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The Effectiveness of ISO 9001 for Service Companies Performance in Nepal

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1. Abstract

The ISO is a one of the largest standard publication and formulation body, which has released and published more than 22,500 new standards. There are 80 Type A (44) and Type B (32) management system (4) standard published by the ISO. Moreover, the generic standard like ISO 9001:2015 is most popular worldwide to improve the management system. This standard focus to improve the quality management system (QMS) through continual improvement.

The study analyze an effectiveness of the ISO 9001 – QMS in service sectors companies in Nepal, raised what are the performance of ISO 9001 before and after certification on the company operation, personnel and market in Nepal? What are the status of uncertified service companies in Nepal? What are the enabling and disabling factors of ISO certification in service sector? Is there the better effectiveness in service sector companies on the comparison of certification?

The methodology which includes process of collecting data, understanding of the research area, applicability of research design, the adequate samples available in the field, characteristics and type of variables included, tool for data collection, the different types of data analysis that would support to test the hypothesis, sample design, collection of data, period of the study, and tools of analysis. This study is defined as the systematic and objective process of gathering, recording, and analyzing data for aid in making decisions.

The Research approach in the base of deductive approach tests the validity of assumptions or theories or hypotheses but inductive approach contributes to the emergence of new theories and generalizations. A deductive approach tests the hypothesis and adopted theory. This study depends on deductive approaches to find the relationship between independent and dependent variables on the impact of effectiveness of ISO 9001 on the performance of company and carried out mixed methods both quantitative and qualitative. This study was conducted all over the Nepal using stratified random sampling for selecting the different sample companies and respondents for primary data collection. 400 companies leaders i.e. managers, officers, assistant officer, program officers, CEO, Executive Chairperson were selected for quantitative data and fifteen for qualitative data. In this study researcher used questionnaire, scheduled interview and observations to collect information from respondents. Analyzing policies, acts, rules and regulations related annual reports and verifying the other supported materials. Various publications and reference books, journals, published data from time to time were used for document review. The processing of data was done through SPSS .Tools of Data Analysis Researcher used suitable tools and techniques to make this research more scientific and systematic; data analysis was done with the help of SPSS package in computer. Variables and their association were analyzed through cross tables. Descriptive analysis includes percentage analysis, mean scores, Variance chi- square test, ANOVA tests were used for the analyzing the data.

It is observed and found that majority of the generic standard have been applied haphazardly in Nepal. Whether the organization have been excel market, financial, sustainable, and process as expected or exceed the customer expectation. However, the effectiveness company's performance has been carried before certification and after certification in service sector only by the researcher of ISO 9001 in service industry in Nepal. The ISO 9001 approaches under their scope and focused its application on risk assessment, risk treatment plan and mitigation, planning, commitment, teamwork, employee involvement, design and development, pre and post activities, adaptation of information technology within the organization.

Keywords: ANOVA, SPSS, ISO 9001, Chi-Square, QMS

2. Introduction

2.1 Transforming enablers

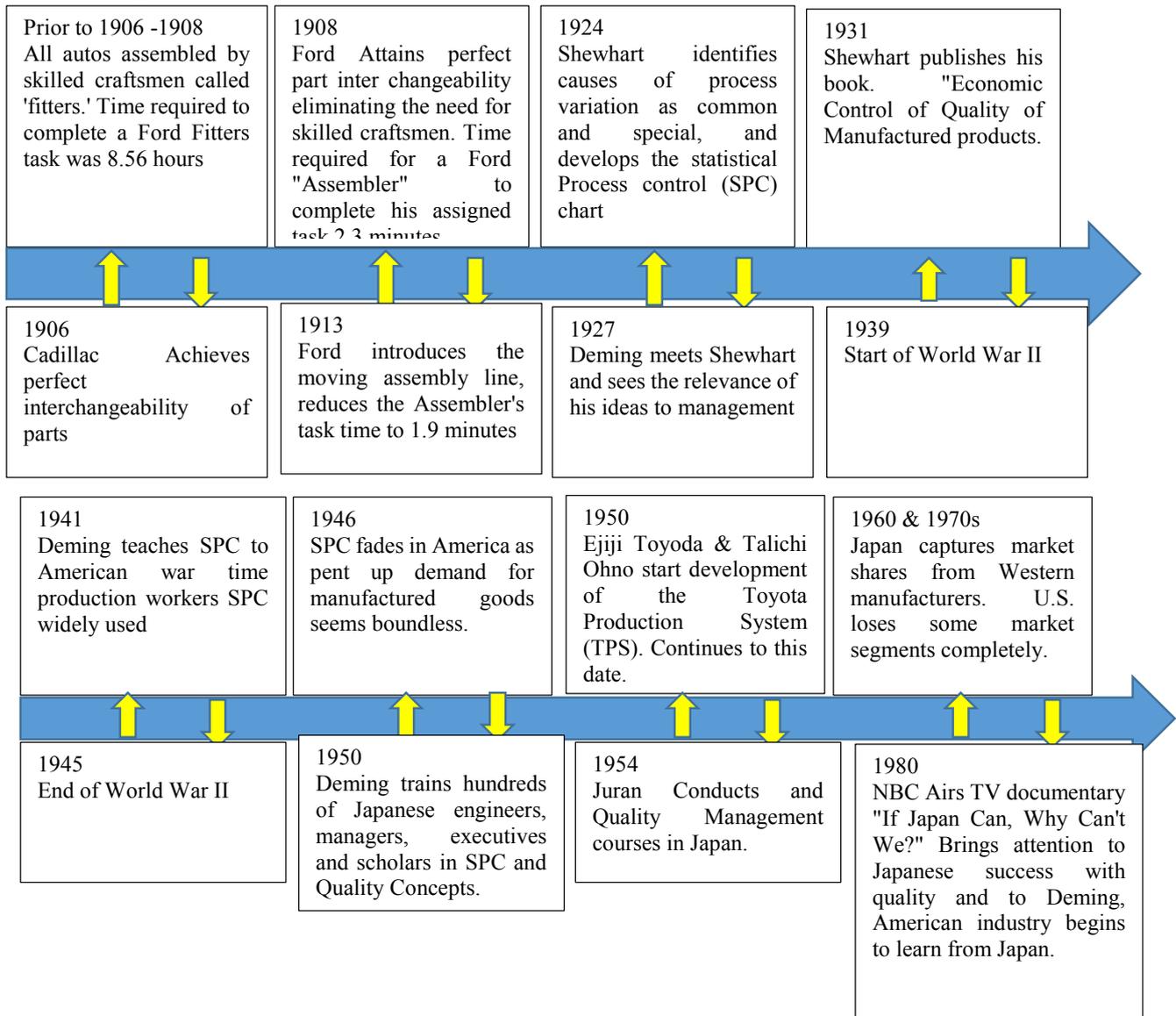
These days, a generic standard ISO 9001 certificate has almost established itself as a basic requirement for an organization. The basic intention of these 9000 series of standards for effective quality management system is system that can induce the culture base of TQM. The system requirement is mandatory for any type of commercial activity within Europe Union. Almost all businesses and or top management view ISO 9001 certification as necessary business evil.

Product or service sector organization of any size and type can adopt ISO 9001 certification process. Lately the demand of ISO 9001 is increasing and its statement “ISO certified “ in organizational brochure, leaflets and hoarding boards has become a fashion due to which this has also paved ways for some of the certification bodies to concentrate on generating more business through sale of certification by not maintaining the actual spirit of ISO certification standards and value.

Moreover, Certification bodies available established in every nook and corner carrying out unethical practice is a potential danger and risk for the continuity and re certification of the standards due to costs associated to renewal and royalty. Institutions are highly impressed with short term consultancy services to get the certification in the initial period, without knowing its implication on the management change, proper IT and Knowledge, resource management, process follow and monitoring process like audit within Organization in the long term. The Quality Management Systems ISO 9000 series starts from ISO 9000:1987, ISO 9001:1994, ISO 9001:2000, ISO 9001:2008 and recent version is ISO 9001:2015 version available and this standard.

Continual improvement in interval of 1950 to 1970s focused in people, 1971 to 1979s focused on team management within the organization, 1980 to 1990s focused on processes, 1991 to 2000s focused on knowledge and adaptability, 2000 onwards the focus has been on Changed Management, Information Technology and process audit. Now-a-days institutions are interested to integrate management system for continual improvement through less documentation rather than bunch of manuals and procedures. The ISO released more than 22850+ standards as an improvement tools for various area and sectors in globe. The Quality Management Systems inclusive of management commitment can achieve the milestones for the Institutional excellence.

3. 100 years of selected historic milestones in the Global Quality Movement



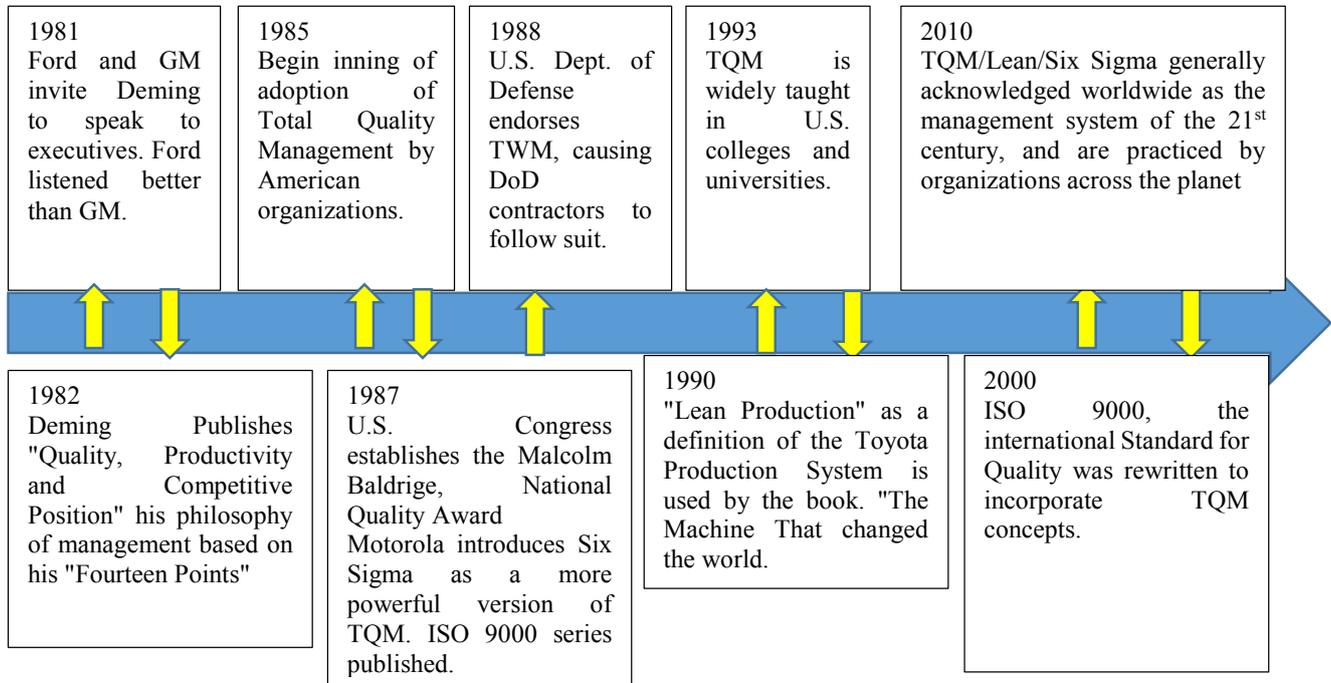


Figure 1: One Century Journey of Quality

4. ISO 9001

Singhal and Singhal (2008) stated that ISO 9001, first introduced in 1987 by International organization of standardization ISO among the ISO 9000 series (Such as ISO 9000, ISO 9002, ISO 9003 and ISO 9004), is an international standard that assists more than one million organizations around the world by providing a set of requirements for developing and demonstrating an effective documented QMS. World's most widely used standard for quality management is ISO 9001. World's most widely used standard for quality management is ISO 9001 (Singhal & Singhal, 2008). The 2000 and 2008 versions of standards are very generic and applicable to all types of business or operations sector.

The first version, divided to three parts, provided three models of quality management system; Part 1: Model for quality assurance in design, development, production, installation, and servicing, Part 2: Model for quality assurance in production, installation, and servicing, Part 3: Model for quality assurance in final inspection and test, and was mainly accessible for manufacturers and recognized for being immensely incomplete. (Tricker, 2016).

According to the survey of ISO Survey 2018, 193 countries were certified the ISO 9001. ISO provided the large number of certificates to the Chinese companies in total number 2, 95703. ISO provided 87 794 certificates in Italy 47,482 certificates in Germany.

Nepal is one of developing country in the world, the service sector industries in education, health, consultancy, transportation, IT and Communication. We don't have own identity for product and service particularly in the world. Even we don't have data for those areas.

World on the eve of twenty one century is confronted with a very dramatic changes. These developments mean that old business practices in world today the will not past performance (Crosby, Evans, & Cowles, 2006). In the current situation, the real mission of the organization understands customer's needs and desires, and provides solutions that following is customer satisfaction. Companies that are at the tertiary level in terms of marketing, attempt to keep satisfied own customers. Satisfied customers does repeat own purchases, and does aware others good experience about a product or service (Gronroos, 2011). Main key of success is company performance consistent with own customers' expectations. Successful companies, attempt to pleased customer. Not only are committed to providing the service or product, rather something they provide is more than commitments (Kotler & Gary, 2011). This study emphasizes to study the effectiveness of ISO in service sectors in Nepal.

ISO 9000 series is a standards developed for quality management and quality assurance to help organization effectively document of quality system to maintain an efficient quality system within the organization. It helps a company satisfy its internal and external customers, meet regulatory requirements, stakeholders and achieve continual improvement. This standard are not specific to the organization specific and can be used in any size and type of organization called as a generic standard. ISO 9000 series standards.

This standards published in 1987, it is developed by the International Organization for Standardization (ISO). The first revision in 1994 and the major revision in 2000 and now include ISO 9000:2005 - definitions, ISO 9001:2008 - requirements, ISO 9004:2009 - continuous improvement and ISO 9001: 2015 - risk management. This recent versions of the standard, ISO 9000:2015 and ISO 9001:2015 was published in September 2015. The ISO 9000:2000 refers to the ISO 9000 update released in the year 2000. This revision included mainly meeting the stakeholder needs, compatible to all type and size of organization, user friendly and facilitate to the quality Management into business management processes. ISO 9000:2015 principles of Quality Management. The ISO 9000:2015 and ISO 9001:2015 standards are based on seven quality management principles that senior management can apply to promote organizational improvement.



Figure 2: ISO 9000 Quality Management Principles

1. Customer focus
 - Understand the needs of existing and future customers
 - Align organizational objectives with customer needs and expectations
 - Meet customer requirements
 - Measure Customer Satisfaction
 - Manage customer relationships
 - Aim to exceed customer expectations
 - Learn more about the customer experiences and customer satisfaction
2. Leadership
 - Establish a vision and direction for the organization
 - Set challenging goals
 - Model organizational values
 - Establish trust
 - Equip and empower employees
 - Recognize employee contributions
 - Learn more about leadership
3. Engagement of people
 - Ensure that people’s abilities are used and valued
 - Make people accountable
 - Enable participation in continual improvement
 - Evaluate individual performance
 - Enable learning and knowledge sharing
4. Process approach
 - Enable open discussion of problems and constraints
 - Learn more about employee involvement
5. Improvement
 - Improve organizational performance and capabilities
 - Align improvement activities
 - Empower people to make improvements
 - Measure improvement consistently
 - Celebrate improvements
 - Learn more about approaches to continual improvement
6. Evidence-based decision making
 - Ensure the accessibility of accurate and reliable data
 - Use appropriate methods to analyze data
 - Make decisions based on analysis
 - Balance data analysis with practical experience
 - See tools for decision making
7. Relationship management
 - Identify and select suppliers to manage costs, optimize resources, and create value
 - Establish relationships considering both the short and long term
 - Share expertise, resources, information, and plans with partners
 - Collaborate on improvement and development activities
 - Recognize supplier successes
 - Learn more about supplier quality and see resources related to managing the supply chain

4.1 Requirement of QMS

Each element of a quality management system helps achieve the overall goals of meeting the customers’ and organization’s requirements. Quality management systems should address an organization’s unique needs; however, the elements all systems have in common include:

- The organization's quality policy and quality objectives
- Quality manual
- Procedures, instructions, and records
- Data management
- Internal processes
- Customer satisfaction from product quality
- Risk and Improvement opportunities
- Quality analysis

4.2 Service Management

Service sectors are of great importance to the world economy (Lee, To, & Yu, 2009). Competing in the global economy and the current markets demands that the service companies establish well-designed and implemented internal management systems according to internationally accepted management standards such as ISO 9001 (Karapetrovic & Willborn, 1998).

Service sectors are of great importance to the world economy (Lee, To, & Yu, 2009; To, Lee, & Yu, 2011). With the growing importance of services for economies and organizations and information technology as driver and enabler of service innovation, there is a need for the holistic management of services in an organization to ensure alignment between the needs of the customer and the objectives of the organization. Business Service Management is a management discipline that view services from a business perspective and deals with the service orientation of the organization and the provisioning and use of business services. (Fieft, 2011). Service is a work and practical offered by one party to the opposite party. Services have four distinctive feature included intangible, inseparable, heterogeneous, and non-store. A service has quality can satisfy customers' needs and demands. Common factors of service quality included process quality, product quality, physical quality, interactive quality, and organization quality. Service quality is more important and necessary due to increasing customer expectations, competitor activity, environmental factors, services nature, and organizational internal factors. (Hemmat, Amoo, & Darkhaneh, 2013)

Managing service quality has always been a target for most hospitality organizations in that it will result in customer satisfaction that very organization intends to accomplish. The more influence an organization has over its service quality, the better it will have control over its customer satisfaction. Service encounter or the 'moment of truth' is one of the predictors of service quality. It is a point in service delivery where there is an interaction between the service employee and the customer. Therefore, accomplishing a positive service encounter is very important. When the service provider is able to understand and meet customer's expectation, positive service encounter will be attained. After analyzing the problems and challenges in managing service encounters, several points can be drawn in attaining positive service encounters. Service is process consists of a set of activities more or less intangible. Service is activity or benefit offers one party to other party. Supply of high quality product and services to customers a continuous basis, makes creating higher competitive advantages such as competitive barriers, increase customer loyalty, production and supply differentiated products, reduce marketing costs and determine higher prices for companies. Service quality is a very mental. Service organizations have been realized this for maintain their customers and gain competitive advantage, one of the key issues that must be considered is improve their quality of services. Providing continuous high quality service is one of basic ways that services organization can do differentiate itself from other competitors.

5. Statement of the Problem

The adaptation of the ISO 9000 Quality Management System in the Service Sector industries has started to grow. According to studies, performance different happened to organizations that certified ISO 9001, some organization gained improvement but some organization productivity is negatively affected. In order to strengthen the service sector industries capability, it is important to determine the effects of ISO 9000 series quality management system certification in enhancing the company operation performance, financial performance and product and service performance in order to gain competitive advantages. International Standards of the "ISO 9000 Family of Quality Management Systems Standards" have been developed and are still improved to support organizations to rationalize communication and competitiveness in national, regional and worldwide international trade. With the possibilities of contemporary information technology, data flow management contributes imminent steps against bureaucracy and heavy documentation of the quality system.

In Nepal, different service Sectors Company were established and operating on their own aims. Quality is the responsibility of everyone in the organization, from the chief executive officer to the operators on the production floor. All companies are in high competition on assuring quality and satisfaction of the consumer. Some of the service sectors companies were certified by ISO . They were audited by ISO 9001. What were the changes can be observable or can be indicated after getting certification by ISO? This is the main questions to assess the effectiveness of the Quality Management System in the study.

6. Research Questions

To analyze the effectiveness of the quality Management System ISO 9001 in service sectors organizations in Nepal, the study raised the following research questions.

1. What are the performance of ISO 9001 certification on the company operation, personnel and market in Nepal?
2. What are the status of uncertified service organization in Nepal?
3. What are the enabling and disabling factors of ISO certification in service sector?
4. Is there the better effectiveness in service sector organization on the comparison of certification?

7. Significance of the Study

This study was mainly concerned on the revision of the effectiveness of ISO 9001 in service sectors companies in Nepal. To analyze different aspects of business for assuring the quality among the distinguish companies having same aims and in same runaway. The study also tried to find out the enabling and disabling factors of ISO 9001 in reference of Nepalese service sectors organizations too. For making suitable polices, rules and regulations and laws this study may become helping hands which forecast the gaps of previous and existing rules , policies and practices. It is very important for business persons faced the problems in their own business and providing services to the customers from the point of customers' satisfaction level.

This study would help as follows.

1. It is useful to help the business persons for establishment of quality service. It can use for create, develop and enhance the great environment, system and regulate them in their own business. It also help them to make business plan to solve the existing business environments, human resource management, and others auditors' indicators.
2. Policy maker will focus the quality of companies while designing, constructing and making business related policies, rules and regulations.
3. The Business researcher may further get the chance to study the effectiveness of ISO 9001.
4. This study will help the developer for implementation and designing the system of ISO.
5. This study helps the new comers in business to ensure the qualities of service.

8. Objectives of the study

General Objective:

To broadcasting the effectiveness of ISO 9001 in service sector organization in reference to Nepal is the general objective of the study.

Specific Objectives of the study

The following specific objectives were determined by the study. The objectives of this research are to:

1. Assess the performance of company before certification
2. Determine the performance of ISO 9001 certification on the performance of the company. Operation, personnel and market in Nepal.
3. Identify the enabling and disabling factors of ISO certification
4. Analyze the effectiveness of ISO 9001 in the service sector.

9. Research Hypothesis

The following research hypotheses are formulated for the test of significance according to the research questions:

- a. There is no difference on the performance between certified and uncertified service organization.
- b. There is no significant difference between different sectors of service business on the effectiveness of ISO 9001 in the service sector.

10. Philosophical Worldviews

In this research, to assess the performance of company before certification, to determine the performance of ISO 9001 certification on the performance of the company's operation, personnel and market, to identify the enabling and disabling factors of ISO certification and to analyze the effectiveness of ISO 9001 in the service sector in Nepal is concerned nearby determination and empirical observation and measurement so this research is under Post Positivist.

11. Theoretical Framework

ISO 9001 is a quality management system that was employed worldwide by manufacturing and government entities. There were a massive number of ISO 9001 certifications that had been issued to organizations which successfully implemented ISO 9001. ISO 9001 certified organization should maintain its certification effectively because it can help organizations improve their performance. Despite the massive number of ISO 9001 certifications, the guideline or framework for ISO 9001 maintenance is yet

to be developed. At the same time, a most previous study in regard to ISO 9001 focuses only on the technical facet. Apparently, the cultural facet of ISO 9001 has been neglected. This paper elaborates the framework of the elements of organizational culture which influences the maintenance of ISO 9001. The model not merely elaborates the need for technical requirements, but also the need of cultural requirements in ISO 9001 maintenance. The model could be employed as a guideline for managers in certified ISO 9001 organizations in their endeavor to maintain ISO 9001 certification effectively (Basir, Davies, & Rudder, 2011). ISO 9001:2015 presents a schematic representation of any process and shows the interaction of its elements. The monitoring and measuring checkpoints, which are necessary for control, are specific to each process and will vary depending on the related risks.

ISO , 9001: 1015 also developed the PDCA cycle it can be applied to all processes and to the quality management system as a whole. The PDCA cycle can be briefly described as follows:

Plan: establish the objectives of the system and its processes, and the resources needed to deliver results in accordance with customers' requirements and the organization's policies;

Do: implement what was planned;

Check: monitor and (where applicable) measure processes and the resulting products and services against policies, objectives and requirements and report the results;

Act: take actions to improve performance, as necessary.

After discussion of this theoretical framework, Theory of Maintenance of a quality management System developed by Kartner (1994) and ISO systematic presentation and PDCA cycle are undertaken as a theoretical framework of the study.

12. Conceptual Frame work

This study is carried out under the following conceptual framework:

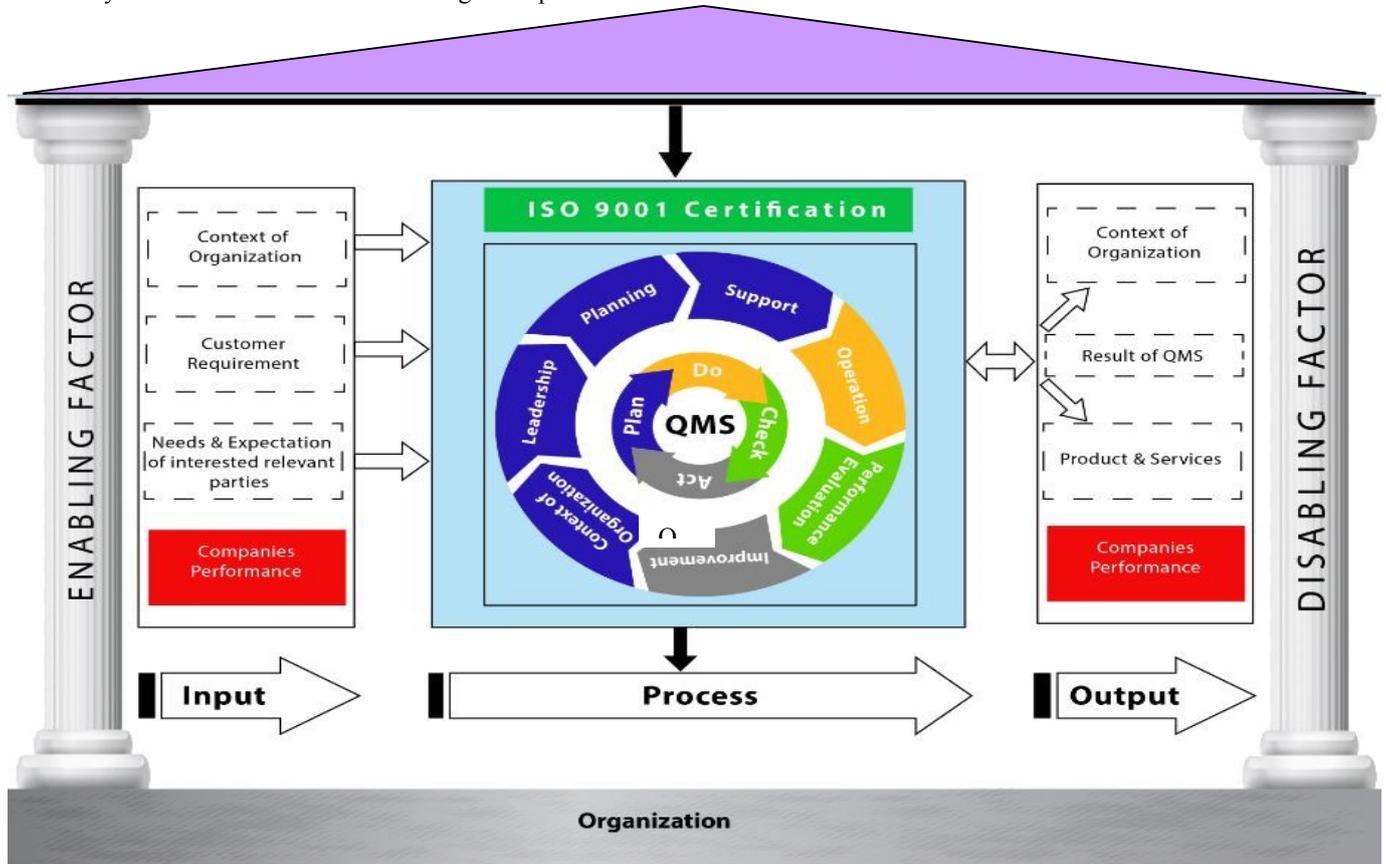


Figure 3: ISO 9001:2015 Conceptual Frame work

The research has following limitations:

1. This research is solely based on Service sector business Nepal.
2. This is an academic research and the findings of this research may differ with other research.
3. Opinion survey of about 400 respondents will be conducted from selected companies.
4. This research will cover only ISO 9001 certified companies.

13. Materials and Methods

Philosophical ideas greatly influence the research process which needs to be identified. Guba (1990) defined the Worldview as "a basic set or belief that guides action" (Guba, 1990). It is centered about the World and nature of research which a researcher used. These worldviews are depended on the discipline area of the and past research experiences. Creswell discussed the overviews in the following aspects that are: post-positivism, constructivism, and advocacy/participatory, and pragmatism (Creswell J. W., 2007).

The research strategy and methodology designed to address the research objectives and questions that have been already identified. The method is an explanation on the philosophical background to the research, the research design and methods of data collection. Towards the end, this chapter also presents the tools and techniques of data analysis. It is necessary to design suitable methodology and select proper analytical tools for a meaningful analysis of any research problem. This section describes the methodology which includes process of collecting data, understanding of the research area, applicability of research design, the adequate samples available in the field, characteristics and type of variables included, tool for data collection, the different types of data analysis that would support to test the hypothesis, sample design, collection of data, period of the study, and tools of analysis.

Business research covers a wide range of phenomena. For managers the purpose of research is to fulfill their need for knowledge of the organization, the market, the economy, or another area of uncertainty. Market research is defined as the process of evaluating the feasibility of a new product or service, through research conducted directly with potential consumers. This method allows organizations or businesses to discover their target market, collect and document opinions and make informed decisions. The process of market research can be done through deploying surveys, interacting with a group of people also known as sample, conducting interviews and other similar processes.

The task of research is to generate accurate information for use in decision making as we say above, the emphasis of business research is on shifting decision makers from intuitive information gathering to systematic and objective investigation. Our study is defined as the systematic and objective process of gathering, recording, and analyzing data for aid in making decisions.

Deductive approach tests the validity of assumptions or theories or hypotheses but inductive approach contributes to the emergence of new theories and generalizations. A deductive approach tests the hypothesis and adopted theory. This study depends on deductive approaches to find the relationship between independent and dependent variables on the impact of effectiveness of ISO 9001 on the performance of company.

13.1 Research Design

A research design is taken as the main plan of a research study. The non-experimental researches rely on correlations, surveys or case studies, and cannot demonstrate a true cause-and-effect relationship. Non-experimental research tends to have a high level of external validity, meaning it can be generalized to a larger population. So, the study was non-experimental cross-sectional. Non experimental research is used when variables of interest cannot be manipulated because they are naturally existing attributes or when random assignment of individuals to a given treatment condition would be unethical. Numbers are used to represent different amounts of quantitative variables and different classifications of categorical variables. Non experimental studies may be classified along two dimensions: one based on the purpose of the study and the other on the time frame of the data collection. It had used the descriptive, exploratory and co-relational research design for quantitative data and phenomenological design was used for qualitative data.

13.2 Research Method

Qualitative Research is primarily exploratory research which is used to gain an understanding of underlying reasons, opinions, and motivations.

Quantitative Research is used to quantify attitudes, opinions, behaviors, and other defined variables – and generalize results from a larger sample population. It is used to quantify the problem using numerical data which can be used in statistical operation. It is also used to measure the data and forecast the pattern in research.

In this study the researcher used mixed methods where both quantitative data i.e the performance of companies before and after ISO certifications, the data were collected as a reference on ISO 9001, the enabling and disabling factors on implementation of ISO 9001 in service sectors companies in Nepal. The same data were collected through interview and observations too. Therefore, both types of data was adopted to address the research hypothesis. The results from both types of data were analyzed.

14. Sample Design

A sample design is defined as a plan to get a sample from the target population. First of all the researcher studied the number of ISO certified Service sectors companies having his own experiences. This study was conducted all over the Nepal. The census method is not feasible for the study, so the researcher used stratified random sampling for selecting the different sample companies and respondents for primary data collection.

14.1 Distribution of Respondents

Distribution of respondents' gender wise:

According to field data, 65.9 % (220 respondents out of 400) of respondents were male and 34.1 % of the respondents were female. It is concluded that majority of respondents were male.

Age wise Distribution of respondents:

According to field data, 5% (11 respondents out of 220) of respondents were in 16-29 years age gap, the largest number 101 or 45.9% were in 30 - 49 years age interval, 37.7 % were in 50- 64 age group and 11.4% were in 65 and above age group. It is concluded that majority of respondents were in 30 - 49 age group which is energetic and responsible age group.

Educational level wise distribution of respondents:

Above table talks about the educational achievement level of the respondents, it was very interesting to find out that only 3.2 % of respondents had completed Bachelors, 50.5% had completed masters or higher, 38% of respondents had technical education and 29.1% respondents had other educational degrees. It is concluded that majority of respondents have master and above degree as their academic qualification.

Working Experience year's wise distribution of respondents:

From the table the respondents had been found with different years of experiences. Among them 12.3 percent experience of below five years, 25.9 percent had 5- 10 years experiences in related fields, 29.1 percent respondents had the experience of 10 - 15 years ,15.0 percent had 15 - 20 years of experience and 17.7 respondents had more than 20 years of experiences. It is found that the majority respondents had 10 - 15 years of experience in their own related field.

Working department wise Distribution of respondents:

The above table presents brief profile of the respondents and working department on companies of participant. As per above table 20 % of total respondent were engaged on operation sector, out of total respondents (220 respondents) 40 respondents (18.2%) were on Marketing departs, 12.3% of respondents were in personal department, 18.6% were representative of financial department, 15.9 % were representative of product and service quality and 15 % from other departments. It is concluded that majority of respondents were working on operation departments of the companies.

Distribution of respondents on the basis of service area of organization:

The table states that the respondents were taken from different types of service areas. 20.9 percent were participated from financial institution, 21.4 were selected from marketing companies, 7.7 percent took part in the study from health sector, and 19.1 percent were taken from educational offices. 9.1 were participated from development sector, 17.3 percent were taken from engineering, educational and others consultancy and 4.5 percent were participated from other types of service sectors. It can be found that majority respondents were from the service area of marketing.

15. Target Population and Sample Size

The sample size is influenced by the target population. The target population represents the research area. The study carried out in Nepal, targeting the respondents of different companies who were involved in service sector business and have ISO certificates. The leader of companies i.e. managers, officers, assistant officer, program officers, CEO, Exuctive Chairperson were respondents.

In the study of 90 showed the ISO 9001 certified companies in Nepal is listed below. By getting mail from ISO certificate providers and find the following numbers of companies had got ISO 9001 certificates. The total number of ISO 9001 certified companies is 700 and ISO 9001 Certified service sector companies is 400

The number of total ISO 9001 certified companies was shown in the table below.

Table no: 15.1 the number of total ISO 9001 certified companies

S. No.	Areas	Nos.
1	Food products, beverage and tobacco	50
2	Manufacture of wood and wood products	10
3	Manufacture of coke & refined petroleum products	10
	Chemicals, chemical products & fibres	20
	Pharmaceuticals	25
	Rubber and plastic products	3
	Electrical and optical equipment	30
	Manufacturing not elsewhere classified	10
	Gas supply	3

	Construction	10
	Wholesale & retail trade, repairs of motor vehicles, motorcycles & personal & household goods	54
	Transport, storage and communication	25
	Information technology	30
	Engineering services	25
	Other Services	95
	Public administration	5
	Education	55
	Health and social work	20
	Sector unknown	95
	Other social services	25
	Manpower and job placement agencies	90
	Total	700

Source : NBSM, Quality Austria, DNV, BSI, SGS, URS, ICS, International Certifications

The distribution of the population for this study was stratified in the following away.

Table 15.2

Service sector wise distribution of Companies in s up to Year 2019

S.No.	Service sector	Number of companies
1	Financial	150
2	Marketing	100
3	Health	75
4	Education	75
5	Development	35
6	Consultant	40
7	Others	225
Total		700

Estimation of Sample Size:

The required sample size for each domain was estimated using the following expressions:

$$n = \frac{X^2 \times N \times p \times (1 - P)}{(ME^2 \times (N - 1) + (X^2 \times P \times (1 - P)))}$$

Where, n = sample size

X² = chi- square or the specified confidence level at 1 degree of freedom

N= population Size

P= population Proportion

M= Desired margin of error (expressed as a proportion)

Where, X is the factor needed to achieve the 95 percent level of confidence (1.96), p is the prevalence rate for the key indicator (0.5) and ME is the margin of error to be tolerated (0.05) the known population size (N) is 700. Using these formulae the total sample size carried out.. Thus, 384 respondents were calculated by the above formulae. By adding 5% more samples for correction of errors altogether 19 samples were drawn from different groups of respondents from different service sectors. The distribution of sample size is shown in the below table.

Table No. 15.3 The distribution of the sample size.

S. N.	Companies	No. of samples
1	Financial	16
2	Marketing	20
3	Health	20
4	Education	35
5	Development	5
6	Consultant	10
7	Others	35
	Total	141

15.1 Sample size for qualitative data

Initially, around 15 participants of 400 sample size was planned for qualitative study but finally qualitative data was also collected from 15 company's authorities for in-depth interview on the basis of saturation of information in the field. Same 15 companies were observed by researcher himself to collect qualitative information from their own desk.

Purposive sampling technique was used for selection of 15 Service sectors companies. The oldest companies were selected from different service areas for interviews with the expectation that important information could be obtained from subjects involved. The purpose was to get rich information. Therefore the selection criteria are as follows:

1. Three years or more experience
2. The high academic qualification

Table 15.1.1: Therefore, quota sampling was adopted to get sub sample. The table shows the sample of different study areas.

S.N	Service Area	No. of Respondent
1	Financial	3
2	Marketing	2
3	Health	2
4	Education	2
	Development	2
6	Consultant	2
7	Others	2
	Total	15

Source: sample study 2018

Attention was taken while planning and conducting interviews to secure a quiet area for interviews and to ensure that interview process was free of interruptions. Interviews were audio taped after obtaining permission of the students. During the process sometimes though the researcher prompted but always remained nonjudgmental. Same companies were observed.

15.2 Sampling Filters

15.2.1 Selection of study areas and its justification

In the process of sample selection, certain criteria were adopted and utilized to make the research more scientific. All over Nepal is taken as sample. No geographical barriers was taken in the study. But only Service providing companies and having ISO 9001 certificates were taken as population and sample too. Stratified random sampling were used for selection companies from distinguish service areas.

15.3 Types of Data Source

The required information for the study was collected from different sources. Only secondary source of information was insufficient for the study. So, necessary information was collected directly from the respondents. In this study researcher used questionnaire, scheduled interview and observations to collect information from consumers.

15.4 Questionnaire Survey

The questionnaire method was most commonly used by researchers studying this topic. Survey response return rates between 20% – 38% were commonly observed. The survey method rather than case studies or interviews was used for this research so that a significant amount of data could be collected in a timely manner. A criticism of previous studies is that differences in company sizes of the samples studied and industry differences may have been the reason the studies were inconclusive. This survey

identified the industry and businesses size to control for those environmental variables. Using the survey method, the respondents' perceptions were converted to a five point Likert scale for analysis. A weakness of the questionnaire method is that surveys are typically sent to the person responsible for ISO certification so that some success bias might be observed (Carlsson & Carlsson, 1996).

Researcher developed questionnaires and sent it to the respondents. The data collection questionnaire and checklist were first developed in English and translated into Nepali by freelance translator. Close ended questionnaires were designed based on dichotomous and likert-type. Total twelve questions having sub questions were prepared in dichotomous and Likert's scales.

15.5 Use of Checklist for in-depth Interview

Direct interview with key informants at field level was carried out. Semi structured open-ended questions were used for interview. The responses were reported through note taking and some photographs were also taken with permission of respondents. In-depth interview was focused to collect the qualitative information.

15.5.1 Observation

Observation technique was also used to collect the more qualitative information to support and verify the collected data. The researcher had observed behavior of target population while collecting primary data.

15.5.2 Tools of collecting Secondary Data:

Various tools were also used to collect and analyze the secondary data.

a. Document Review:

Different library of University and organizations were visited to collect the related documents. Analyzing policies, acts, rules and regulations related annual reports and verifying the other supported materials. Various publications and reference books, journals, published data from time to time were used for document review.

b. Web Search:

The information related to outside region (other part of Nepal and Global) was studied from internet. Topic related journal articles, periodicals records and reports, electronics/internet search, was carried out.

15.6 Process of Field Study

The study was carried out in two phases

a) In the first phase:

Firstly, to take responses the questionnaire was prepared. The prepared tool was then sent to experts and supervisor and experienced related researchers for comments. Item analysis was performed after trial testing before finalizing the test for main study in the light of experts' comments and trial testing. Further details can be found in discussion about pilot testing and validation of the tests.

b) In the second phase:

The qualitative data were taken from the respondents described in the sub sample.

15.7 Variables in the Study

Variable is the key elements of research. This is taken as the image or perception or concept that can be measured. The study related variables were identified through the literature reviews and discussion with experts to address the objectives of study. Dependent variable is those that will be measured. What the investigator thinks will be affected during the experiment that is taken as dependent variables. Independent variable is what is varied during the experiment; it is what the investigator thinks will affect the dependent variable. Background Variables is an explanatory variable that can affect other (dependent) variables but cannot be affected by them.

The study related variables were identified through the literature reviews and discussion with experts to fulfill the objectives of study. The study tested whether the independent variable led to the dependent variable or not. Demographic variables such as gender, age, educational level of the respondents, experiences, academic qualifications were known as the basic variable in research study. The Requirements of ISO 9001 i.e. Context of organization, leadership, planning, support, operation, performance evaluation and improvement is placed as independent variables and the performance of service companies i.e. operational, personal and market is placed as dependent variables. The setting of the variables was presented in the given figure.

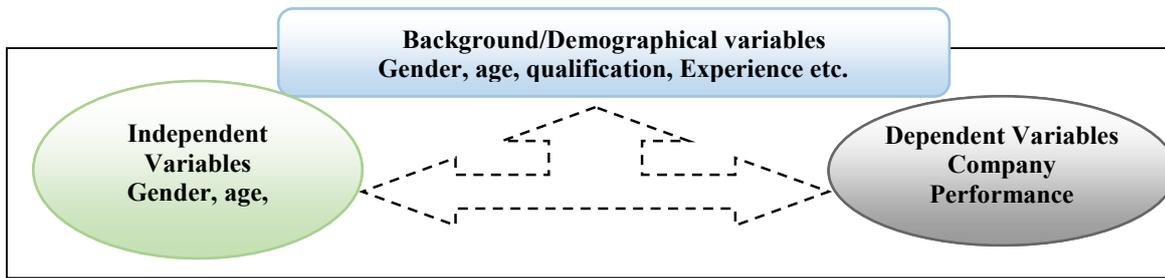


Figure : 4 The setting of variables

Independent Variables

15.8 Research Instruments

Questionnaire and depth interview check list, Observation indicators were used as the research instruments.

15.9 Test of Research Instruments

A. Validity Test

I. Language Translation-back-translation:

The research instruments were translated into Nepali and Nepali version was again translated into English. If the English translation was correct and gave the same meaning as the original, it was considered as valid, if some deviation, the researcher had discussed with the translator and found the cause and improved the instruments before data collection.

II. Panel of experts:

Content validity of the instruments was addressed by identifying items from the literature review and through assessment by both experts and participants in the pilot test. The instruments were sent to a number of experts and supervisor for their comment and recommendations. Based on their suggestions, the instruments were revised.

B. Reliability Test

I. Pilot test:

Reliability test was carried out by using clarity test. The instruments were piloted among the 15 respondents. Similarly, discussion was held among the expert, supervisors and target population. Necessary adjustment of the instruments was made afterwards as required. Some items are omitted, some are edited and some are added on the result of pilot study.

2. Cronbach's Alpha: Cronbach's (alpha) is a coefficient of internal consistency of data. This test was used in this study to test the reliability of collected primary data. The value of Cronbach's Alpha test was done covering the all items and questions of research instruments prepared in dichotomous and Likert's scales which shows the value of Cronbach's Alpha is: 0.836 which is acceptable.

C. Data Processing

After the completion of data collection, filled up questionnaire were edited properly to make them ready for coding. The master table was prepared to incorporate all the information available in the questionnaire and other tables were prepared for further analysis and interpretations of data to make the conclusion. The processing of data was done through SPSS .

15.10 Tools of Data Analysis

Researcher used suitable tools and techniques to make this research more scientific and systematic; data analysis was done with the help of SPSS package in computer. Variables and their association were analyzed through cross tables.

15.11 Statistical Tools

The research results were analyzed by using various statistical tools. Descriptive analysis includes percentage analysis. It was used for each question contained in the questionnaire, mainly to make certain the distribution of respondents under each category to describe the profiles of respondents and profile of companies . The Chi-square analysis is the appropriate tool for data analysis which is used to test the significance association between two variables. The tests were carried out at 5 percent level of significance. The test for mean score analysis, the Analysis of Variance (ANOVA) test procedure is used to compares mean scores of more than two groups. The procedure assumes that the variances of the groups are equal and used to test the significant difference between the means.

16. Significant different between the status of companies before and after ISO 9001 certification on context of Organization

Table no 14.1.1 Paired sample t test between the status of companies before and after ISO 9001 certification on context of Organization

Paired Samples Test									
S. N.	Status of Companies	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Understanding the organization and its context	1.77	.68	.05	1.86	1.68	38.41	219	.000
2	Understanding the needs and expectations of interested parties	1.95	.79	.05	2.06	1.85	36.58	219	.000
3	Determining the scope of the quality management system	1.81	.67	.05	1.90	1.72	40.12	219	.000
4	Quality management system and its processes	1.97	.99	.07	2.10	1.84	29.61	219	.000

Data source- Field Survey, 2018

The significant differences were tested by pair sample t-test using SPSS 20.00 version. The testing results were shown in the above table. From the table it can be stated followings:

- There was significant difference between the status of companies after and before ISO 9001 certification on Understanding the organization and its context having $P (= 0.000) < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Understanding the needs and expectations of interested parties having $P (= 0.000) < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Determining the scope of the quality management system $P (= 0.000) < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Quality management system and its processes having $P (= 0.000) < 0.05$.

14.1.2 Significant different between the status of companies before and after ISO 9001 certification on Leadership

Table no 14.1.2 Paired sample t test between the status of companies before and after ISO 9001 certification on leadership

Paired Samples Test									
S. N.	Status of Companies (Leadership)	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Leadership Commitment	1.91	1.14	.08	2.06	1.76	24.77	219	.000
2	Developing the quality policy communicating	2.18	.78	.05	2.29	2.08	41.26	219	.000
3	Organizational roles, responsibilities and authorities	1.85	1.08	.07	1.99	1.70	25.38	219	.000

Data source- Field Survey, 2018

The significant differences were tested by pair sample t-test using SPSS 20.00 version. The testing results were shown in the above table. From the table it can be stated followings:

- There was significant difference between the status of companies after and before ISO 9001 certification on Leadership Commitment under the leadership heading where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Developing the quality policy communicating under the leadership heading where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on organizational roles, responsibilities and authorities under the leadership heading where $P = 0.000 < 0.05$.

14.1.3 Significant difference between the status of companies before and after ISO 9001 certification on Planning

Table no 14.1.3 Paired sample t test between the status of companies before and after ISO 9001 certification on Planning

Paired Samples Test									
S. N.	Status of Companies (Planning)	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Planning on actions to address risks and opportunities	1.77	1.19	.08	1.93	1.61	22.00	219	.000
2	Quality objectives and planning to achievement	2.27	1.11	.08	2.42	2.12	30.27	219	.000
3	Addressing to planning of changes	2.02	1.35	.09	2.20	1.84	22.15	219	.000

Data source- Field Survey, 2018

The significant test results were shown in the above table. The status of companies on Planning on actions to address risks and opportunities, Quality objectives and planning to achievement and Addressing to planning of changes under the heading 'planning' were tested between after and before ISO 9001 certification.

From the table it can be concluded that followings:

- There was significant difference between the status of companies after and before ISO 9001 certification on Planning on actions to address risks and opportunities where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Quality objectives and planning to achievement where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Addressing to planning of changes $P (= 0.000) < 0.05$.

14.1.4 Significant different between the status of companies before and after ISO 9001 certification on Support

Table no 14.1.4 Paired sample t test between the status of companies before and after ISO 9001 certification on Support

Paired Samples Test									
S. N.	Status of Companies (Support)	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Support Process Resources (Man, Machine Material, Technology, Method) <ul style="list-style-type: none"> • Infrastructure • Environment for the Operation Processes • Monitoring and measuring resources • Organizational knowledge 	1.36	.77	.05	1.47	1.26	26.16	219	.000
2	Competence	1.59	.78	.05	1.69	1.48	30.15	219	.000
3	Awareness	1.77	1.27	.09	1.94	1.60	20.65	219	.000
4	Communication	1.66	1.21	.08	1.82	1.50	20.38	219	.000
5	Documented information and Control required by the standard and operation process	9.15	17.77	1.20	11.52	6.79	7.64	219	.000

Data source- Field Survey, 2018

The status of companies on Support Process Resources (*Man, Machine Material, Technology, Method*) including Infrastructure, Environment for the Operation Processes, Monitoring and measuring resources and Organizational knowledge, Competence, Awareness, Communication and Documented information and Control required by the standard and operation process under the heading 'Support' were tested between after and before ISO 9001 certification.

From the table following results can be concluded:

- There was significant difference between the status of companies after and before ISO 9001 certification on support Process Resources (*Man, Machine Material, Technology, Method*) including Infrastructure, Environment for the Operation Processes, Monitoring and measuring resources and Organizational knowledge having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Competence having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Awareness having $P = 0.000 < 0.05$.

- There was significant difference between the status of companies after and before ISO 9001 certification on Communication having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Documented information and Control required by the standard and operation process having $P = 0.000 < 0.05$.

14.1.5 Significant different between the status of companies before and after ISO 9001 certification on Operation

Table no 14.1.5 Paired sample t test between the status of companies before and after ISO 9001 certification on operation

Paired Samples Test									
S. N.	Status of Companies (Operation)	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Plan, Implement and control of Operational Processes	1.88	1.19	.08	2.04	1.72	23.50	219	.000
2	Establish, implement and maintain a design and development process	.94	7.10	.48	.00	1.88	1.96	219	.051
3	Control of externally provided processes, products and services Ensuring that externally provided processes, products and services conform to requirements	2.40	.94	.06	2.52	2.27	37.69	219	.000
4	Production and service provision	1.85	.76	.05	1.95	1.74	35.98	219	.000
5	Release of the product and services	1.68	1.36	.09	1.86	1.50	18.33	219	.000
6	Control of nonconforming outputs	2.38	.94	.06	2.51	2.26	37.74	219	.000

Data source- Field Survey, 2018

The status of companies on Plan, Implement and control of Operational Processes, Establish, implement and maintain a design and development process, Control of externally provided processes, products and services ensuring that externally provided processes, products and services conform to requirements, Production and service provision, Release of the product and services and Control of nonconforming outputs the heading 'Support' were tested between after and before ISO 9001 certification.

From the table following results can be concluded:

- There was significant difference between the status of companies after and before ISO 9001 certification on Plan, Implement and control of Operational Processes having $P = 0.000 < 0.05$.
- There was no significant difference between the status of companies after and before ISO 9001 certification on Establish, implement and maintain a design and development process $P = 0.051 > 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Control of externally provided processes, products and services ensuring that externally provided processes, products and services conform to requirements having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Production and service provision having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Release of the product and services having $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Control of nonconforming outputs having $P = 0.000 < 0.05$.

14.1.6 Significant different between the status of companies before and after ISO 9001 certification on Performance Evaluation

Table no 14.1.6 Paired sample t test between the status of companies before and after ISO 9001 certification on Performance Evaluation

Paired Samples Test									
S. N.	Status of Companies	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Performance evaluation	2.28	1.04	.07	2.42	2.14	32.53	219	.000
2	Internal audit	2.79	1.33	.09	2.97	2.61	31.17	219	.000
3	Management review	2.56	1.19	.08	2.72	2.40	31.89	219	.000

Data source- Field Survey, 2018

The significant tests of the status of companies before and after ISO 9001 certification was shown in the table. The pair sample t -test was done. Performance evaluation, Internal Audit and Management review under the heading 'Performance Evaluation' were tested between after and before ISO 9001 certification.

From the table it can be concluded:

- There was significant difference between the status of companies after and before ISO 9001 certification on Performance evaluation where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Internal audit where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Management review where $P = 0.000 < 0.05$.

14.1.7 Significant different between the status of companies before and after ISO 9001 certification on Improvement

Table no 14.1.7 Paired sample t test between the status of companies before and after ISO 9001 certification on Improvement.

Paired Samples Test									
S. N.	Status of Companies	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Determine and select opportunities for improvement and implement any necessary actions to meet customer requirements and enhance customer satisfaction	2.90	1.18	.08	3.06	2.74	36.52	219	.000
2	Retain documented information as evidence of the nature of the nonconformities and any subsequent actions taken and results of any corrective action.	2.51	.91	.06	2.63	2.39	40.71	219	.000
3	Determine if there are needs or opportunities that shall be addressed as part of continual improvement Continual improvement	2.46	1.02	.07	2.59	2.32	35.70	219	.000

Data source- Field Survey, 2018

The significant tests of the status of companies on Improvement before and after ISO 9001 certification was shown in the table. The pair sample t -test was done. Determine and select opportunities for improvement and implement any necessary actions to meet customer requirements and enhance customer satisfaction , Retain documented information as evidence of the nature of the nonconformities and any subsequent actions taken and results of any corrective action and Determine if there are needs or opportunities that shall be addressed as part of continual improvement Continual improvement under the heading 'Improvement' were tested between after and before ISO 9001 certification.

From the table it can be concluded:

- There was significant difference between the status of companies after and before ISO 9001 certification on Determine and select opportunities for improvement and implement any necessary actions to meet customer requirements and enhance customer satisfaction where $P = 0.000 < 0.05$.

- There was significant difference between the status of companies after and before ISO 9001 certification on Retain documented information as evidence of the nature of the nonconformities and any subsequent actions taken and results of any corrective action, where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Determine if there are needs or opportunities that shall be addressed as part of continual improvement Continual improvement where $P = 0.000 < 0.05$.

14.1.8 Enabling and disabling factors of the implementation ISO 9001 9001

S. N.	Criteria	Enabling Factors	Disabling factors
1	Context of the organization	<ul style="list-style-type: none"> • Quality Control • Internal Management • Proper implementation of organization chart and chain of command • Recognition • Perkiness • Managed by new team • Safeguards the customers to get good quality products and services • Need and expectation , scope and QMS process • Fruitful 	<ul style="list-style-type: none"> • Lengthy paper works • Lack of education and understanding • Lack of proper awareness • High cost & budget allocation needed • Inflates Organization
2	Leadership	<ul style="list-style-type: none"> • Identifies the loopholes of the management • Better academic qualification • Long experience of teaching and administration • Top management commitment and involvement • Awareness and focus • Very Nice 	<ul style="list-style-type: none"> • Less time • Lack of middle level management commitment /Employees no commitment to implements QMS •
3	Planning	<ul style="list-style-type: none"> • Assigns roles and responsibilities to each department head and individual and provides clarity in the work to be conducted • Directional and communication • Far sightedness • Fulfillment of objectives • Regular meeting and feedback • Integrated Quality management goals and objectives of Business goals / ISO 9001 Budget provision • Determination and commitment • Well planned 	<ul style="list-style-type: none"> • lack of proper planning • QMS implementations associated with extensive changes/ complex paper work
4	Support	<ul style="list-style-type: none"> • Exploitation of proper Resources • Coordination from different sector • Employee support and involvement • Time • Full Support 	<ul style="list-style-type: none"> • Lack of mutual understanding • Employee's resistance to change
5	Operation	<ul style="list-style-type: none"> • Hierarchical Performance • Right planning and proper control • Initiation for implementation • Team work and communication • Involvement • Very effective 	<ul style="list-style-type: none"> • Lack of monitoring • Creates Functional conflicts /Doesn't match with existing work culture
6	Performance evaluation	<ul style="list-style-type: none"> • Client Satisfaction survey, analysis and evaluation • Regular reporting for betterment • Internal / External audits 	<ul style="list-style-type: none"> • Not in regular basis • Mentality of avoiding taking responsibility and audit processing

		<ul style="list-style-type: none"> Result Oriented Very good 	
7	Improvement	<ul style="list-style-type: none"> NC and work out on executing the NC's Planning to settle the weakness Initial training and motivation including working environment Follow-up Lots of Improvement 	<ul style="list-style-type: none"> Concrete improvement is not seen

14.1.9 Roles of ISO 9001 in organizational Effectiveness

14.1.9 Frequency distribution on the Roles of ISO 9001 in organizational Effectiveness

Table no: 14.1.9 Frequency distribution on the Roles of ISO 9001 in organizational Effectiveness

S. N.	Effectiveness Criteria	No Effective		fairly Effective		Moderately Effective		Highly Effective		Very highly Effective	
		N	%	N	%	N	%	N	%	N	%
1	Human affiliation										
	Employee Satisfaction					24	10.9	146	64.4	50	22.7
	Employee commitment					14	6.4	183	83.2	23	10.5
	Open communication					11	5.0	161	73.5	48	21.8
2.	Change/Innovation										
	Risk taking					13	5.0	98	44.5	109	49.5
	Creativity					7	3.2	185	84.1	28	12.7
	Adaptability					111	50.5	109	49.5		
3.	Achievement										
	Increased market					148	67.3	61	27.7	11	5.0
	Increased profit					81	38.2	111	50.5	25	11.4
	Product quality					61	27.7	87	39.5	72	32.7
	Productivity					18	8.2	87	39.5	115	52.3
4.	Stability										
	Efficiency					11	5.0	148	67.3	61	27.7
	Timeliness					34	15.5	48	21.8	138	62.7
	Smooth functioning					37	16.8	59	26.8	124	56.4

Data source- Field Survey, 2018

Frequencies of the opinions of respondents are shown in the above table. The respondents were asked how ISO 9001 helped for the organizational effectiveness. There were four effectiveness criteria: Human affiliation, Change/Innovation, Achievement and Stability including other sub criteria. The responses were calculated in to No Effective, fairly Effective, Moderately Effective, Highly Effective and Very highly Effective scale.

From the table it can be described that 10.9 percent respondents saw moderately effective roles, 64.4 respondents found highly effective roles and 22.7 percent respondents observed very highly effective roles for Employee Satisfaction. Similarly, 6.4 percent respondents saw moderately effective roles, 83.2 respondents found highly effective roles and 10.5 percent respondents observed very highly effective roles for Employee commitment. Likewise, 5 percent respondents saw moderately effective roles, 73.5 respondents found highly effective roles and 21.8 percent respondents observed very highly effective roles for open communication.

Change/Innovation was the second criteria mentioned in above table including Risk taking, Creativity and Adaptability as the sub criteria. The above table showed that 5.0 percent respondents found moderately effective roles, 44.5 percent respondents observed highly effective roles and 49.5 percent respondents saw very highly effective roles for risk taking. Closely, 3.2 percent respondents saw moderately effective roles, 84.1 respondents found highly effective roles and 12.7 percent respondents realized very highly effective roles for creativity. But 50.5 percent respondents noticed moderately effective roles, 49.5 respondents found highly effective roles and no one observed very highly effective roles for adaptability.

The third criteria were achievement having three sub criteria: Increased market, increased profit, Product quality, Productivity. From the table, 67.3 percent respondents saw moderately effective roles, 27.7 respondents found highly effective roles and 5 percent respondents observed very highly effective roles for increased market. Correspondingly, 38.2 percent respondents saw moderately effective roles, 50.5 respondents found highly effective roles and 11.4 percent respondents observed very highly effective roles for Increased Profit. Comparably, 27.7 percent respondents got moderately effective roles, 39.5 respondents found highly effective roles and 32.7 percent respondents saw very highly effective roles for product quality. Likewise, 8.2 percent respondents got moderately effective roles, 39.5 respondents found highly effective roles and 52.3 percent respondents saw very highly effective roles for productivity.

The last criteria listed in the above table were Stability having Efficiency, Timeliness and smooth functioning as sub criteria. From the table, 5.0 percent respondents saw moderately effective roles, 67.3 respondents found highly effective roles and 27.7 percent respondents observed very highly effective roles for Efficiency. Likewise, 15.5 percent respondents saw moderately effective roles, 21.8 respondents found highly effective roles and 62.7 percent respondents observed very highly effective roles for Timeliness. Comparably, 16.8 percent respondents got moderately effective roles, 26.8 respondents found highly effective roles and 54.6 percent respondents saw very highly effective roles for smooth functioning.

From the above discussion the following points can be drafted:

- The majority of the respondents felt highly effective roles of ISO 9001 for Employee satisfaction.
- The majority of the respondents felt highly effective roles of ISO 9001 for Employee commitment.
- The majority of the respondents felt highly effective roles of ISO 9001 for Open communication
- The majority of the respondents felt very highly effective roles of ISO 9001 for risk taking.
- The majority of the respondents felt highly effective roles of ISO 9001 for creativity.
- The majority of the respondents felt moderately effective roles of ISO 9001 for adaptability.
- The majority of the respondents felt moderately effective roles of ISO 9001 for Increased market
- The majority of the respondents felt highly effective roles of ISO 9001 for increased profit.
- The majority of the respondents felt highly effective roles of ISO 9001 for Product quality.
- The majority of the respondents felt very highly effective roles of ISO 9001 for Productivity.
- The majority of the respondents felt highly effective roles of ISO 9001 for Efficiency.
- The majority of the respondents felt very highly effective roles of ISO 9001 for Timeliness.
- The majority of the respondents felt very highly effective roles of ISO 9001 for smooth functioning.

14.1.10 Mean scores of responses on the Roles of ISO 9001 in organizational Effectiveness

Table no: 14.1.10 Mean scores of responses on the Roles of ISO 9001 in organizational Effectiveness

S. N.		Mean	Std. Deviation
1	Human affiliation		
	Employee Satisfaction	4.12	.569
	Employee commitment	4.04	.409
	Open communication	4.17	.491
2.	Change/Innovation		
	Risk taking	4.44	.605
	Creativity	4.10	.388
	Adaptability	3.50	.501
3.	Achievement		
	Increased market	3.38	.580
	Increased profit	3.73	.652
	Product quality	4.05	.778
	Productivity	4.44	.642
4.	Stability		
	Efficiency	4.23	.526
	Timeliness	4.47	.749
	Smooth functioning	4.40	.760

Data source- Field Survey, 2018

Above table shows the mean scores of responses on the roles of ISO 9001 for organizational effectiveness. The mean scores on the roles of ISO 9001 for Employee commitment, Open communication and Employee Satisfaction were 4.12, 4.04 and 4.17

respectively. Uniformly, the mean scores on the roles of ISO 9001 for Risk taking, Creativity and Adaptability were 4.44, 4.10 and 3.50 respectively. By the same token the mean scores on the roles of ISO 9001 for Increased market, increased profit, Product quality and Productivity were 3.38, 3.73, 4.05 and 4.44 respectively. Likewise, the mean scores on the roles of ISO 9001 for Efficiency, Timeliness and Smooth functioning were 4.23, 4.47 and 4.40 respectively.

From the above discussion it can be drawn the conclusion that:

- The roles of ISO 9001 were more for open communication than employee commitment than employee satisfaction.
- The roles of ISO 9001 were more for risk taking than creativity than adaptability.
- The roles of ISO 9001 were more for Productivity than Product quality than increased profit than increased market.
- The roles of ISO 9001 were more for Timeliness than smooth functioning than Efficiency

14.1.11 Significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the education level of respondents

Table no: 14.1.11 significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the education level of respondents

ANOVA						
S .N.		Sum of Squares	df	Mean Square	F	Sig.
1	Human affiliation					
	Employee Satisfaction	.731	3	.244	.749	.524
	Employee commitment	.446	3	.149	.887	.449
	Open communication	.747	3	.249	1.034	.378
2.	Change/Innovation					
	Risk taking	3.550	3	1.183	3.339	.020
	Creativity	.148	3	.049	.324	.808
	Adaptability	.971	3	.324	1.294	.277
3.	Achievement					
	Increased market	.554	3	.185	.546	.652
	Increased profit	.122	3	.041	.095	.963
	Product quality	.084	3	.028	.046	.987
	Productivity	1.546	3	.515	1.255	.291
4.	Stability					
	Efficiency	.420	3	.140	.502	.681
	Timeliness	1.217	3	.406	.720	.541
	Smooth functioning	.522	3	.174	.298	.827

Data source- Field Survey, 2018

This table shows the significant difference among the educational level of respondents and roles of ISO 9001 for organizational effectiveness. Above table showed that there was significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness having $P = 0.021 < 0.05$ for risk taking under change and innovation criteria. But there was no significant difference among the level of education and the roles of ISO 9001 on organizational effectiveness for other criteria : Employee Satisfaction, Employee commitment, Open communication, Creativity, Adaptability, Increased market, Increased profit, Product quality, Productivity, Efficiency, Timeliness and Smooth functioning having $P = 0.524 > 0.05$, $P = 0.449 > 0.05$, $P = 0.37 > 0.05$, $P = 0.808 > 0.05$, $P = 0.277 > 0.05$, $P = 0.652 > 0.05$, $P = 0.963 > 0.05$, $P = 0.987 > 0.05$, $P = 0.291 > 0.05$, $P = 0.681 > 0.05$, $P = 0.541 > 0.05$ and $P = 0.827 > 0.05$ respectively.

From the above discussion it can be concluded that:

- There was significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for risk taking under change and innovation criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Employee Satisfaction under human affiliation criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Open communication under human affiliation criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Employee commitment under human affiliation criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Creativity under change and innovation criteria.

- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Adaptability under change and innovation criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for increased market under Achievement criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for increased profit under Achievement criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for product quality under Achievement criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for productivity under Achievement criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Efficiency under Stability criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for Timeliness under Stability criteria.
- There was no significant difference among the level of education and the roles of ISO 9001 for organizational effectiveness for smooth functioning under Stability criteria.

14.1.12 Significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the working experiences of respondents

Table no: 14.1.12 significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the working experiences of respondents

ANOVA						
S .N.		Sum of Squares	df	Mean Square	F	Sig.
1.	Human affiliation					
	Employee Satisfaction	.576	4	.144	.440	.779
	Employee commitment	.553	4	.138	.823	.512
	Open communication	1.530	4	.383	1.605	.174
2.	Change/Innovation					
	Risk taking	1.075	4	.269	.731	.572
	Creativity	.451	4	.113	.746	.562
	Adaptability	.307	4	.077	.301	.877
3.	Achievement					
	Increased market	.265	4	.066	.194	.941
	Increased profit	.503	4	.126	.291	.883
	Product quality	.388	4	.097	.158	.959
	Productivity	.184	4	.046	.110	.979
4.	Stability					
	Efficiency	.185	4	.046	.164	.956
	Timeliness	1.159	4	.290	.512	.727
	Smooth functioning	.703	4	.176	.300	.878

Data source- Field Survey, 2018

Above table showed that there was no significant difference among the working experiences and the roles of ISO 9001 on organizational effectiveness for other criteria : Employee Satisfaction, Employee commitment , Open communication, Risk taking, Creativity , Adaptability, Increased market, Increased profit , Product quality, Productivity, Efficiency, Timeliness and Smooth functioning having $P = 0.779 > 0.05$, $P = 0.512 > 0.05$, $P = 0.174 > 0.05$, $P = 0.572 > 0.05$, $P = 0.562 > 0.05$, $P = 0.877 > 0.05$, $P = 0.941 > 0.05$, $P = 0.883 > 0.05$, $P = 0.959 > 0.05$, $P = 0.979 > 0.05$, $P = 0.956 > 0.05$, $P = 0.727 > 0.05$ and $P = 0.878 > 0.05$ respectively.

From the above discussion, It can be drawn the conclusion that

- There was significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Employee Satisfaction under human affiliation criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Open communication under human affiliation criteria.

- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Employee commitment under human affiliation criteria.
- There was significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for risk taking under change and innovation criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Creativity under change and innovation criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Adaptability under change and innovation criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for increased market under Achievement criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for increased profit under Achievement criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for product quality under Achievement criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for productivity under Achievement criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Efficiency under Stability criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for Timeliness under Stability criteria.
- There was no significant difference among the working experiences and the roles of ISO 9001 for organizational effectiveness for smooth functioning under Stability criteria.

14.1.13 Significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the working departments of respondents

Table no 14.1.13 significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the working departments of respondents

ANOVA						
S .N.		Sum of Squares	df	Mean Square	F	Sig.
1.	Human affiliation					
	Employee Satisfaction	.445	5	.089	.270	.929
	Employee commitment	.347	5	.069	.409	.842
	Open communication	1.791	5	.358	1.504	.190
2.	Change/Innovation					
	Risk taking	.802	5	.160	.433	.825
	Creativity	.396	5	.079	.520	.761
	Adaptability	.535	5	.107	.420	.834
3.	Achievement					
	Increased market	1.189	5	.238	.702	.622
	Increased profit	1.806	5	.361	.846	.519
	Product quality	1.824	5	.365	.598	.702
	Productivity	.200	5	.040	.095	.993
4.	Stability					
	Efficiency	.101	5	.020	.071	.996
	Timeliness	1.144	5	.229	.402	.847
	Smooth functioning	3.237	5	.647	1.123	.349

Data source- Field Survey, 2018

Above table showed that there was no significant difference among the working departments and the roles of ISO 9001 on organizational effectiveness for other criteria : Employee Satisfaction, Employee commitment , Open communication, Risk taking, Creativity , Adaptability, Increased market, Increased profit , Product quality, Productivity, Efficiency, Timeliness and Smooth functioning having $P = 0.929 > 0.05$, $P = 0.842 > 0.05$, $P = 0.190 > 0.05$, $P = 0.825 > 0.05$, $P = 0.761 > 0.05$, $P = 0.834 > 0.05$, $P = 0.622 > 0.05$, $P = 0.519 > 0.05$, $P = 0.702 > 0.05$, $P = 0.993 > 0.05$, $P = 0.996 > 0.05$, $P = 0.847 > 0.05$ and $P = 0.349 > 0.05$ respectively.

From the discussion it can be finalized that:

- There was significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Employee Satisfaction under human affiliation criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Open communication under human affiliation criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Employee commitment under human affiliation criteria.
- There was significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for risk taking under change and innovation criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Creativity under change and innovation criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Adaptability under change and innovation criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for increased market under Achievement criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for increased profit under Achievement criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for product quality under Achievement criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for productivity under Achievement criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Efficiency under Stability criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for Timeliness under Stability criteria.
- There was no significant difference among the working departments and the roles of ISO 9001 for organizational effectiveness for smooth functioning under Stability criteria.

14.1.14 Significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the service sector of companies

Table no: 14.1.14 significant differences of responses on the Roles of ISO 9001 in organizational Effectiveness among the among the service sector of companies

ANOVA						
S .N.		Sum of Squares	df	Mean Square	F	Sig.
1	Human affiliation					
	Employee Satisfaction	2.169	6	.362	1.120	.352
	Employee commitment	1.491	6	.248	1.506	.178
	Open communication	1.137	6	.189	.782	.585
2.	Change/Innovation					
	Risk taking	1.926	6	.321	.875	.514
	Creativity	.779	6	.130	.858	.527
	Adaptability	2.004	6	.334	1.342	.240
3.	Achievement					
	Increased market	3.621	6	.604	1.835	.094
	Increased profit	.625	6	.104	.240	.963
	Product quality	1.159	6	.193	.314	.930
	Productivity	2.150	6	.358	.866	.520
4.	Stability					
	Efficiency	1.031	6	.172	.614	.719
	Timeliness	1.376	6	.229	.402	.877
	Smooth functioning	2.474	6	.412	.708	.644

Data source- Field Survey, 2018

Above table showed that there was no significant difference among the service sector and the roles of ISO 9001 on organizational effectiveness for other criteria : Employee Satisfaction, Employee commitment , Open communication, Risk taking, Creativity , Adaptability, Increased market, Increased profit , Product quality, Productivity, Efficiency, Timeliness and Smooth

functioning having $P = 0.352 > 0.05$, $P = 0.178 > 0.05$, $P = 0.585 > 0.05$, $P = 0.514 > 0.05$, $P = 0.527 > 0.05$, $P = 0.240 > 0.05$, $P = 0.094 > 0.05$, $P = 0.963 > 0.05$, $P = 0.930 > 0.05$, $P = 0.520 > 0.05$, $P = 0.719 > 0.05$, $P = 0.877 > 0.05$ and $P = 0.644 > 0.05$ respectively.

17. Summary

The following objectives were addressed in the study

- To assess the performance of company before certification
- To determine the performance of ISO 9001 certification on the performance of the company: Operation, personnel and market in Nepal.
- To identify the enabling and disabling factors of ISO certification
- To analyze the effectiveness of ISO 9001 in the service sector.

To achieve the above mentioned objectives, a questionnaire was developed based on the above research objectives. A quantitative data was collected from field survey and interviews for non-teaching staffs were also used for data collection. Quantitative data was analyzed using a variety of statistical tools like mean, standard deviation, t-test, ANOVAs and other descriptive analysis. Similarly, qualitative data from interviews was analyzed using qualitative data analysis techniques and results from both were discussed in previous chapter. The use of both qualitative and quantitative data was aimed to get greater insight of the problem and capitalize the strength of both types of approaches in research. This chapter discusses the findings and conclusions in forthcoming sections.

18. Qualitative Analysis

16.1.1 Analysis of Interview

There were 15 interviews taken for the study. Semi structured interviews were taken with nineteen questions for Management Representative/top management of the organization. The result of the interview were discussed in below.

16.1.2 Significant different between the status of companies before and after ISO 9001 certification on Performance Evaluation

Table no 16.1.2 Paired sample t test between the status of companies before and after ISO 9001 certification on Performance Evaluation.

Paired Samples Test									
S. N.	Status of Companies	Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
1	Performance evaluation	2.28	1.04	.07	2.42	2.14	32.53	219	.000
2	Internal audit	2.79	1.33	.09	2.97	2.61	31.17	219	.000
3	Management review	2.56	1.19	.08	2.72	2.40	31.89	219	.000

Data source- Field Survey, 2018

The significant tests of the status of companies before and after ISO 9001 certification was shown in the table. The pair sample t-test was done. Performance evaluation, Internal Audit and Management review under the heading 'Performance Evaluation' were tested between after and before ISO 9001 certification. From the table it can be concluded:

- There was significant difference between the status of companies after and before ISO 9001 certification on Performance evaluation where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Internal audit where $P = 0.000 < 0.05$.
- There was significant difference between the status of companies after and before ISO 9001 certification on Management review where $P = 0.000 < 0.05$.

19. Conclusion

This study assessed the status of the companies before ISO 9001 certification and after ISO 9001 certification. It also carried out the significant change between after and before ISO 9001 certification. The conclusion of the study can be summarized in this way.

Firstly, the study tried to assess the status of the service sector companies in Nepal. The majority of the companies had moderately effective status on the Context of organizations and its sub standards determined by ISO 9001. Similarly, the companies had moderately effective status on Leadership and Process and its sub standards before ISO certification. But the companies had fairly effective status on planning and operation and its substandard before ISO 9001 certification. The companies before ISO certification had not effective status on Management Review. Likewise, the status of companies before ISO 9001 certification on performance Evaluation and Continual Improvement was seemed fairly effective

Secondly, the status of companies after ISO 9001 certification also measured on the study. The study found that the status of companies after ISO 9001 certification was very highly effective under 'Context of Organization', 'Planning', 'Support (Process & resources: *Man , Machine, Method, material & Technology*)', 'Operation', 'Performance Evaluation' and 'Continual Improvement'. But the status of companies after ISO certification was highly effective under 'leadership and its sub-standards'. Thirdly, the mean scores were calculated more on the status of effectiveness of the service sectors companies in Nepal after ISO 9001 certification than before certification.

Fourthly, There was no significant difference between the status of companies after and before ISO 9001 certification on establish, implement and maintain a design and development process but there was significant difference between the status of companies after and before ISO 9001 certification on all others standards.

In next, Teamwork, Publicity, Brand promotion, Accountability, Customer satisfaction, Documented information, Document management system, Internal Audit, Regular review Meeting, Complain handling and management, Effective customer and internal communication, Internal control system, Input – process - output analysis, Proper defining of roles and responsibilities, a measurable quality objectives, risk based thinking assessment and treatment and Plan- Do - Check-Act cycle etc. were taken as the enabling factors in the implementation of ISO. Similarly, Intensive record keeping, Documentation, Motivation, Leadership absence to provide resources, Lack of documented information, Lack of Competent people, Unfamiliar words and standards, Lack of trainings and Lack of knowledge and benefits of ISO 9001 etc. were taken as disabling factors on implementation of ISO.

The study concluded that very highly effective roles of ISO were assessed for employee satisfaction, for employee commitment, for open communication, for risk taking, for productivity, for increased profit, for efficiency, for timeliness, for smooth functioning. Similarly, the highly effective roles of ISO 9001 were assed for creativity and product quality. But moderately effective roles of ISO 9001 were assessed for adaptability and for increased market.

20. Recommendations

Important recommendation can be made on the basis of findings of this study for different stakeholders. These recommendations are follows.

1. The status of service sector companies was more effective after ISO 9001 certification than before ISO 9001 certification. So, to achieve highly effectiveness on the status of companies' ISO 9001 certification may be the main process.
2. The status of companies on leadership was assed just in highly effective criteria it should be better for enhancing the status who had already certified.
3. The costs were felt more expensive so Certification Body (CB) should be aware on this matter.
4. Some of the disabling factors were listed in the study so for effective implementation of ISO 9001 the disabling factors should be omitted.

21. Scope for further Research

1. It will be of particular interest if this study is replicated on a different sample particularly in other sector of companies i.e. manufactures, trading, hospital and health care, construction, and food etc. Thus prospective study may investigate, verify and generalize the result of the study.
2. Similar study can also be conducted for other ISO 9001 standards of qualities.
3. Further study can be useful to test these hypothesis generated through qualitative data in this study and see if these variable are really significant in determining same factors.
4. Further study can be done in large sample size to verify the result.
5. Further research can be useful by identifying others demographic variables like as: gender, location, trainings, level of leadership, experiences etc.

22. Bibliography

- Ali, F., Zhou, Y., Hussian, K., Kumat, P., Neethianhnanthan, N., & Ragavan, A. (2016). Quality Assurance in Education. *Quality Assurance in Education*, 24(1), 7-94.
- Alolayan, S. (2014). *An assessment of quality management system indicators for the ISO 9001: 2008 certified work organizations in Kuwait*. School of Mechanical and Manufacturing Engineering. Dublin City University.
- Basir, S. A., Davies, J., & Rudder, A. (2011). The elements of organizational culture which influence the maintenance of ISO 9001: A theoretical framework . *African Journal of Business Management*, 5(15), 6028-6035.
- Carlsson, M., & Carlsson, D. (1996). Experiences of implementing ISO 9000 in Swedish industry. *International Journal of Quality & Reliability Management*, 13(7), 36-47.
- Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (2nd ed.). California: Sage Publications.
- Creswell, J. W., & Plano Clark, V. L. (2011). *Designing and conducting mixed methods research* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Crosby, L., Evans, K., & Cowles, D. (2006). Relationship quality in services selling: an interpersonal influence perspective . *Journal of Marketing*, 54, 68-81.
- Denzin, N. K., & Lincoln, Y. S. (2005). Introduction. In N. K. Denzin, & Y. S. Lincoln (Eds.), *SAGE handbook of qualitative research* (3rd ed., pp. 1-29). Thousand Oaks, CA: Sage.
- Feigenbaum, A. (1991). *Total Quality Control* (3rd ed.). McGraw-Hill, Inc.
- Fielt, E. (2011). *Business Service Management* (Vol. 3 : understanding business models). Australia: Queensland University of Technology.
- Fotaki, M. (2015). Why and how is compassion necessary to provide good quality health care ? *International Journal of Health Policy Management*, 4(44), 199-201.
- Gronroos, C. A. (2011). Service Model and its Marketing Implications. *European Journal of Marketing*, 18(4), 36-44.
- Guba, E. G. (1990). The alternative paradigm dialog . *The Paradigm dialog*, 17-30.
- Hemmat, M., Amoo, M., & Darkhaneh, M. A. (2013). THE QUALITY OF SERVICE AND ITS IMPORTANCE IN SERVICE ORGANIZATIONS . *Arabian Journal of Business and Management Review (OMAN Chapter)*, 3(3).
- Johnson, R. B., & Onwuegbuzie, A. J. (2004). Mixed methods research: A research paradigm whose time has come. *Educational Researcher*, 33, 14-26.
- Karapetrovic, S., & Willborn, W. (1998). Connecting internal management systems in service organizations. *Managing Service Quality*, 8(4), 256-271.
- Knowles, G. (2011). *Quality management*. Denmark: Ventus Publishing Aps.
- Kotler, P., & Gary, A. (2011). *Marketing Management*. Prentice Hall.
- Lee, P., To, W., & Yu, B. (2009). The implementation and performance outcomes of ISO 9000 in service organizations: an empirical taxonomy. *International Journal of Quality and Reliability Management*, 6(7), 646-662.
- Lee, P., To, W., & Yu, B. (2009). The implementation and performance outcomes of ISO 9000 in service organizations: an empirical taxonomy . *International Journal of Quality and Reliability Management*, 26(7), 646- 662.
- Lehtinen, J. (1983). *Customer-Oriented Service Firm*. Espoo Finland: Weilin and Goos.
- Morgan, D. (2007). Paradigms Lost and Pragmatism Regained: Methodological Implications of Combining Qualitative and Quantitative Methods. *Journal of Mixed Methods Research*, 1(1), 48-76.
- Mustaphaa, I., Jusoha, A., & Nora, K. M. (2015). A Review on Quality Management Systems Maintenance Framework based on Process Based Management, Knowledge Quality and Knowledge Self-efficacy . *Jurnal Teknologi (Sciences & Engineering)*, 72(4), 7 -12.
- Prajogo, D. I., & Cooper, B. K. (2008). The effect of people-related TQM practices on job satisfaction: a hierarchical model . *Production Planning and Control*, 21(1), 26-35.
- Singhal, D., & Singhal, K. R. (2008). *Implementing ISO 9001: quality management system A reference guide*. New delhi: PHI Learning Private Limited.
- To, W., Lee, P., & Yu, B. (2011). ISO 9001:2000 implementation in the public sector: a survey in Macao SAR, the People's Republic of China", , Vol. 23 No. 1, pp. 59-72. *The TQM Journal*, 23(1), 59-72.
- Tricker, R. (2016). *ISO 9001:2015 in Brief*. New York : Routledge.
- Trochim, W. M., & Land, D. A. (1982). *Designing designs for research* (Vol. 1). The Researcher.
- Wahid, R. A. (2010). *Beyond certification: the maintenance of ISO 9001 in Malaysian Service Organization* . Doctorate Dissertation, The University of Waikato.