Chapter 1: Introduction

1.1 Overview

Information Systems Management (ISM) is an application of Information Technology (IT) widely used to support and facilitate the major functions and tasks, significant specifically in production management. It is the supreme consolidated solution that information technology has offered to business application. ISM integrates companies' several information systems to deploy the best / proven practices for business processes.

Predominantly the mid-sized manufacturing organizations producing engineering goods are sensitive to consequences of ISM applications. The economic pressures, turbulent environment, global economy with exponential growth in this sector over the few decades makes the competition tough. This causes significant need of stability and sustenance that is achievable by successful application of ISM. This point makes it worth to have study of the influence of ISM on this sector.

Two aspects of ISM that rationalized the significance of research in the area as follows

- **Failure Paradox (The Contrast):** Enormous advantages with huge investment in ISM versus high failure rate of ISM.

- **Perpetual Need of Study:** Already established solutions becomes irrelevant or obsolete because of constant and fast changes in technology and revolutions in business practices that forces constant need of study in this area.

1.2 Research Title

Considering the facets of ISM the study is proposed with following title:
"A study of Application of Information System Management in Improving the Productivity and Quality"

1.3 Motivation for Research

Application of ISM generates noticeable benefits such as to gain centralized storage, processing and backup facility, visibility and control, workflow automation and integration, modular software with secure collaboration and so on. Because of these tangible benefits number of corporate tempting to make a massive investment in ISM. However recognizing the constant failure rate of ISM and also the impact of rapid changes in technology and business processes are the main motive for the research.

ISM is different from other innovations of pure IT, because of the socio-technical challenges of ISM causing the complexity involved in the implementation process as well as involving diversified groups. Comprehend the people's perception about ISM in improving productivity and quality is the impetus of study.

1.4 Relevance and Contribution

ISM provides a major strategic advantage to organization in the marketplace. Both competitive strategies enabled by the ISM and specific operational characteristics can place the organization in a deliberate position. ISM becomes a vital instrument while organizational transformation. The study identifies the factors which are contributing in performance improvement while implementing the ISM.

1.5 Proposed Chapter Scheme

The proposed chapter scheme consist of chapter scheme as follows

Chapter-One: Introduction: In this chapter, a brief introduction about the content of this study is presented along with the motivation and relevance of the study.

Chapter-Two: Review of Literature: Study of relevant literature to establish context rationale, to correlate current relevant research (to identify the gaps) and also to relate the observations with findings of others is elaborated in this chapter.
Chapter-Three: Research Methodology: The approach, planning, strategy and tools/techniques used explained in this chapter.

Chapter-Four: Conceptual Background: All about application of ISM, various types of ISM, its functionality and applicability is explained in this chapter.

Chapter-Five: Profile of Study Area: Historical, Social, Cultural and Economic perspective of research clarified in this chapter.

Chapter-Six: Data Analysis and Synthesis: Data collection/gathering, preparation, study and scrutiny of the data obtained to make it meaningful and decisive is explained.

Chapter-Seven: Findings Conclusion and Suggestions: Interpretation and summary of research work with future road-map and recommendations are revealed in this chapter.

1.6 Thesis Outline

An information system is a typically set of people, processes and technology that collect, process, transfer and disseminate the information in an organization. There are basically two types of IS subsists: manual IS and computer based IS. Considering volume of information to be processed today in the technology era, manual ISs are outdated and technology/computer based ISs are considered for effective and efficient management.

The contrast between enormous (and obvious) business advantages and constant failure rate of ISM application is main intention to undertake this subject for study.

In the proposed thesis the application of ISM is being analyzed for performance improvement through ‘Productivity’ measurements; whereas conformance standards are through ‘Quality’ measurements. Critical Success Factors (CSFs) that impacting on application of ISM in improving the productivity and quality are classified and analyzed.

Following diagram depicts the broad outline of the thesis.

Figure 1.2: Thesis Outline
As mentioned in section above the productivity and quality parameters are being measured before and after application of ISM and the crucial ‘Critical Success Factors’ contributing in successful implementation of ISM application are being analyzed. Questionnaires are being used to collect the facts and conclude that the application of ISM contributing in improving the productivity and quality in an enterprise.

The correlation is being established between

- Ten identified parameters known as Critical Success Factors (CSFs) classified into
  - Five managerial CSFs
  - Five Technical CSFs
- Two Performance Parameters, related to ‘Productivity’
- Two Conformance Parameters, related to ‘Quality’

In order to select an appropriate ISM that best suitable to the business practices of an SME (i.e. mid-sized manufacturing industries producing engineering goods), detailed analysis of company’s specific processes and requirements are essential. Conformation of suitability and feasibility of ISM is primary step. Further the analysis that supports both the ISM implementation process and identification of these Critical Success Factors that determines the final success or failure of the ISM performed. The purpose of this study is to address the two primary questions as follows

1. Is ISM really contributing in the performance improvement?
2. In that case, which are the ‘success factors’ that significantly impacting ISM? And to what extent?

Accordingly the questionnaire is being designed, tested and made public, data is being collected and analyzed and finally the conclusion is made based on findings.