66.7%
6	Reverse psychology	29.6%
7	Flex authority muscle	17.8%
8	Promise of reward	17.2%

From the analysis, it can be seen almost all the responses favoured *awareness programmes, meeting or seminar and ISO 9000 benefit explanation* as these three methods received over 90% approval each. Reasoning or coaxing is another viable method, while getting testimony from other people should be fairly good enough. It could be a good idea to counter employees' misconception with the combination of all five methods – a meeting/awareness programs/seminar that explains and reasons the benefits. The approach should focus on the people within the quality system and how the registration will benefit them.

On the contrary, *reverse psychology* to correct misconception obtained 29.6% positive answers. *Flexing of authority muscle* received 35.7% while *Promise of rewards* received 17.2%. Hence these three methods are not being practised by the respondents to correct misconception and resistance.

Other methods as written by the respondents include "clear guidelines as laid down in the ISO 9000 system" and "training and provide examples". The former suggestion implied the use of ISO 9000 guidelines as written by the Standard to correct any misgivings by employees, while the latter focuses on employee training and using examples to do so.

This part of the questionnaire has touched on the issues of employees' reaction towards ISO 9000. From this part, issues on how the employees react toward ISO 9000 and what they think about the quality system have been discussed. The methods to address the ways to tackle employees' resistance have also been laid out. These issues should be acknowledged and taken into account when implementing ISO 9000.

General Employee Factors

This is the second part of the discussion. The crux is to find out the general employees' factors for a successful ISO 9000 certification from the respondents. Two open-ended questions were asked in this part.

i) Positive Employee Factors

The first question asked the positive employee factors leading to successful certification of ISO 9000, while the second question asked the opposite – employee factors that hinder the success of certification. The replies were varied and many albeit the factors collected from the survey are by no means exhaustive. There are respondents who answered out of point, while some of the answers represent the respondent's personal perception on an issue. The questions mainly focus on the *employees' factors* of the ISO

TABLE 3
Positive employee factors

No	Positive factors	No of responses
1	Commitment	20
2	Teamwork	15
3	Co-operation/co-ordination	11
4	Following documented procedures	7
5	Adequate/effective training	7
6	Understanding of system	5
7	Involvement/participation	5
8	Awareness/adequate knowledge	5
9	Understanding of ISO 9000 benefits	4
10	Willingness to change	4

9000 certification. Table 3 shows positive employee factors that obtained more than three votes by the respondents.

First, on list for the positive employee factors for a successful ISO 9000 certification is **commitment**. Whatever else is needed to implement the ISO 9000 standard chosen, commitment must come first (Voehl *et al.* 1994). For a company-wide project as huge as ISO 9000, commitment from all levels of employees, especially the top and middle level management, is pivotal. It is imperative that the nature of the employee role in the implementation process does not vary from the original management commitment (Wilson 1996).

Another vital factor for successful certification is **teamwork**. Teamwork plays an essential part in the success of any endeavour, be it games, in committees or in the boardroom (Iverson 1995). Nuances to this factor are **co-operation** and **co-ordination** by employees. These three factors are high on the list of positive employee factors, thus indicating the magnitude of importance among the factors for ISO 9000 certification. This is true, as preparing a company for ISO 9000 is not a trivial matter (Voehl *et al.* 1994). As Small (1997) said, "ISO 9000 doesn't happen unless everyone makes it happen".

The survey also shows **following documented procedures** is a positive contributing towards successful ISO 9000 certification, apart from proper understanding of procedures and also its significance. As documentation is the heart of ISO 9000, this issue should receive attention whilst implementing the standard. Quality problem can arise as much through the boss ignoring procedures as through employees doing so (Voehl *et al.* 1994).

Adequate and **effective** employee **training**, too, plays a vital role in ISO 9000 certification. Training and re-training of employees at all levels are needed to support company goals, as well as to equip the employees with necessary skills and knowledge to carry them throughout the long and arduous journey of continuous improvement in the implementation process. Understanding of system is another factor that must not be overlooked. Employees should not be performing tasks without understanding the essence of such task, and how that is linked to their job function.

Employee participation is expected by ISO quality standards. This applies not only to the factory, but also to managers – right up to the top (Voehl *et al.* 1994). Every well-known quality expert stresses this principle: Crosby emphasises "employee involvement",

Juran stresses "new leadership style", Deming restates this idea throughout his "14 Obligations", etc (Hutchins 1997). With enough involvement, employees will arrive at a point of sense of ownership or belonging, as well as pride, in the implementation process and the resultant quality system (Wilson 1996).

Employee awareness and adequate knowledge of ISO 9000 quality system benefits, coupled with company employee *involvement* in the process, will put a tremendous amount of brainpower on the task of ISO 9000 implementation (Voehl *et al.*, 1994). There is little doubt that knowledge and understanding are the essential ingredients in a successful ISO 9000 venture. Early awareness and appreciation of the ISO 9000 standards, as well as deploying and learning and experiences throughout a company, are the keys to success (Small 1997).

ISO 9000 will be a prime driver in a company's quality effort with two aspects are addressed. Knowing the benefits of ISO 9000 certification to the company as well as to the employees individually is another positive contributing factor, as much as willingness to change, learn and improve skills. Thus, the company, especially the top management, should put extra effort and enlighten the benefits of ISO 9000 to the employees, as well as be prepared to spearhead change within the organisation. They should clearly understand both the major benefits and the extent of the considerable work involved (Voehl *et al.* 1994).

Employees with motivation and high morale are also required, as much as employees with good attitude or positive thinking. Some respondents wrote an open-minded attitude employee as a positive employee factor. Other factors include employees who are able to accept authority and responsibility are also suggested. Understanding and trust of company's policies and plans is another positive employee factor. Employees who share the same company objectives will be able to work hand-in-hand with the company goal of ISO 9000 certificate attainment. It is imperative, too, to regard ISO 9000 as a tool to further improve the quality system. In other words, believing the ISO 9000 will bring much good to the quality system will make the implementation easier.

A management team with strong leadership qualities to lead employees was also highlighted. Another respondent wrote systematic ways or approach in problem solving, apart from treating other departments as internal customer as positive employee factors. Employees will work better when they feel they are being appreciated by the company, so said a respondent. Thus, companies could show their appreciation towards their employees. To ensure that the ISO 9000 quality benefits continue to be realised, positive personal employee traits or characteristics such as determination, integrity, respect, discipline, obedience, initiative, as well as hardworking are needed. A respondent professed low employee turnover rate as a positive factor. This point could be interpreted as having a consistent or almost consistent workforce in the company, rather than having employees being changed periodically.

ii) Negative employee factors

The responses for the second question in this part are mainly reversal of the previous part. Table 4 indicates the negative employee factors which received more than three votes. Some of the points will be discussed here.

Leading the list for the employees' factors that hinder a successful certification of ISO 9000 are **resistance** or **unwillingness to change**, **stubbornness** or **arrogance**, which is a direct paradox of the positive employee factors. **Inadequate** or **no commitment** from the employees can also play a role in preventing the certification, besides all sorts of **negative or wrong perception** from the employees. As Wilson (1996) said, the barriers to successful ISO 9000 implementation are usually the result of an inadequate company management commitment to the process. Casual delegation or apparent abdication of

TABLE 4
Negative employee factors

No	Negative factors	No of responses
1	Resistance/unwillingness to change or stubbornness or arrogance	17
2	Inadequate/no commitment	9
3	Negative/wrong perception	7
4	Not following/bypass/cut short procedures	7
5	Complacency/ignorance/bad attitude	7
6	Inadequate/no co-operation or coordination	6
7	Inadequate/no training	6
8	Inadequate/no knowledge or understanding	6
9	No teamwork	4
10	Inadequate sense of responsibility/ownership	4
11	Unwilling to learn/lazy/unmotivated	4
12	No communication or poor dissemination of information	4

implementation responsibilities by senior management is usually caused by a lack of appreciation for the ISO 9000 standards benefit to the company (Wilson 1996).

In documentation, **not following** and **attempting bypass** or **cut short** procedures will bring ill effects to the ISO 9000 project. Attitude of employees also counts. **Complacency, ignorance and bad attitude** are the negative employee factors that the respondents wrote in. In addition to that, other opposite factors are inadequate or no **training, knowledge, understanding**, and **awareness** of ISO 9000.

Other more popular opinions are lack of sense of responsibility or ownership among employees, unwilling to learn or do extra work, indolence, and employees who are not motivated. The methods to instil sense of ownership have been dwelled in previous parts, as the ways to counter the other negative factors.

A few wrote lack of communication, poor dissemination of information as other factors that delay the successful certification. A lot of problems can actually happen because of incorrect information; information is not given to the person, or misconception (Yeap, 1999). This shows the importance of effective communication in a project as huge as ISO 9000. Management skills, support, focus and seriousness are also contributing factors as well as apathy towards documentation, unnecessary paperwork and inability to understand procedures.

Teamwork, co-operation and co-ordination are three factors that received emphasis from the respondents. An interesting point as written in by a respondent is lack of experience in ISO 9000. This issue is relevant to the Management Representative of the company. Another interesting point is employees who demand reward or incentive. One respondent wrote individualistic personnel as a negative factor. This issue can be related to the main nub – teamwork. Low morale, fear, no pride and no integrity are inter-related negative employee factors that have to be acknowledged. The issue of being rude to auditors during certification audit could be countered with appropriate training and coaching of employee on auditing.

In general, the negative employee factors are direct opposites of the positive factors. The more important factors that contribute positively to the certification of ISO 9000 are *commitment, teamwork, co-ordination and participation*. Attention and energy should be focussed to *documentation, training, understanding*, as well as *awareness* of employees, among other issues as written in by the respondents.

The negative factors are also imperative in the implementation of ISO 9000. Companies going for ISO 9000 should acknowledge those issues. The negative factors can serve as a means for those companies to prepare themselves and take necessary steps to counter the issues before and during ISO 9000 implementation. Understanding the good and bad employee factors can give the company a competitive edge in the journey towards higher quality. However, how the implementation is being conducted, as well as the significance of employees' issues in the implementation of ISO 9000 is beyond the scope of the study.

CONCLUSIONS

The success of ISO 9000 implementation is dependent on many factors, of which one of the factors is the employee. There are myriad of employee factors that contribute to the certification of ISO 9000. Two aspects of the issues have been explored - employees' reaction and general employee factors. From the discussion on each of the issues, it can be seen the **employees' issues** play a pivotal role in all stages of ISO 9000 implementation right from securing top management commitment to the certification audit and subsequently maintaining of the quality system. The study has further enhanced comprehension on the pertinent matters regarding the employees, thus allowing future ISO 9000 implementation to be more attentive to issues that centred on the employees.

In pursuing ISO 9000, many potential pitfalls and obstacles must be addressed and overcome. The journey of ISO 9000 certification is by no means easy but can be made less difficult than it already is by applying the right tool and knowledge. There is little doubt that knowledge and understanding are the essential ingredients in a successful ISO 9000 venture. The knowledge obtained from this study is fundamental to improvement in the ISO 9000 implementation. One has to know what and where they are coming from, if improvements were to be made. Knowledge is not power until it is put to use. With the right knowledge, one can achieve wonders. Lack of knowledge dooms one to make the same mistakes again and again. Today's practices, when scrutinised, will lead to tomorrow's innovations. However, one of the factors that ensures the ISO 9000 quality benefits to be continuously realised tomorrow is the **human factors**. And that, is what this study is all about.

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