The Availability of ISO 9001-2015 requirements

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ABSTRACT

This research attempt to study ISO 9001-2015 requirements availability in CIHAN University campus, the research problem interpreting by the main question deals with the requirements of ISO 9001-2015 which are represented by ten clauses, three of them are key clauses (scope, normative references, terms and definitions). The research use a questionnaire as a main tool for gathering data, a sample of nine department's heads asked about the availability of seven clauses (context of the organization, leadership, planning, support, operation, performance evaluation and improvement), according to three options (applied and documented, applied and not documented, not applied and not documented).

The result show that the highest percentage coverage gained by second clause (5. Leadership), and the lower percentage were for third one (6. Planning), while the application and documentation of clauses 1, 8 (context of the organization) and (operation) gained the upper rate of agreements between the department's heads ((77%) for both). The researcher suggests to overlaps difficulties and fills the gaps to make all clauses available, so it's necessary to make some preparations dealings with deploying the philosophy of ISO, so the nine departments' heads invited to put their concerns at planning activities by define actions to manage risks and address opportunities in the internal and external environment.

Introduction

This research deals with the most famous quality management system ISO 9001-2015, which represent the main quality assurance and quality improvement tool, depending on well-organized and comprehensive requirements with HLS (High Level Structure).

The researchers attempt to discover the availabilities of mandatory requirements in educational services organization represented by CIHAN University -Erbil.

Section one views research methodology including research problem and its importance, the objectives and hypothesis, research method and research society and sample, second section discover the theoretical side of ISO 9001-2015, which is contain historical background, meaning, definitions and philosophy, then the research discuss the principles that ISO depends on, then the framework and the new version, and its basic requirements, also the researcher indicate the benefits and advantages of consistency with ISO 9001-2016 and the implementation steps.

The third section deals with the practical aspects of our research, which is contain the results reached to, using two types of analysis macro and micro Analysis, at the last the researcher introduces some conclusions and suggestions.

1. Research Methodology

1.1: Research Problem: represent by main question which is " what is the level of ISO 9001-2015 requirements availability in **CIHAN University**?", this question divided into seven sub questions which are:

1. Are the clause **context of the organization** was applied and documented at **CIHAN University**?
2. What the availability of the clause **leadership** at **CIHAN University**?
3. How much the University fit with the clause **planning**?
4. Are the clause **support** was applied and documented at **CIHAN University**?
5. What the availability of the clause **operation** at **CIHAN University**?
6. How much the University fit with the clause **performance evaluation**?
7. What the availability of the clause **improvement** at **CIHAN University**?

1.2: Research Importance: the value of current research related with the importance of fitting with well-known international specification, if any organization implements the requirements of this specification (especially service provider); they pass many problems dealing with quality and productivity gaining a required reputation needed in competitive world.

The important of convincing the heads of **CIHAN University colleges and department** to facilitate and commitment to ISO deals with an internal climate encouraging, team work, continual improvement of quality of work with high level of service quality, utilization of quality assurance concepts, tools and techniques, work towards Total Quality Management approach and both international and national accreditation.

1.3: Research Objectives: the main objective of our research is estimating the real level of applying ISO 9001-2015 requirements at the studied university and;

1. Reach to true attitudes of University's decisions makers against ISO.
2. Getting information about top management commitment level and employees readiness for ISO program.
3. Indicate the total level of documented and applying of each clauses.

1.4: Research Hypothesis: to reach to those objectives the researcher test seven hypotheses, which they are;

1. There was an application and documentation of the clause **context of the organization** at **CIHAN University**.
2. The clause **leadership** was applied and documented at **CIHAN University**.
3. There was an application and documentation of the clause **planning** at **CIHAN University**.
4. The clause **support** was applied and documented at **CIHAN University**.
5. There was an application and documentation of the clause **operation** at **CIHAN University**.
6. The clause **performance evaluation** was applied and documented at **CIHAN University**.
7. There was an application and documentation of the clause **improvement** at **CIHAN University**.

1.5: Research Method: the main method of our research was the questionnaire, which design by using some references (http://www.iso9001consultant.com), (http://www.BSI.com), (2016 20000Academy), these references considered as the key referee of all ISO specifications versions, they distribute ISO 9001-2015 requirements for ten clauses (three for key and seven mandatory clauses), the questionnaire design with seven sections, each for the one deals with the status of the clause (Supplement:1).

1.6: Research Society: Cihan University is a private English-speaking institution, one of the first and finest universities established in Erbil, Kurdistan, Iraq. It was approved by the Kurdish Ministry of Higher Education and Scientific Research in 2006 and operated for the first time in 2007.

Spread over 127.000 m2, the university campus consists of newly-built, modern, fully-equipped and spacious complex of buildings which hosts its academic departments, administration offices and student service facilities, Cihan University offers undergraduate degrees in Law, Business Administration, Accounting & IT, Communication & Engineering, Computer Science, International Relations, Architecture Engineering, Biology, Graphic Design and English.

University Plan: Cihan University set strategic plans in the fields of education and scientific research to serve the society and to develop it as well as develop the performance, the main mission of Cihan University in education aims at spreading the informational awareness in Kurdistan and Iraq and providing the youths with everything concerning knowledge and learning to face the contemporary huge development in age of technology, the plans and programs include (in brief):

1. Applying the concerned regulations and rules.
2. Activating the system of academic orientation.
3. Following up the graduates by a specialized section, namely (graduates affairs section).
4. Launching new specialized departments due to the needs of the society and the official directorates.
5. Activating the system of the continuous teaching.
6. Encouraging the students to take the responsibility of their study and to continue their learning.

University Study System: Cihan University adopts the two semesters per year system. Each semester is sixteen weeks one for the mid-term exams. The language of teaching in the university is English except the departments of Law and the department of International Relations where Arabic is the language of teaching. The university offers an intensive course in English through a well-developed teaching method.

Quality Assurance of Teaching: The university includes within its body the Division of quality assurance which aims to follow up the implementation of the activities of the university to ensure the quality of education in the university, and thus access to the ultimate goal of preparing graduate who are highly qualified, and be able to keep pace with developments, which makes the graduate desirable by employers in the labor market, there is a committee to ensure the quality of education at the university headed by University president and the membership of the head of the department of Quality Assurance and representatives from the Departments of those who do not have administrative positions and they are entitled to follow and implement a quality education program in their respective departments.

University Buildings and Infrastructure: The University occupies a space of 127800 square meter and includes buildings, gardens, green courts, dormitories, and gymnasium to form one big university unit, the campus includes:

1. A special four-floor building for the presidency of the university on a space of 500m2
2. Nine buildings of (1800 m2 to 2400 m2) which include: (86 class halls (42 m2) and (63 m2) which have a capacity of (63, 56, and 42) students, 20 specialized laboratories, a simulating court for legal applications, two big conference halls (VIP halls) of (156 and 110 capacity) equipped with audio-visual technologies, a big hall for seminars and lectures, the Library, the internet unit.
3. Two buildings of 800m2 for students clubs and a cafeteria of 250 m2, coffee shop of 200 m2, sport Facilities: (Football stadium (of 2500 fans capacity), track Field, covered sport, hall for basketball, handball, the swimming pool (capacity of 400 fans), hall for electronic games, parking area for the teaching staff, storage halls, administrative and service units, dormitory for girls, roman theater, gardens and green spaces

http://www.cihanuniversity.edu.iq/cihan/en/page.php?id=1367732953#.VxiEh7dJldg

1.7: Research Sample: the researchers use a restrictive sample represents the University departments heads for scientific departments, they distribute twelve lists, after four weeks they gathers the lists, after reviewing that lists, there are nine valid list, table 1 view the departments that included in research sample.

Table 1: Research Sample

No.	Faculties	Departments	Description
1	Administration and Financial sciences	• Accounting • Business Administration • Financial and Banking Sciences • Health Administration	Qualifying human resources in the fields of administrative and financial sciences. The college in collaboration with international universities plans to improve its programs. It contains the best lecturers in the specialties concerned. The college aims at providing its students with the necessary knowledge and skills in the fields of study and connecting the theoretical study with the real life of work. Doing so, the college will meet the needs of the labor market. The teaching methods used are of high technical quality to achieve the vision and the mission of the college.
2	Arts and Letters	• English • Translation • Interior Design • Media	The Faculty concerns qualifying the human resources in the fields of language, media, interior design, and translation. The college in collaboration with international universities plans to improve its programs. The college contains the best lecturers in the specialties concerned. The college aims at providing its students with the necessary knowledge and skills in the fields of study and connecting the theoretical study with the real life of work in the courts. Doing so, the college will meet the needs of the labor market. The teaching methods used are of high technical quality to achieve the vision and the mission of the college.
3	Engineering	• Architectural Engineering • Communication and Computer Engineering • Civil Engineering	The Faculty concerns qualifying the human resources in the fields of communication, civil, and architectural engineering. The college in collaboration with international universities plans to improve its programs. The college includes the best lecturers in the specialties concerned and the best laboratories, workshops, and drawing halls. The college aims at providing its students with the necessary knowledge and skills in the fields of study and focusing on the practical side. Doing so, the college will meet the needs of the labor market. The teaching methods used are of high technical quality to achieve the vision and the mission of the college.
4	Law and International Relations	• Law • international Relations and Diplomacy	The college concerns qualifying the human resources in the fields of law and international relations. The college in collaboration with international universities plans to improve its programs. The college contains the best lecturers in the specialties concerned. The college aims at providing its students with the necessary knowledge and skills in the fields of study and connecting the theoretical study with the real life of work in the courts. Doing so, the college will meet the needs of the labor market. The teaching methods used are of high technical quality to achieve the vision and the mission of the college.
5	Science	• Computer Science (IT) • Biology	The Faculty concerns qualifying the human resources in the fields of IT and biology. The college in collaboration with international universities plans to improve its programs. The college includes the best lecturers in the specialties concerned and the best laboratories. The college aims at providing its students with the necessary knowledge and skills in the fields of study and focusing on the practical side. Doing so, the college will meet the needs of the labor market. The teaching methods used are of high technical quality to achieve the vision and the mission of the college.

Source: prepared by the researchers depending on: (http:/ /www.cihanuniversity.edu .iq /cihan/en/faculty.php?ref=1367734204#.VxiD47dJlldg)

2: Theoretical Aspect: ISO 9001-2015; Meaning and Implementing

2.1: Historical Background: ISO first published its ISO 9001 standard in 1987 and later published an updated version in 1994. In an effort to address the changing needs of

its users, ISO again updated its standard in 2000 and 2008 and again in 2015. The newest version is known as ISO 9001 2015 (http://www.praxiom.com/iso-9001-standard.htm)

Formalized quality assurance originally came from the Defense Industry's need for standards. For example, to supply the Ministry of Defense (MoD) a company had to write up its procedure for making its product, have the procedure inspected by the Ministry of defense and then ensure that its workers followed the published procedures.

The idea of quality assurance spread beyond the military and in 1966, the UK Government led the first national campaign for quality and reliability with the slogan "Quality is everyone's business." However, by this time, suppliers were being assessed by any number of their customers and it was widely recognized that such duplication of effort was a chronic waste of time and money. Progress was finally made in 1969, when a UK Government committee report on the subject recommended that suppliers' methods should be assessed against a generic standard of quality assurance.

In 1971, the British Standards Institute (BSI) published the first UK standard for quality assurance (BS 9000), which was developed for the electronics industry. Then, in 1974, the BSI published BS 5179; Guidelines for Quality Assurance. This led to a shift in the burden of inspection from the customer to the supplier, as quality assurance could be guaranteed by the supplier to the customer through third-party inspection (Thomas, 2001: 67)

Through the 1970's, the BSI organized meetings with industry to set a common standard, which culminated in the BS 5750 standard in 1979. Key industry bodies agreed to drop their own standards and use BS 5750 instead. The purpose of BS5750 was to provide a common contractual document, demonstrating that industrial production was controlled (Table 2).

Table 2: ISO 9000 versions

No.	Versions	Structure	Detailed	Elements
1	The initial 1987 version (ISO 9000:1987)	Same structure as the UK Standard BS 5750	Three 'models' for quality management systems, the selection of which was based on the scope of activities of the organization. The language of this first version of the Standard was influenced by existing US and other Defense Military Standards (accessible to manufacturing)	Twenty elements or requirements, tended to be overly placed on conformity with procedures rather than the overall process of management; which was the original intent.
2	1994 version (ISO 9000:1994)	attempt to break from the practices which had somewhat clouded the use of the 1987 standard	It also emphasized quality assurance via preventive actions and continued to require evidence of compliance with documented procedures	Tended to implement its requirements by creating shelf-loads of procedure manuals and become burdened with ISO bureaucracy. Adapting and improving processes could be particularly difficult in such an environment.
3	The 2000 version of the standard	Sought to make a radical change in	Making it clear that the essential goals of the standard - which had always been about 'a documented system' not a 'system of documents', the goal was	A new set of eight core quality management principles, designed to act as a common foundation for all standards relating to quality

No.	Versions	Structure	Detailed	Elements
	(ISO 9001:2000)	thinking. It placed the concept of process management	always to have management system effectiveness via process performance measures, makes this more visible and so reduced the emphasis on having documented procedures if clear evidence could be presented to show that the process was working well. Expectations of continual process improvement and tracking customer satisfaction were also made explicit in this revision	management, were also introduced
4	The fourth edition of the standard (ISO 9001:2008) arrived on November 14th 2008.	This revision contains minor amendments only.	The aim of this revision is to clarify existing requirements and to improve consistency of approach with other management standards, like ISO 14001:2015.	Five clauses with three key clauses
5	During September 2015, a revised version - ISO 9001:2015	Was launched to bring the standard up to date, reflecting latest quality management good practice. Whilst some requirements have been tightened	The standard is now far less prescriptive and has even greater integration with other ISO management standard thanks to a common high-level structure.	Seven clauses with three key clauses

Reference: http://www.british-assessment.co.uk/services/iso-certification/iso-9001-certification/iso-9001-history

Nationally, and throughout the World, standards and standardization processes are managed by a large number of examine facts, data, technical information, outputs, outcomes, lessons learned, and other reports to develop a consensus regarding best practices for a wide variety of industries, systems, processes, goods, services, competencies, and functions.

As advancements occur the improvements process via a 3 to 5 year cycle of continuous revisions made to their preexisting Standards, and subsequently transition periods whereby businesses update their policies, recommendations, and procedures, conducting audits, and the renew their business certifications.

Historically, in 1918 the U.S. American National Standards Institute (ANSI) was created (NOT to develop standards), but rather, to Oversee and Accredit, and coordinate U.S. Standards with International Standards via it's members (now comprised of government agencies, organizations, corporations, academic and international bodies, and individuals, currently representing the interests of ~125,000 companies and 3.5 million professionals). In 1974 globalization activities lead to the U.S. Co-founding the International Organization for Standardization (ISO) (Roy, 2005: 213).

The ISO9001 standard impacts many businesses and trade practices through providing equipment, products, services, and is estimated to directly or indirectly impact nearly all protected resources in some way including: Agriculture and Food, Defense Industrial Base, Energy, Public Health and Healthcare, Financial Services, Drinking Water and Water Treatment Systems, Chemical Industry, Commercial Facilities, Dams, Emergency Services, Nuclear Reactors, Materials, and Waste, Information Technology, Communications, Postal and Shipping, Transportation Systems, Government Facilities. ISO9001 certified businesses are also involved in initiatives for sustainable development, accessibility, climate change, and a wide range of goods and services.

2.2: **Meaning, Definition and philosophy:** ISO 9001 is an international standard that gives requirements for an organization's quality management system (QMS). It is part of a family of standards published by the International Organization for Standardization (ISO) often referred to collectively as the "ISO 9000 series" or "ISO 9000 family".

For this reason, you may sometimes hear your suppliers refer to being "ISO 9000 certified", or having an "ISO 9000-compliant QMS". This will normally mean that they are claiming to have a QMS meeting the requirements of ISO 9001, the only standard in the ISO 9000 family that can be used for the purpose of conformity assessment. It is important to understand, however, that ISO is the body that develops and publishes the standard – ISO does not "certify" organizations, as will be explained later in this text.

The scope of ISO 9001 certified organization will have implemented Quality Management System requirements for all areas of the business, including (Facilities, People, Training, Services, and Equipment), this International Standard specifies requirements for a quality management system where an organization: (Thomas, 2001: 10)

a) Needs to demonstrate its ability to consistently provide product that meets customer and applicable statutory and regulatory requirements, and

b) Aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable statutory and regulatory requirements. The term (product) only applies to: (Roy, 2005: 217)

a) Product intended for, or required by, a customer.
b) Any intended output resulting from the product realization processes.

The Statutory and regulatory requirements can be expressed as legal requirements.

The objective of ISO 9001 is to provide a set of requirements that, if effectively implemented, will provide you with confidence that your supplier can consistently provide goods and services that: (http://www.iso.org/iso/pub100304.pdf)

• Meet your needs and expectations
• Comply with applicable regulations

The requirements cover a wide range of topics, including your supplier's top management commitment to quality, its customer focus, adequacy of its resources, employee competence, process management (for production, service delivery and relevant administrative and support

processes), quality planning, product design, review of incoming orders, purchasing, monitoring and measurement of its processes and products, calibration of measuring equipment, processes to resolve customer complaints, corrective/ preventive actions and a requirement to drive continual improvement of the QMS.

There is a requirement for your supplier to monitor customer perceptions about the quality of the goods and services it provides. ISO 9001 does not specify requirements for the goods or services you are purchasing. That is up to you to define by making clear your own needs and expectations for the product. You might, for example, refer to product specifications, drawings, national or international product standards, supplier's catalogues, or other documents as appropriate (http://advisera.com/9001academy/blog/2016/02/23).

The philosophy of ISO 9001 management system focuses on two important elements: (Mullen, 2012: 3)

1. The organizations customers:
2. Top management.

Customers are the reason the company or organizations exists. It is vital to understand what they need and make improvements based on customer feedback. Since we are all customers and have been frustrated when something doesn't go right to the point of giving the company a piece of our minds at least a time or two in our lives, it is easy to see why ISO 9001 would feel customers are a vital part of the total quality management philosophy.

2.3: ISO 9001-2015 principles: ISO 9001 is based upon eight quality principles, which are defined in: (http:// uscsrh.ideascale.com/a/dtd/ISO9001-2015-NEW-QMS-Framework-Requirements)

- ISO 9000:2005, Quality management systems Fundamentals and vocabulary.
- ISO 9004:2009 Managing for the Sustained Success of an organization.

These are timeless ideas which will help align the organization with all stakeholders: customers, suppliers & employees. Here is a summary of the Eight Principles, along with some supporting information on how to apply it: (figure 1) (http:// www.praxiom.com/principles.htm)

1. Principle 1: **Customer Focus**: organizations depend on their customers and therefore should understand current and future customer needs, should meet customer requirements and strive to exceed customer expectations, (Do you carefully review your customer's requirements?), (How do you know if your customers are satisfied?).
2. Principle 2: **Leadership:** leaders establish unity of purpose and direction of the organization. They should create and maintain the internal environment in which people can become fully involved in achieving the organization's objectives. The captain guides the ship, and likewise. Top Management has a responsibility to embrace these principles and quality system, specifically, organization's leadership should hold management review meetings to keep your QMS (and organization) running smoothly.
3. Principle 3: **Involvement of people:** people at all levels are the essence of an organization and their full involvement enables their abilities to be used for the organization's benefit. ISO requires training to ensure employees have the tools they need to do their job and contribute

to the success of organization, in order for people to support your quality initiatives, they must understand them.

4. Principle 4: **Process approach:** a desired result is achieved more efficiently when activities and related resources are managed as a process. A process is a set of activities that uses resources (people, machines, etc.) to transform inputs into outputs. Every organization is made up of a series of interacting processes.

5. Principle 5: **System approach to management:** Identifying, understanding and managing interrelated processes as a system contributes to the organization's effectiveness and efficiency in achieving its objectives, this is especially important when auditing. If you only audit "within" a process, you may not consider the impact on other processes.

6. Principle 6: **Continual improvement:** continual improvement of the organization's overall performance should be a permanent objective of the organization, auditing QMS and improving processes is a key requirement of ISO 9001.

7. Principle 7: **Factual approach to decision making:** effective decisions are based on the analysis of data and information, it is important to make a correction, and take corrective and preventive action. Root Cause Analysis is good way to determine the problem.

8. Principle 8: **Mutually beneficial supplier relationships:** an organization and its suppliers are interdependent and a mutually beneficial relationship enhances the ability of both to create value, (can you trust your suppliers?) (Must you inspect everything?), every organization is unique, and so there is not one right answer as to the application of these principles. However, implementing ISO 9001 can help establish a solid basis for improved quality and customer satisfaction.

Figure 1: principles of ISO 9001-2015

Reference: Mullen, A., 2012, **what is ISO 9001's Total Quality Management Philosophy**?, Prentice Hall Books, USA, 54.

2.4: Framework and the new version: business has changed radically since the last major revision in 2000; technology has changed how we work, geographical boundaries are almost insignificant in today's global economy, supply chains are increasingly complex and the information available has multiplied exponentially.

To ensure that ISO 9001 continues to serve the business community and maintain its relevance in today's market place, the standard is being revised to address the change in the business world.

One thing remains constant, to be successful, businesses have to adapt to meet the growing needs of customers. ISO was originally written with the customer in mind and that remains the priority for ISO 9001:2015.

BSI obtains first global accreditation from ANAB to certify organizations to the new Quality Management standard ISO 9001:2015, BSI is the first to receive official global accreditation status from the ANSI-ASQ National Accreditation Board (ANAB) to certify organizations to the new Quality Management Standard, ISO 9001:2015. The decision was made utilizing ISO/FDIS 9001:2015 and accredited certificates to ISO 9001:2015 cannot be issued until the standard is published at September 2015.

The changes made during the ISO9001:2015 revision are considerably more substantial than those produced during the 2008 revision. Below is a short summary of the main developments. Without debating their benefits, we will attempt to highlight seven reasons for these changes: (http://www.isorevisions.com/iso-90012015-what-are-the-main -changes)

1. The standard is rewritten according to the HLS (High Level Structure): ISO 9001:2015 standard has been restructured: chapter and subchapter titles   (figure 2).
2. Risk management becomes a foundation of the standard: each major revision of the standard introduces a concept that allows certified companies to reach a new level of maturity (figure 3)
3. Leadership: the commitment to quality through strong and visible leadership is strengthened:

- The idea of a "management representative" disappears completely.
- The quality policy and stated goals must be deeply in keeping with the strategic orientations.
- QMS requirements must be merged into business processes.

Figure 2: the five version's focus

Reference: British Standards Institution group, GB/iso-9001-quality-management/Implementing-ISO-9001, retrieved April 15, 2016

Figure 3: the five version's focus

Reference: Prajogo, D. & Sohal P., 2016, **The Implementation of ISO 9000 in Australian Organizations**, Australian Supply Chain Management Research Unit, Monash University, supported by JAS-ANZ.

A standard purposely open to the service industry: the context in which organizations evolve has changed and the revision of the standard takes into account the evolutions in the way organizations do their business or activities.

4. No more quality manual! Once an integral part of the ISO standard, will the quality manual disappear? Indeed, it is quite possible, but not in the near future, as the idea of the quality manual is deeply rooted into the culture of quality.

5. Importance given to the context surrounding the certified organization and to its stakeholders: two new clauses (4.1 and 4.2) require greater consideration of the context surrounding the organization. They require a context analysis, as well as the stakeholder identification and the understanding of their expectations.

6. Knowledge is a resource like any other: in its 2015 revision, ISO9001 is once again adapting to its times. Knowledge has become key to successful projects and business development. The new standard considers knowledge like any other resource to be managed:

- Identify the knowledge necessary to carry out the activity in compliance with the QMS and to achieve the defined objectives.
- Knowledge must be maintained, protected and made available where necessary.
- Anticipate changes in knowledge needs and manage the risk of failing to acquire knowledge in due time.

The above are the reasons for change, but that lead to an important question which is what are the changes?, the new 2015 revision of ISO 9001, brought right up to date in response to vast changes in technology, business diversity and global commerce, promises to be the most effective, user-friendly and relevant quality management system yet.

Introduced in 1987, ISO 9001 has been revised four times to date, and the new version – ISO 9001:2015 – is the first major revision since 2000. It has been three years in the making and is the work of hundreds of experts from industry and commerce, standards stakeholders (i.e. consultants, users, test laboratories, certification bodies, etc.), academia and research bodies. The result of this evolutionary process brings ISO's best-selling standard firmly into the 21st century.

Certified organizations have three years following publication of ISO 9001:2015 in September to align their quality management systems to the new edition of the standard.

The second question is why change? Many users, happy with ISO 9001 in its current form, may well ask (if it isn't broken, why fix it?). But this latest revision is a response to vast changes in technology, business diversity and global commerce in the 15 years since ISO 9001:2000.

ISO 9001:2015 recognizes the increased prominence of the service sector and its need for quality management. It also reflects calls for greater QMS alignment and integration with an organization's

business and strategic direction, and makes it easier to adopt multiple ISO business management standards such as ISO 14001 and sector-specific QMSs such as the aerospace industry's AS9100.

The third question dealing with (What has changed?, the first piece of good news is that ISO 9001:2015 will be easier to use, particularly in conjunction with other management system standards, and will be less prescriptive – for example, documentation will be less mandated and more user-friendly, and the language has been simplified. It also follows the underlying philosophy that (output matters), so it will ask if an organization's processes are achieving their planned results, and if the system is actually delivering on its promise – central to implementing ISO 9001 – of (providing confidence in the ability to consistently provide conforming products and services).

Employing the Plan-Do-Check-Act (PDCA) cycle at all levels in the organization to manage the processes and the system as a whole, and to drive improvement. This new risk-based focus is intended to prevent undesirable outcomes such as non-conforming products and services.

The benefits of those changes will create greater flexibility in the way they choose to implement the standard, and the amount and nature of the documentation that is required, one very important factor has been the greater alignment of structure, content and terminology for all ISO management system standards, particularly evident when looking at the new versions of ISO 9001 and ISO 14001. This is intended to make life easier for organizations needing to address the requirements of several standards in a single management system.

It is the consequent orientation on results and a certain flexibility on how to build the management system that can be seen throughout the standard, with no problem adapting, early signs suggest that the drafters of ISO 9001:2015 have succeeded well in developing a more robust QMS that will allow organizations to build confidence in the products and services they deliver throughout the supply chain to customers worldwide. If they prove right. (http://www.clarkquality.co.uk/2015/12/iso-9001:2015)

2.5: ISO 9001-2015 requirements: ISO has two kinds of quality management standards**:** *requirements* **and** *guidelines***. Together these two kinds of quality standards make up what is known as the ISO portfolio of quality management standards.**

Requirements **are the formal expectations that you must meet if you wish to be officially certified or registered. They are compulsory.** *Guidelines***, on the other hand, are suggestions and recommendations only. They are voluntary.**

In the past, ISO had three sets of quality *requirements***: ISO 9001, ISO 9002, and ISO 9003. However, now there's only one standard: ISO 9001 2015. ISO 9002 and 9003 have been dropped.**

In the past, ISO's quality *guidelines* **included ISO 8402, ISO 9000, ISO 9004, ISO 10005, ISO 10011, ISO 10012, and ISO 10013. But most of these standards have either changed or been dropped. ISO 8402 1994 and ISO 9000 1994 have been replaced by** ISO 9000 2015**. And ISO 9004 2000 has become** ISO 9004 2009**, while the ISO 10011 series has been turned into** ISO 19011.**(**http://www.praxiom.com/iso-9001-standard.htm**)**

The following are the seven clauses of ISO 9001-2015 (the three causes are key clauses (scope, normative references, terms and definitions), each standards introduce by International

organization for standardization (ISO) include those key clauses: (http://www.praxiom.com/iso-9001.htm, retrieved, Jan. 29, 2016) (Appendix 1 show the details of each clauses)

1. **Context of the organization.**
2. **Leadership.**
3. **Planning**?
4. **Support.**
5. **Operation.**
6. **Performance evaluation.**
7. **Improvement.**

2.6: The benefits and advantages of consistency with ISO 9001-2016: according to (http://www.iso9001.com/benefitsofiso9001.asp, retrieved April 2, 2016), ISO 9001 Certification will provide maximum benefit to an organization if it approaches ISO 9001 implementation in a practical way. This will ensure that:

1. The Quality Management Systems that are adopted.
2. Work to improve the business and are not just a set of procedures that your employees will find hard to manage.
3. More efficient working practices and focuses on the business objectives of the organization.
4. Achieve a system that will help and support staff, and improve the levels of customer satisfaction,

Whether using an external assessor or allocate an internal resource to carry out the initial assessments, there is a need to ensure that they have buy-in from senior management, so that all areas of the organization are aware of the importance of the ISO 9001 Certification process.

ISO 9001 Certification is not just suitable for large organizations but also small businesses that will benefit from adopting efficient Quality Management Systems that will save time and cost, improve efficiency and ultimately improve customer relationships, some of the benefits to an organization include:

- Provides senior management with an efficient management process.
- Sets out areas of responsibility across the organization.
- Mandatory if you want to tender for some public sector work.
- Communicates a positive message to staff and customers.
- Identifies and encourages more efficient and time saving processes.

Also customer benefits from ISO 9001-2016, like, improved quality and service, delivery on time, right first time attitude, fewer returned products and complaints and independent audit demonstrates commitment to quality.

ACS registrars, indicate another advantages when the organization fit with the clauses, which they are minimizes mistakes, improves reporting and communications, better quality products and service, more reliable production scheduling and delivery, standards maintained by annual assessments ((http://www.acsregistrars.com/benefits-of-iso-9001, retrieved March 24, 2016)

International organization for standardization listed many benefits and advantages being with ISO 9001-2015 (table 3).

Table 3: The benefits of ISO 9001-2015

No.	Beneficiary	Benefits
1	Business	• Suitable for both small and large organizations • Better internal management • Less wastage • Increase in efficiency, productivity and profit • Improved customer retention and acquisition • Consistent outcomes, measured and monitored • Globally recognized standard • Compatible with other ISO standards • Accreditation by UKAS
2	Society	• Consumers can have confidence that they are safe, reliable and of good quality. For example, ISO's standards on road safety, toy safety and secure medical packaging are just a selection of those that help make the world a safer place. • The involvement of consumers in standard development work with its Committee on consumer policy (COPOLCO). • International Standards on air, water and soil quality, on emissions of gases and radiation and environmental aspects of products contribute to efforts to preserve the environment and the health of citizens.
3	Government	• ISO standards a vital resource for governments when developing public policy. • National governments can use ISO standards to support public policy, for example, by referencing ISO standards in regulations. This has a number of benefits, including (Expert opinion: integrating an ISO standard into national regulation, governments can benefit from the opinion of experts without having to call on their services directly), (Opening up world trade: integrating ISO standards into national regulation, governments help to ensure that requirements for imports and exports are the same the world over, therefore facilitating the movement of goods, services and technologies from country to country).

Source: http://www.iso.org/iso/home/standards/benefitsofstandards.htm

One study looked at why Australian businesses implemented ISO 9001, their approaches and experiences, including comparing the 2000 version with the earlier version: better or not? The study was conducted by Monash University, in collaboration with JAS-ANZ. Findings were from 326 organizations, spread evenly between manufacturing and service/non-manufacturing; the majority (87%) were small to medium- sized organizations, major findings: (Prajogo & Sohal, 2016: 24)

• The top 3 reasons for getting certification were externally oriented: enhancing the company image, responding to customer demand, and getting 'preferred supplier' status. Top internal reasons were to establish better control over business operations, and to provide a foundation for continuous improvement.

- The major benefits reported were in relations with their customers, management of business processes, management of business knowledge and information, and in organisation strategy & culture, such as improving their managerial policies & procedures. (This tallies with frequent 'post-9001' themes from our clients: 'now we really know what we have, and where it is, and everyone knows where to find it'.)
- The area reported as least impacted was supplier management.
- The 2000 version of the Standard was reported as significantly easier to implement than the previous (1994) version. Overall, results validated that major revision of ISO 9001, confirming that the Standard is now much improved in terms of its ease of implementation & simplicity, while still maintaining high levels of impact in business areas.

A couple of other findings:

- The mean time to implement the Standard has reduced. For ISO 9001:2000, the mean was 8 months compared with a mean of 10 months for the 1994 version.
- Of the difficulties associated with implementing ISO 9001, balancing other priorities with the demands of implementation was the greatest one. The 2000 version was associated with substantially fewer difficulties in implementation across all elements surveyed.

UK survey was carried out by a professional market research organization to find out what consumers know (or care) about ISO 9000, the findings was: (Tannock & Henry, 2015: 13)[1]

- More than 1/4 (26%) of the general adult population was already aware of the standards. Knowledge was concentrated among working people.
- Results indicate *positive attitudes* towards ISO 9000 and companies certified to the standard. People tend to perceive products and services associated with ISO 9000 as being of higher quality.
- Consumers are *more likely to contact a company* if it uses 'ISO 9000' in the labelling and marking of products/services.
- Consumers possess *greater levels of trust and confidence* in ISO 9000 products and services, the labelling of products or services with a logo denoting ISO 9000 is likely to cause consumers to prefer them.
- One interesting finding was that it would be 'beneficial for companies having certification to promote increased public awareness of ISO 9000, because increased levels of consumer awareness should improve levels of confidence and trust in their products and services'.
- In other words: if you have it, use it. Tell your customers and prospects you have it and wherever possible educate them in what that means: particularly the benefits for them.

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[1] For more studies see:

- BSI website.
- http://qms.net/iso-90012015/
- http://www.ebme.co.uk/articles/ebme-quality-management/353-implementation-guidance-for-iso-9001-2015
- LRQA / LRQA news / 2015 / LRQA ISO Standards Update: What benefits will ISO 9001:2015 bring to organisations?

2.7: Implementing ISO 9001-2015: develop the knowledge and skill required to implement an ISO 9001:2015 Quality Management System (QMS), good businesses understand quality; great businesses implement it. An ineffective QMS can cost you time, money and customers. That's why it's important to get it right from the start. Implementing a framework based on ISO 9001:2015 helps your business consistently deliver and drive continual improvement in your products and services, gain the required skills to conduct a base-line review of your organization's current position and implement the key principles of ISO 9001:2015. Using a step-by-step approach, you'll learn how to develop an implementation plan, create necessary documentation, monitor your QMS and achieve continual quality improvement.

BSI group, declare top tips for implementing ISO 9001, they are: (http://www.bsigroup.com/en-GB/iso-9001-quality-management/Implementing-ISO-9001, retrieved April 15, 2016)

1. Get commitment and support from senior management.
2. Engage the whole business with good internal communication.
3. Compare your existing quality systems with ISO 9001 requirements.
4. Get customer and supplier feedback on current quality management.
5. Establish an implementation team to get the best results.
6. Map out and share roles, responsibilities and timescales.
7. Adapt the ISO 9001 principles of quality management to your business.
8. Motivate staff involvement with training and incentives.
9. Share ISO 9001 knowledge and encourage staff to train as internal auditors.
10. Regularly review your ISO 9001 system to make sure you are continually improving it.

They add the following stages: (BSI, 2012: 12)
1. **Make contact**: We can discuss what you need, and recommend the best services for you. We'll then give you a proposal detailing the cost and time involved.
2. **Complete BSI's application form**: Once we have received your completed form, we'll assign you a Client Manager, who will be your point of contact through the process – and beyond. They'll have an excellent understanding of your business area and will support you as you move forward to the assessment and certification of your quality management system.
3. **Make sure your staff have the necessary skills**: Whether you're seeking to implement a management system or would like to increase your general awareness of the standard, there are a range of workshops, seminars and training courses available to help you.
4. **Gap analysis to make sure you are on track**: We can carry out an optional gap analysis, also called a Pre-Assessment, of your existing management system against the requirements of the standard and identify any omissions or weaknesses that need resolving before formal assessment.
5. **Formal assessment to achieve your ISO 9001 certificate**: We'll do a two-stage assessment. First an initial review of your management system against ISO 9001 identifying any omissions or weaknesses that need resolving before Stage 2 when we'll conduct a full assessment.
6. **Certification and beyond – promote your certificate and your business**: Once the assessment has been successfully completed, we'll issue a certificate of registration, clearly explaining the scope of your management system. The certificate is valid for three years, and your assessor will

visit you regularly to help you make sure you remain compliant, and support you in the continual improvement of your systems.

BSI group, 2016, stated briefly the above stage: (http://www.bsigroup.com/en-AE/ISO-9001-Quality-Management/Certification-for-ISO-9001/retrived April 17, 2016)

Stage one: Getting started with ISO 9001 Quality Management

1. Discover the best way to begin your quality management journey and why ISO 9001 quality systems are good for business.
2. Download the ISO 9001 Client Manual (PDF).
3. Read the full case study (PDF).
4. See all ISO 9001 case studies.
5. Involve in training courses to get you started in ISO 9001.
6. Whether you're starting the certification process, looking to transfer, or just need to discuss options for your business, contact expert team who will guide you through the process (request a quote for certification)

Stage two: Implementing ISO 9001 Quality Management

1. Apply ISO 9001 to your business, build your own quality management system and let us make the process simple for you.
2. Are you ready for ISO 9001, a full process improvement?
3. Understand the top tips for implementing ISO 9001 (earlier we mention it)

Stage 3: Certification to ISO 9001 Quality Management

ISO 9001 certification gets your quality management system recognized globally. Demonstrate your compliance and commitment to industry-respected practices; stay competitive; and have new business opportunities, completely knowledgeable of 'what is quality management', we make the certification process simple. After we have received your application, we appoint a client manager who will guide you and your business through the following steps.

1. Gap analysis: this is an optional pre-assessment service where we take a closer look at your existing quality management system and compare it with the requirements of the ISO 9001 standard. This helps identify areas that need more work before we carry out a formal assessment, saving you time and money.
2. Formal assessment: this happens in two stages. First we review your organization readiness for assessment by checking if the necessary ISO 9001 procedures and controls have been developed. We will share the details of our findings with you so that if we find gaps, you can close them. If all the requirements are in place, we will then assess the implementation of the procedures and controls within your organization to make sure that they are working effectively as required for certification.
3. Certification and beyond: when you have passed the formal assessment you will receive an ISO 9001 certificate, which is valid for three years. Your client manager will stay in touch during this time, paying you regular visits to make sure your system doesn't just remain compliant, but that it continually improves.

Stage 4: Maintaining your ISO 9001 system

AINTAINING YOUR ISO 9001 SYSTEM

You are already ahead with ISO 9001 certification. Now you can achieve even more. Discover ways to keep improving your quality management system.

1. Make the most of your certification.
2. Promote your commitment to excellence.
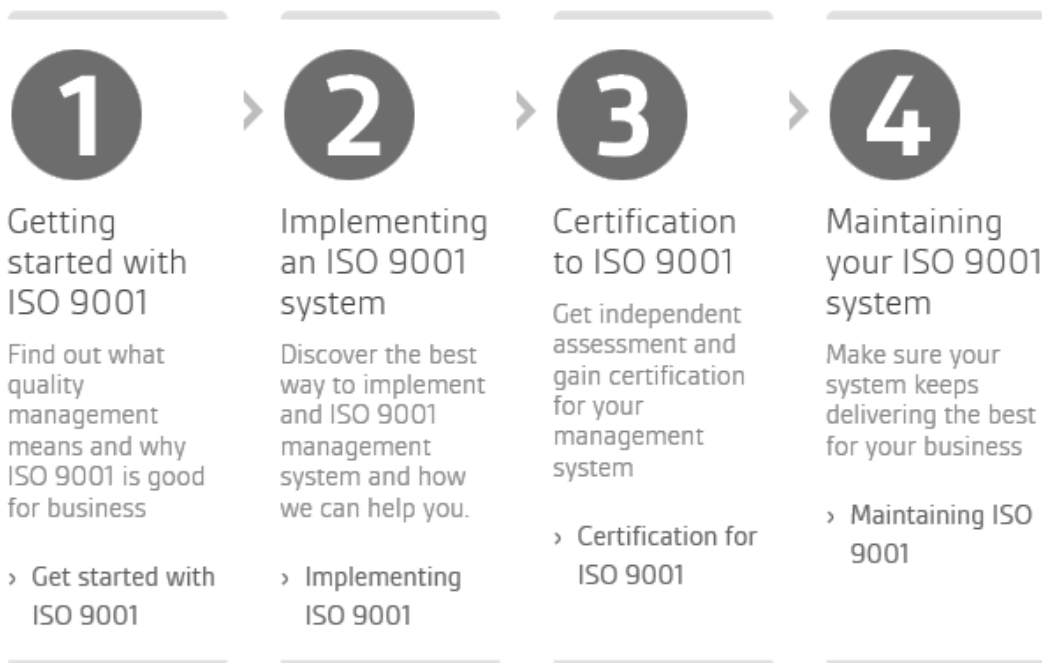3. Integrate to keep getting better.

Figure 4: quality management journey

Source: BSI group, 2016.pp. 4-12.

3: Practical Aspects: Results

3.1: Analysis of the answers: each question well be analysis by the tables (4-10), each group of clauses analyzed according to the three options:

1. Applied and documented.
2. Applied and undocumented.
3. Unapplied and undocumented.

1. **Context of the organization** (6 Questions)

Table 4: The percentage of the answers above clause 4

It is the first clause of the requirements, dealing with the context, the upper agreement for **(Define the scope of your quality management system)** was 77% applied and documented, while for applied and undocumented was 66% for (**Clarify the needs and expectations of interested parties**, there are an agreement about unapplied and undocumented for four sub – clauses (4:3, 4:4, 4:4:1 and 4:4:2) especially for (**Develop a QMS and establish documented information)(Establish a QMS that complies with this standard).**

4. Context of the organization	Applied and Documented	%	Applied and Un Documented	%	Un Applied and Un Documented	%
4.1 Understand your organization and its unique context.	4	44	5	55	0	
4.2 Clarify the needs and expectations of interested parties.	3	33	6	66	0	
4.3 Define the scope of your quality management system.	7	77	1	11	1	
4.4 Develop a QMS and establish documented information.	5	55	1	11	3	
4.4.1 Establish a QMS that complies with this standard.	4	44	2	22	3	
4.4.2 Maintain QMS documents and retain QMS records.	3	33	4	44	2	
Total	26		19		9	

2. **Leadership** (7 Questions)

Table 5: The percentage of the answers above clause 5

5. Leadership	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
5.1 Provide leadership by focusing on quality and customers.	3	33	5	55	1	
5.1.1 Provide leadership by encouraging a focus on quality.	4	44	4	44	1	
5.1.2 Provide leadership by encouraging a focus on customers.	5	55	3	33	1	
5.2 Provide leadership by establishing a suitable quality policy.	3	33	4	44	2	
5.2.1 Provide leadership by formulating your quality policy.	2	22	7	77	0	
	2	22	6	66	1	
5.3 Provide leadership by defining roles and responsibilities.	4	44	4	44	1	
Total	23		33		7	

The second clause of the requirements, dealing with Leadership, the upper agreement for **(Provide leadership by encouraging a focus on customers)** was 55% applied and documented, while for applied and undocumented was 77% for (**Provide leadership by formulating your quality policy**), there are an agreement about unapplied and undocumented for all sub – clauses except (5:2:1).

3. **Planning** (7 Questions)

Table 6: The percentage of the answers above clause 6

6. **Planning**	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
6.1 Define actions to manage risks and address opportunities.	3	33	5	55	1	
6.1.1 Consider risks and opportunities when you plan your QMS.	2	22	6	66	1	
6.1.2 Plan how you're going to manage risks and opportunities.	2	22	5	55	2	
6.2 Set quality objectives and develop plans to achieve them.	4	44	3	33	2	
6.2.1 Establish quality objectives for all relevant areas.	2	22	4	44	3	
6.2.2 Develop plans to achieve objectives and evaluate results.	2	22	4	44	3	
6.3 Plan changes to your quality management system.	3	33	3	33	3	
Total	18		30		15	

These clause deals with Planning, the upper agreement for **(Set quality objectives and develop plans to achieve them)** was 44% applied and documented, while for applied and undocumented was 66% for (**Consider risks and opportunities when you plan your QMS**), there are an agreement about unapplied and undocumented for all sub – clauses.

4. **Support** (16 Questions)

Table 7: The percentage of the answers above clause 7

7. **Support**	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
7.1 Support yours QMS by providing the necessary resources.	5	55	4	44	0	
7.1.1 Provide internal and external resources for your QMS.	5	55	4	44	0	
7.1.2 Provide suitable people for your QMS and your processes.	4	44	3	33	2	
7.1.3 Provide the infrastructure that your processes must have.	5	55	1	11	3	
7.1.4 Provide the appropriate environment for your processes.	6	66	1	11	2	
7.1.5 Provide monitoring, measuring, and traceability resources.	5	55	3	33	1	
7.1.6 Provide knowledge to facilitate process operations.	5	55	4	44	0	
7.2 Support your QMS by ensuring that people are competent.	4	44	4	44	1	
7.3 Support your QMS by explaining how people can help.	4	44	3	33	2	
7.4 Support your QMS by managing your communications.	5	55	2	22	2	
7.5 Support your QMS by controlling documented information.	4	44	3	33	2	
7.5.1 Include the documented information that your QMS needs.	2	22	3	33	4	
7.5.2 Manage the creation and revision of documented information.	2	22	4	44	3	
7.5.3 Control the management and use of documented	2	2	5	5	2	

7. Support	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
information.		2		5		
7.5.3.1 Control your organization's QMS documents and records.	3	33	2	22	4	
7.5.3.2 Control how QMS documents and records are controlled.	2	22	2	22	5	
Total	63		48		33	

These clause deals with support activities, the upper agreement for **(Provide the appropriate environment for your processes)** was 66% applied and documented, while for applied and undocumented was 55% for (**Control the management and use of documented information**), also we indicate an agreement about unapplied and undocumented for all sub – clauses except three which are (7:1, 7:1:1, 7:1:6).

5. **Operations** (28 Questions)

Table 8: The percentage of the answers above clause 8

8. Operations	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
8.1 Develop, implement, and control your operational processes.	7	77	2	22	0	
8.2 Determine and document product and service requirements.	6	66	3	33	0	
8.2.1 Communicate with customers and manage customer property.	6	66	2	22	1	
8.2.2 Clarify all product and service requirements and capabilities.	5	55	3	33	1	
8.2.3 Review product and service requirements and record results.	4	44	4	44	1	
8.2.4 Amend documents when product and service requirements change.	3	33	4	44	2	
8.3 Establish a process to design and develop products and services.	6	66	2	22	1	
8.3.1 Create an appropriate design and development process.	6	66	1	11	2	
8.3.2 Plan product and service design and development activities.	3	33	3	33	3	
8.3.3 Determine product and service design and development inputs.	3	33	4	44	2	
8.3.4 Specify how design and development process will be controlled.	4	44	3	33	2	
8.3.5 Clarify how design and development outputs will be produced.	3	33	5	55	1	
8.3.6 Review and control all design and development changes.	6	66	2	22	1	
8.4 Monitor and control external processes, products, and services.	6	66	1	11	2	
8.4.1 Confirm that external products and services meet	3	3	3	3	3	

8. Operations	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
requirements.		3		3		
8.4.2 Establish controls for externally provided products and services.	2	22	2	22	5	
8.4.3 Discuss your organization's requirements with external providers.	5	55	2	22	2	
8.5 Manage and control production and service provision activities.	3	33	4	44	2	
8.5.1 Establish controls for production and service provision.	2	22	4	44	3	
8.5.2 Identify your outputs and control their unique identity.	2	22	5	55	2	
8.5.3 Protect property owned by customers and external providers.	5	55	3	33	1	
8.5.4 Preserve outputs during production and service provision.	4	44	4	44	1	
8.5.5 Clarify and comply with all post-delivery requirements.	3	33	4	44	2	
8.5.6 Control changes for production and service provision.	3	33	3	33	3	
8.6 Implement arrangements to control product and service release.	4	44	3	33	2	
8.7 Control nonconforming outputs and document actions taken.	4	44	3	33	2	
8.7.1 Identify and control nonconforming outputs to prevent unintended use.	4	44	2	22	3	
8.7.2 Document your nonconforming outputs and the actions that are taken.	5	55	2	22	2	
Total	117		83		52	

The larger clause of the requirements of ISO 9001-2015 deals with Operations activities, the upper agreement for **(Develop, implement, and control your operational processes)** was 77% applied and documented, while for applied and undocumented was 55% for both (**Clarify how design and development outputs will be produced)** and (**Identify your outputs and control their unique identity**), also we indicate an agreement about unapplied and undocumented for all sub – clauses except the first two (8:1, 8:2).

6. **Performance Evaluation** (11 Questions)

Table 9: The percentage of the answers above clause 9

9. Performance Evaluation	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
9.1 Monitor, measure, analyze, and evaluate QMS performance.	6	66	1	11	2	
9.1.1 Plan how you're going to monitor, measure, analyze, and evaluate.	5	55	3	33	1	
9.1.2 Find out how well customer needs and expectations are	5	55	3	33	1	

being met.						
9.1.3 Evaluate performance, effectiveness, conformity, and satisfaction.	3	33	2	22	4	
9.2 Use internal audits to examine conformance and performance.	3	33	2	22	4	
9.2.1 Audit your quality management system at planned intervals.	3	33	3	33	3	
9.2.2 Develop an internal audit program for your organization.	4	44	3	33	2	
9.3 Carry out management reviews and document your results.	5	55	2	22	2	
9.3.1 Review suitability, adequacy, effectiveness, and direction.	6	66	2	22	1	
9.3.2 Plan and perform management reviews at planned intervals.	5	55	2	22	2	
9.3.3 Generate management review outputs and document results.	5	55	2	22	2	
Total	50		25		24	

These clause deals with evaluation process of all performance, the upper agreement for two sub- clauses **(Monitor, measure, analyze, and evaluate QMS performance) and (Review suitability, adequacy, effectiveness, and direction)** which was 66% applied and documented, while for applied and undocumented was 33% for four sub-clause (9:1:1, 9:1:2, 9:2:1, 9:2:2)**,** also the researchers indicate an agreement about unapplied and undocumented for all sub – clauses.

7. **Improvement** (5 Questions)

Table 10: The percentage of the answers above clause 10

10. Improvement	Applied and Documented	%	Applied and Undocumented	%	Unapplied and Undocumented	%
10.1 Determine improvement opportunities and make improvements.	4	44	4	44	1	
10.2 Control nonconformities and take appropriate corrective action.	6	66	2	22	1	
10.2.1 Correct nonconformities and address causes and consequences.	4	44	4	44	1	
10.2.2 Document your nonconformities and the actions that are taken.	4	44	3	33	2	
10.3 Enhance the suitability, adequacy, and effectiveness of your QMS.	4	44	2	22	3	
Total	22		15		8	

It is the last clause of ISO 9001-2015 requirements, dealing with most important issue (Improvement), the upper agreement for **(Control nonconformities and take appropriate corrective action)** was 66% applied and documented, while for applied and undocumented was 44% for two

sub-clauses (**Determine improvement opportunities and make improvements**) and (**Correct nonconformities and address causes and consequences**), also there are an agreement about unapplied and undocumented for all sub – clauses.

3.2: Coverage percentage of the answers (Adjusted Average)

In these part the analysis well concentrated on the average of the answers of responses (heads of nine departments), the researcher aims to support the percentage analysis at (3.1).

The following formula was used to get the adjusted average (supplement 2).

$$\frac{(N_{ad}*10)_{1-n} + (N_{aund} * 5)_{1-n}}{10*N + 5*N}$$

Table 11, show the percentage of clauses coverage above all clauses.

Table 11: Percentage of seven clauses coverage

No.	Clauses	Coverage percentage %
4	Context of the organization	43
5	Leadership	51
6	Planning	34
7	Support	40
8	Operations	41
9	Performance Evaluation	42
10	Improvement	43

The table indicate the following information:

1. The upper coverage rate gained by clause 5 (leadership).
2. The lower coverage rate go to clause 6 (Planning).
3. Although the clause 5 do not get the upper applied and documented sub- clauses (55%), but the applied and undocumented sub-clauses for these clause was the upper one (77%).
4. The clause 6 gained also the lower applied and documented sub- clauses (44%), that indicate the consistency of the two analysis, the applied and undocumented sub-clauses for these clause was (66%) which is the second bigger number after clause 5.
5. There are similarity of clauses coverage between clause 4 and clause 10, they also near each other for the applied and documented sub- clauses (77%) and (66%) respectively.
6. The results indicate convergence between clauses 7, 8, 9 according to coverage rate (40, 41, 42)% respectively.

So, the seven hypotheses are proved.

4: Conclusions and Suggestions

4.1: Conclusions

1. The department's heads of Cihan University focus on the clause **Context of the organization** by defining the scope of quality management system at University.

2. The managers provide **leadership** by encouraging a focus on customers (students),

3. Also they do **planning** activity by setting quality objectives and develop plans to achieve them.

4. By providing the appropriate environment for education processes, the department's heads activate **support** functions.

5. The manager's focus on the larger clause of the requirements of ISO 9001-2015 which is deal with **operations** activities, they do the agreements for developing, implementing, and controlling operational processes (educational process at the campus).

6. The department's heads of Cihan University **evaluate** the department's performance by monitoring, measuring, analyzing and evaluating QMS performance at their departments and they reviewing suitability, adequacy, effectiveness, and direction of that departments.

7. By Controlling nonconformities and take appropriate corrective action, the department's heads implement **improvement** process at all the departments.

8. According to coverage percentage the nine departments success to fit with leadership clause, which is mean the heads of all departments:
   - Focusing on quality and customers.
   - Encouraging a focus on quality.
   - Encouraging a focus on customers.
   - Establishing a suitable quality policy.
   - Formulating quality policy.
   - Communicating quality policy.
   - Defining roles and responsibilities.

9. The nine departments failed to fit with planning clause, which is mean the heads of all departments failed to:
   1. Define actions to manage risks and address opportunities.
   2. Consider risks and opportunities when they plan their QMS.
   3. Plan how they are going to manage risks and opportunities.
   4. Set quality objectives and develop plans to achieve them.
   5. Establish quality objectives for all relevant areas.
   6. Develop plans to achieve objectives and evaluate results.
   7. Plan changes to their quality management system.

10. The research prove the usefulness of questionnaire to test the readiness of the education services providers (in our case the universities) to a adapt ISO 9001-2015.

4.2: Suggestions

1. The researcher suggests to overlaps difficulties and fills the gaps to make all clauses available and coverage it in reality.
2. It's necessary to make some preparations dealings with deploy the philosophy of ISO.
3. The nine department's heads invited to put their concerns at planning activities by define actions to manage risks and address opportunities in the internal and external environment.
4. They must consider risks and opportunities when they plan their quality management system (ISO 9001-2015).
5. The managers must learn how to manage risks and opportunities at both internal and external environment.
6. The researchers suggest to set quality objectives and develop plans to achieve them for each departments with assistance of quality assurance bureau.
7. It is important to establish quality objectives for all relevant areas for each department.
8. The nine department's heads invited to put their concerns on develop plans to achieve objectives and evaluate results for every time range (weekly, monthly, yearly not forgetting the strategic range.
9. They must plan changes to their quality management system every time range.
10. The suggestions (3-9) concentrate on the clause that the departments failed to cover its sub-clause, that's didn't mean the departments fit the other clause.
11. The researcher suggests to overlaps the main difficulties of documenting the procedures or tasks, it has been indicate that in many cases the clause or sub-clauses are applied but not documented.

References

1. **Books**
2. BSI, 2012, ISO 9001: **It's in the detail your implementation guide**, bsi-entropy.com.
3. Foster, S. Thomas. 2001. **Managing Quality: An Integrative Approach**. Upper Saddle River, NJ: Prentice Hall.
4. Mullen, A., 2012, **what is ISO 9001's Total Quality Management Philosophy**?, Prentice Hall Books, USA.
5. Prajogo, D. & Sohal P., 2016, **The Implementation of ISO 9000 in Australian Organizations**, Australian Supply Chain Management Research Unit, Monash University, supported by JAS-ANZ.
6. Roy, R.N (2005),. **A Modern Approach To Operation Management**, New Age International Ltd., Publishers, New Delhi.
7. Tannock, J & Henry B., 2015, **Do consumers really care about ISO 9001 certification**?, , Nottingham University Business School published in ISO Management Systems, May-June edition, Vol 6 #3/.

2. Websites

1. BSI website.
2. http:// uscsrh.ideascale.com/a/dtd/ISO9001-2015-NEW-QMS-Framework-Requirements
3. http:// www.praxiom.com/principles.htm

4. http://advisera.com/9001academy/blog/2016/02/23
5. http://qms.net/iso-90012015/
6. http://www.acsregistrars.com/benefits-of-iso-9001, retrieved March 24, 2016
7. http://www.british-assessment.co.uk/services/iso-certification/iso-9001-certification/iso-9001-history
8. http://www.bsigroup.com/en-AE/ISO-9001-Quality-Management/Certification-for-ISO-9001/retrived April 17, 2016
9. http://www.bsigroup.com/en-GB/iso-9001-quality-management/Implementing-ISO-9001, retrieved April 15, 2016
10. http://www.cihanuniversity.edu.iq/cihan/en/faculty.
11. http://www.clarkquality.co.uk/2015/12/iso-9001:2015
12. http://www.ebme.co.uk/articles/ebme-quality-management/353-implementation-guidance-for-iso-9001-2015
13. http://www.iso.org/iso/home/standards/benefitsofstandards.htm
14. http://www.iso.org/iso/pub100304.pdf
15. http://www.iso9001.com/benefitsofiso9001.asp, retrieved April 2, 2016
16. http://www.isorevisions.com/iso-90012015-what-are-the-main-changes
17. http://www.praxiom.com/iso-9001.htm, retrieved, Jan. 29, 2016
18. http://www.praxiom.com/iso-9001-standard.htm
19. http://www.praxiom.com/iso-9001-standard.htm
20. LRQA / LRQA news / 2015 / LRQA ISO Standards Update: What benefits will ISO 9001:2015 bring to organizations?