

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The purpose of this research is to take an in depth study at the internal audit of 5S Quality (IAQ) activities carried out by organizations might lead to the company operational performance in 5S certified company. Quality audit is the process of systematic examination of a quality system carried out by an internal or external quality auditor or an audit team. Audits are an essential management tool to be used for verifying objective evidence of processes, to assess how successfully processes have been implemented, for judging the effectiveness of achieving any defined target levels, to provide evidence concerning reduction and elimination of problem areas. For the benefit of the organization, quality auditing should not only report non-conformances and corrective actions, but also highlight areas of good practice. In this way other departments may share information and amend their working practices as a result, also contributing to company operational performance.

In this chapter, several bodies of literature were reviewed with specific attention given to the internal audit and operational performance. The main focus was on literature that indicated whether the internal audit activities are being carried out in an equitable manner to all organizations that have been practicing Quality Environment (5S) System. The internal audit of 5S Quality is critical to the successful of 5S, TQM as well as Quality Management System (QMS) programs. It is often overlooked or considered an unnecessary extra expense to organizations. The internal audit validates the

accountability of the 5S target area owners for complying with 5S plans. In performing audit activity, internal auditor must objectively and independently collect and verify the audit evidence, evaluate it against criteria or guideline and report their finding. In short, without the audit, the program slowly withers away and becomes ineffective. Concern at 5S failures will reveal a lack of IAQ activity. The success and effective IAQ depends on adequate numbers of auditors, competence, and audit report. It is important that IAQ activities determine the factors that can influence them to achieve organizational goal. This will force the auditor ability to examine if the internal audit of 5S Quality can contribute towards company operational performance.

2.1 Quality Audit

World has recognized “quality” as the weapon to fight global competitive war (Dunk, 2002), therefore, organisations had been striving to implement the principles of total quality management (TQM). This phenomenon has resulted in the implementation of systems, models, techniques, tools, and standards under the umbrella name of TQM in organisational arena to varied extents. Some of the initiatives sustained even today while the remaining vanished. Among all, the most noticeable one that has been dominating organisations is the installation of quality systems (QS) (Berry, 1998). Majority of QS installations have been carried out according to the ISO 9000 series standards. Further, one of the requirements of implementing those quality systems is the conduct of audits (Karapetrovic and Willborn, 2001).

Today, the “quality world” has focused on the auditing process. They tried to find an effective way to improve the quality of “quality auditing” and summarized that only “value-added audits” can be employed as a continuous improvement tool. The

importance of “adding value” during quality audits referring to make something more useful or to improve something. ISO 9000:2000 describes an “audit” as “a systematic, independent, and documented process for obtaining evidence and evaluating it objectively to determine the extent to which audit criteria fulfilled” (Pivka and Mulej, 2004). In other research, the group outlines “appropriate team selection to achieve audit objectives” and “allocation of adequate time to perform audit” as two of the most important tips on how to add value, as well. These are also clearly mentioned in the ISO 19011 standard, which presents guidelines for quality and/or environmental management systems auditing, includes necessities for “qualification of auditors,” and focuses on an “audit team” (Dereli et al., 2005). However, the ISO 19011 guideline still does not provide a “framework” for the value-added auditing. Basically compliance audits have become a routine for both auditors and the auditee; therefore, the quality audit scope has been enlarged to areas by which the organization or managers master their business (Pivka and Mulej, 2004).

In new auditing perspective, the auditors are called “value-added auditors” who should act as a consultant for the audited organization. They are experts and should give assistance to the audited organization in improving their organization performance as well as quality as whole. The auditors are responsible for performing an audit, resulting in improvements of current processes in such a way that management goals are fulfilled.

Other than ISO 9000: 2000 standard, “Integrated lean TQM model has come into the picture. The new term called “5S þ” where the main purpose is to combine the two sets of well-proven 5-S and lean 5-S (L5S) audit checklists. The 5S þ approach will ensure the sustainable development of most types of organizations in the contemporary business environment. The main focus of the model is to enable companies to effectively achieve

safety, hygiene, quality productivity, image, cost reduction, environmental protection and timely delivery (Samuel Ho, 2009). The outcomes of 5S activity would give impact to organization performance indirectly. The 5S is a first step towards TQM. Over the last century, the Japanese have formalised the technique and name it as the 5S practice (Osada, 1991). Lean 5S (L5S) has been adopted and adapted by many organizations in the world. By now, over 8,000 organisations employing over 100,000 people in no less than 20 countries (including Australia, Canada, China, Finland, HKSAR, Indonesia, Malaysia, Philippines, Singapore, Spain, Sweden, Taiwan, Thailand, the UK, the USA are been using the research output in the improvement of their business performance by developing sound strategies and achieving significant improvements in safety, quality, productivity, speed and image. (Samuel Ho, 2009)

Quality auditing has been around for a long time, dating back to the 1960s. Unfortunately, there has been limited academic interest in the detail of the quality auditing process in spite of the popularity of quality auditing in a wide range of industries and service sectors (Swift et al., 2000). For example, many organizations in Turkey and around the world have faced quality audits while they were trying to implement their quality management systems. Concerns have also been raised in recent years about the usefulness of conventional compliance audits for continuous improvement, inconsistency of audit processes and results, and the value of compliance audits in understanding complexities of business systems (Karapetrovic and Willborn, 2001). Karapetrovic and Willborn suggested and advocated the implementation of a systems approach in auditing in order to add “value” to the audited organization. They argued that in a well-planned and managed audit system, “competent auditors” must strive to identify improvements.

Under the system approach (Karapetrovic and Willborn, 1998), an audit is viewed as a set of interdependence processes or activities that using human, material, infrastructural, financial, information and technical resource to achieve objectives related to continuous improvement of performance. Hizrel et. al (1998) agrees that an audit refers to a system. Since quality auditing is a service for internal (executive management) and external (customer/ third party), a quality audit system must provide such confidence with respect to audit requirements. The requirements may include specific time frame, provision of audit program, adequate auditor competence, audit resources, proper co-operation with the auditor and auditee.

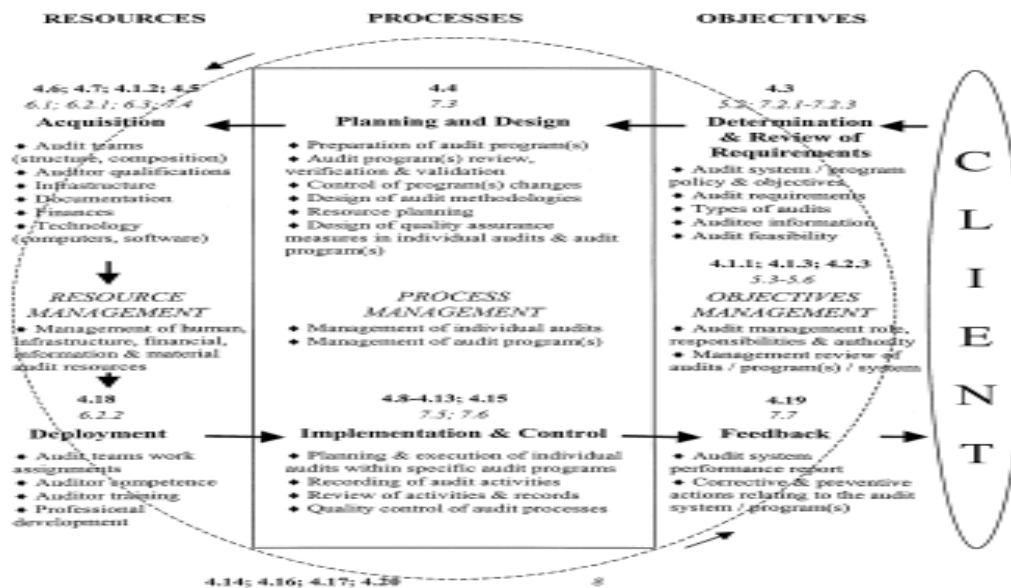


Figure 2.1: Adapted from Quality Assurance and Effectiveness of Audit System by Karapetrovic and Willborn, 2000

The illustrated framework (Figure 2.1) is structured around the main elements of systems which includes audit objectives, process and resources. Generally audit system policy and objectives are determined first before others. It followed by second stage that involves audit system planning and design where specific quality assurance procedures for conducting audit are designed. The planning stage is followed by the allocation and

deployment of resources in order to achieve company audit objectives. At this stage auditors who are responsible for audit program are identified, their qualification and competence are determined and reviewed, and audit assignment for particular audit program are assigned.

2.2 Organizational Performance

Organizational performance is recognized as organizational outcomes through ISO 9000 implementation. Definitions of performance are different, depending on the types of organizations, such as financial performance or customers' satisfaction (Soh and Markus, 1995). The main objective of ISO 9000 is to help organizations to establish an effective QMS. ISO 9000 does not guarantee any improvement of product quality or organizational performance (Feng et al., 2008). This is because ISO 9000 is focused on the processes development and QMSs, and not focused on managerial areas, such as strategy and business results (Porter and Tanner, 1996). Managing all areas could be covered by other initiatives of quality award models, such as the EFQM model (Czuchry et al., 1997). Therefore, we argue that ISO 9000 outputs (operational performance) conditionally influence organizational performance on a long-term basis.

ISO 9000 adoption focuses on improving operational performance and starting point for continuous improvement culture to produce a product or a service efficiently and effectively. Attention must be prioritized to ten critical success factors: leadership; training; involvement of all staff; organizational resources; a quality-oriented culture; a customer-based approach; a process-centered approach; good communication and teamwork; customizing the ISO requirements; and a quality audit. ISO 9000 has been looked as one of the crucial quality programs to improve the quality of products or

services (Lewis et al., 2006). Many organizations have struggled to obtain the ISO 9000 certification and transform ISO 9000 implementation into organizational performance. However, there has been much debate about the effectiveness of ISO 9000 adoption. In view of this debate, this study has synthesized the literature on various aspects of ISO 9000 implementation and suggested a performance realization framework to implement ISO 9000.

Previous researches in the quality arena have highlighted quality system elements giving impact on organizational performance. Mann and Kehoe (1994) examined the elements of total quality management that impact business success. Their research highlighted two key components which are procedures and a formal feedback system. Tsiotras and Gotzamani (1996) emphasized on periodic review, formal corrective actions, and process that brings impact on organizational performance. Carlsson and Carlsson (1996) identified processes improvement and better customer relations as benefits of implementing ISO 9000 in Swedish companies. Lee and Palmer (1999) cited daily monitoring adherence to documented procedures and understanding of the corrective action process as significant challenges.

Motivation factors of ISO 9001 certification can be classified into two main categories: internal and external motivations. Internal motivations are related with the goal of achieving organizational improvement, while external motivations are mainly related with promotional and marketing issues, customer pressures, improvement of market share, and others. Companies that required quality certification for “developmental reasons” have experienced more internal benefits from certification (Jones *et al.*, 1997). Brown *et al.* (1998) argued that companies driven by internal reasons to seek certification have positive perception about improvements achieved. The manager sees certification as

internal processes and systems improvement, rather than simply getting certificate, will get broader positive results from it. Gotzamani and Tsiotras (2002) stated that companies seeking ISO 9001 certification mainly based upon external motivations will also achieve mostly external benefits, while those that seek certification based on true quality improvement will get benefits mainly in terms of internal operations performance (Poksinska *et al.*, 2002; Williams, 2004).

Llopis and Tarí (2003) suggest that companies more concerned about internal reasons are those that:

- Obtain higher profits deriving from the implementation of quality system;
- Reach a greater practical implementation of quality management principles;
- Are most likely to progress towards total quality management.

Based on above literature, companies optimize their benefits if they achieve ISO 9001 certification based on internal motivations.

According to Garvin (1984, *cited in* Sousa and Voss, 2002), the influence of quality over business performance, can be based upon two main categories: manufacturing and market. In the manufacturing, improving internal process quality results in better operational performance, which leads to business financial performance. In the market route, improvement of product quality will influence marketing business performance, and will lead to financial performance improvement as well.

According to Sousa and Voss (2002), quality management practices have a significant and strong impact on quality and operational performance. However, their impact over business financial performance is weaker and not always significant. Singels *et al.* (2001) have not found a positive relationship between ISO certification and performance of

organizations. However, the authors have concluded that the internal factor for seeking registration has an influence over the organization performance. On the basis of such research results, the authors concluded that ISO 9001 certification based upon internal motivations results in improved performance.

Therefore, we can summarize that introduction of the ISO 9001 does not automatically bring economic benefits; instead, certain conditions should be met. If ISO 9001 is well applied and implemented, it is expected to make a significant improvement to company's performance (Singels et al., 2001).

2.3 Internal Audit of Quality and Organizational Performance

Internal audit of quality is one part of the whole internal audit (IA). On January 1, 2002, the Institute of Internal Auditors (IIA) has revised standards for the internal audit practices that included two key provisions related to quality assurance. First, the internal audit department should implement a quality assurance (refer to internal audit of quality) and improvement program, and second, they should secure an external quality assurance review of their internal audit operations.

Internal audit of quality also is one of the techniques required by ISO 9001 standard. The main purpose of conducting an internal audit quality is to examine for compliance with requirements of the ISO 9001 standard and to report any non-conformities identified as a basis for further corrective actions in order to eliminate them (ISO 9001:2008, Ch. 8.2.2). By eliminating finding in audit report such as non-conformities, the company formally meets requirements for managing or maintaining ISO 9001 certificate.

When discussing pertaining internal audit of quality, ISO 9000 (2000) has defined internal audit effectiveness as “the extent to which planned activities are realized and planned results achieved”, and efficiency as “the relationship between the result achieved and the resources used” (Beckmerhagen et al., 2004). By performing internal audit of quality, the system can be effectively monitored for conformity to the internationally recognized standards and create a cycle of continuous quality improvement (CQI). Furthermore, not only should the outcomes of audit be measured against the planned objectives, but the audit process should include planning, reporting, follow-up and resource requirements, including auditor skill and competency.

According to Mihret and Yismaw 2007, internal audit (IA) effectiveness is defines as the extent to which an internal audit of quality is debatably a result of the interchange among four factors: internal audit; management support; organizational setting; and attributes of the auditee. The main IA function’s capability is to provide useful audit findings and recommendations would help raise management’s interest in implementing improvement activity on quality. The management support such as providing the resources and commitment to implement the IA recommendations is essential in determining audit effectiveness. Also, the organizational setting in which IA operates, for instance the organizational status of the office, its internal organization and the policies and procedures applying to each auditee, should enable smooth audits that lead to reaching useful audit findings that can be presented in the form of report. The figure 2.2 shows the factors influencing Internal Audit Effectiveness.

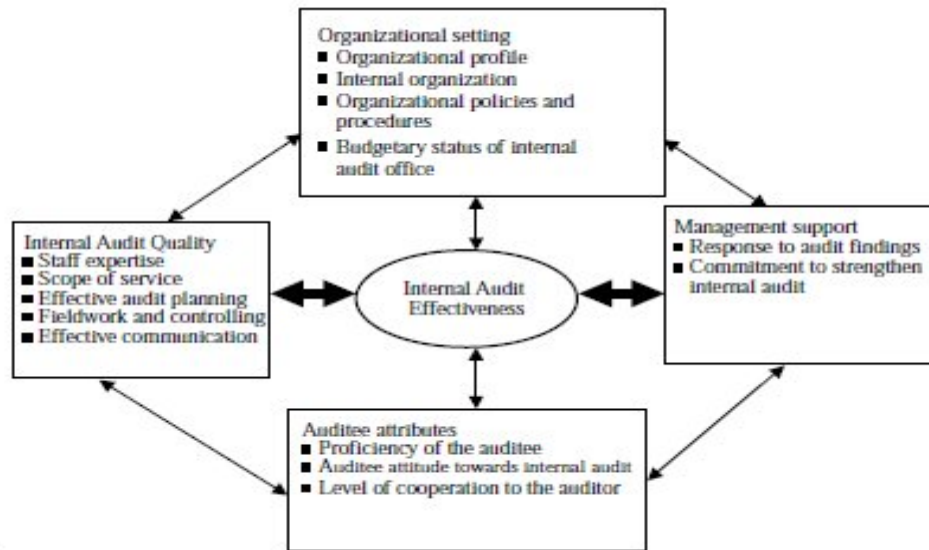


Figure 2.2: Adapted from Internal Audit Effectiveness: Ethiopian Case Study by Mihret and Yismaw, 2007

In addition, with strong management support it is possible to improve the IA from solely monitoring for compliance to searching for any possible improvements. Such audits are considered as internal audits that add value (Liebesman, 2002; Hutchins, 2002; Piskar, 2004; Pivka and Smogavc Cestar, 2004). Benefits of implemented IA depend on management’s understanding of IA, on management’s attitude to IA, and on how management responds to IA findings (Razzetti, 2003; Bauer, 2005; Mihret and Yismaw, 2007) and stimulates the auditors (Hutchins, 2002).

Hutchins (2002) looks at internal audit of quality as a problem solving tool and an independent unbiased advising activity which is intended to improve and add value company’s business by improving the effectiveness of controls as well as decreasing risks. Results of previous empirical study support the claim that internal audit of quality should be used as a management tool for stimulating improvements in QMS resulting in processes effectiveness and efficiency (Pivka and Smogavc Cestar, 2004). The survey has

supported by a total of 89.9 per cent of the companies in a Slovenian (Piskar, 2003, p. 152). A survey in Spain (Tari and Sabater, 2004) showed that 84 per cent of companies use internal audit of quality as a basis for development of their QMS. Some other surveys and case studies have confirmed internal audit of quality's contribution to business improvement (Kaye and Anderson, 1999).

The trends involve clarifying the broader context of the ISO 9001:2000 within companies. Hence, it should be spelt out how the QMS is integrated into the way companies do business. Related to this, the role of the internal audit of quality should also be clarified. Expectations of companies relating to the results of the internal audit of quality may differ between companies and also over time within the same company: from simple formal conformance to the requirements of the standard (interested in having the certificate) to audits that help companies actually achieve effective and efficient performance (mature quality culture and mature QMS). The identified positive outcome of the QMS will be used as a foundation for assessing the internal audit of quality's contribution to achieve business goals and at the same time improve company efficiency. The importance effect of internal audit of quality is largely dependent on the management's understanding of audit reports (as user of the audit results), on management's attitude to audits, and on how management responds to audit findings.

When discussed about benefits of internal audit of quality outcomes from the effective and efficient introduction of the ISO 9001 (Leung et al., 1999; Karapetrovic and Willborn, 2001; Magd and Curry, 2003; Milena A. and Borut R., 2010) the different benefits mentioned by previous studies can be divided into four groups in accordance with the balanced score card approach (Kaplan and Norton, 1996):

- (1) Benefits related to the customer perspective are improvement of product and service quality which includes decreased cost caused by non-conformity of received goods and incoming control, and improved communication and relationship with suppliers. This improvement would lead to greater customer satisfaction, improved image of the company, and retention of existing customers as well as increased sales volume.
- (2) Benefits related to the internal processes perspective, the procedures are determined and more visible, improved processes, decrease in rework and scrap, decrease in external auditing, and higher productivity. It would give better effectiveness of processes.
- (3) Benefits related to the learning and development perspective which includes increased qualification of employees for the implementation of work tasks, increased transfer and dissemination of knowledge among employees, improved communication and relationship between employees, better work morale and motivation of employees, and continuous improvement of product and service quality. It could improve employee satisfaction and an innovation building of a competitive advantage.
- (4) Benefits related to the achievement of economic goals and improved financial performance are increased income – based on improved products and services, and decreased cost – based on process improvements, improved process effectiveness and product quality. Company could benefit by improved profitability and owners satisfaction.

When QMS becomes more mature, the management's expectation of the internal audit of quality effects are changing, so the purpose and orientation of the internal audit of quality can be changed from a compliance assessment (compliance audit) to an assessment of

continuous improvement (continuous improvement audit) and management system (management audit) (Karapetrovic and Willborn, 2000; ISO 9004, 2002, Ch. 8.2.1.3; Seaver, 2002). Accordingly, the objectives of the internal audit of quality have changed and should be related to business objectives the basic characteristic of such an internal audit that would be the audit objectives connected or related to the business objectives of the company (Karapetrovic and Willborn, 2000; Beckerhagen et al., 2003; Pivka and Mulej, 2004).

2.4 Audit Resources

The resource-based view of strategy with regards to strategic perspective (rather than economic) resources as firm specific and difficult for rivals to buy or imitate (Nelson and Winter, 1982; Wernerfelt, 1984; Barney, 1986), and it gives value to managers to influences the direction and growth of a company (Penrose, 1959; Hamel and Prahalad, 1994; Collins and Porras, 1994; Ghoshal and Bartlett, 1997). This view explains strategic resources as tangible and intangible assets that when both it combined, it will help to constitute a company's competitive advantage (Teece, 2007). The softer components of organizational resources, such as staff and skills, and how these are managed in operational teamwork against top-level targets and longer-term strategy, are central to the management of strategic resources.

It has long been considered important to have a strong interconnection of relations within the organization (Barnard, 1938). The importance of organizational audits has been recognised in the performance management and organizational studies literatures, and that employee participation is a strong predictor of organizational performance (e.g. Wagner, 1994; Leana et al., 1992). However, despite the thoroughness such popular

business excellence frameworks, as the European Foundation for Quality Management (EFQM, 1999) and the Baldrige Criteria (NIST, 2003), can provide for ensuring quality improvements, they are not designed to facilitate the review of the management of strategic capabilities at the operational level.

Therefore, in perspective of internal audit of quality, a preliminary condition for internal audit of quality in order to be able to do its duties is the availability of a sufficiently large number of skilled professionals or resources (see, for instance, Turnbull, 1999).

2.5 Auditor Competencies

The resource-based view regards the company as a cognitive system, which is characterized by particular and context-dependent competences that are core to strategic purpose. These are conditioned by hierarchical capabilities, or sets of practices, involved in the management of the firm's core business processes that help to create value. Competences typically involve the development of specialist expertise, and firms may become locked into a route that is difficult to change effectively in the short to medium-term (Tushman and Anderson, 1986; Dierickx and Cool, 1989), which is dangerous if the company finds itself prey to major external change (Leonard-Barton, 1992).

The concern of an executive team is not solely to review the operations effectiveness, but to gain an understanding of how activities at an operational level play their parts in the success of strategy at an operational level. Take the EFQM approach, for example, under the "people development and involvement" category, the intention is to:

. . . implement the organization's policies, strategies, objectives and plans . . . [to] recruit and develop their people to match these competencies and actively and positively support them

throughout . . . to realise and unlock their full potential . . . [and] prepare people to meet and adapt to the changes required of them both in terms of operational changes and personal capabilities (EFQM, 1999, p. 7).

While much is said about the need to ensure that staff develop themselves and to align their capabilities with the organization's top-down policies, there is no grant for top management to learn how these competency shortfalls should be adjusted for in their formation of strategy (back at the top level). This is a key component in the resource-based view of strategy, where human capital is seen as an important strategic resource of the organization in its achievement of competitive advantage (Barney, 1991).

From audit perspectives, the auditors' competencies can also increase the effectiveness of the internal audit of quality team by improving the recognition of their role within the organization. Previous studies underlined that line managers often believe that internal auditors do not have enough knowledge to provide useful help (Griffiths, 1999; Van Peurse, 2004, 2005) and, if this is the case, they do not take into account their advice, hence reducing the effectiveness of internal audit of quality (Van Peurse, 2004, 2005).

2.6 Audit Report

Audit report has been seen as one of the tools to measure the impact of internal audit of quality. It's requires a clear definition, understanding and acceptance of the term "effective audit report". Related terms, such as the "reliability of findings", "added value", and "client satisfaction", point in the right direction. But these are merely findings of an audit report. A typical evaluation of audit performance or findings includes the measurement of the achieved effectiveness and efficiency, and a subsequent comparison

of the actual performance with the expected goals. In ISO 9000 (2000), effectiveness is defined as the extent to which planned activities are realized and planned outcomes achieved compare with number of resources used. Therefore, in order to adequately measure internal audit of quality as a whole, one should evaluate not only the audit process but also the results (outcomes) or extending from the planning and execution to the audit reporting, follow-up and resources (including the auditor independence and competence) (Karapetrovic and Willborn, 2000).

With regards to above scenario, audit reporting is probably one of the most sensitive part of the audit process. Regardless of the quality of the auditing examination and evaluation, if the results of the audit are not clearly transmitted to management, the audit effort is of little value. Internal auditor are normally told to employ standards guideline in their reporting such as clarity, brevity, timeliness, completeness, freedom from jargon and use in positive language. There are three aspects that should be considered in audit reporting:

- a. The report should be responsive to the needs of recipient such as management and auditee. The auditor should anticipate the questions that recipient will ask such as why, how, where, when and how much and also should provide this information clearly. It would also be well to identify alternative methods of corrective action that could be taken and even enclose a separate directive for manager to use in directing that such corrective action be taken.
- b. Responding to the level of understanding of the report recipient. The auditor should consider the recipient background, education and position within organization and structure the report to fit.
- c. Emphasizing quality aspect of audit finding. The reporting should not only describe the activities that are being reported, but also describe quality aspects so

as to provide the reaser with a complete picture od situasion (Mort Dittenhofer, 2001).

The report should be designed to be an action devise and should have a natural fit to the characteristics of the receipient. It should evoke a feeling of uncertainties. Based upon the auditor's findings and recommendation, the auditee belive that they can complete their job easily (Mort Dittenhofer, 2001)