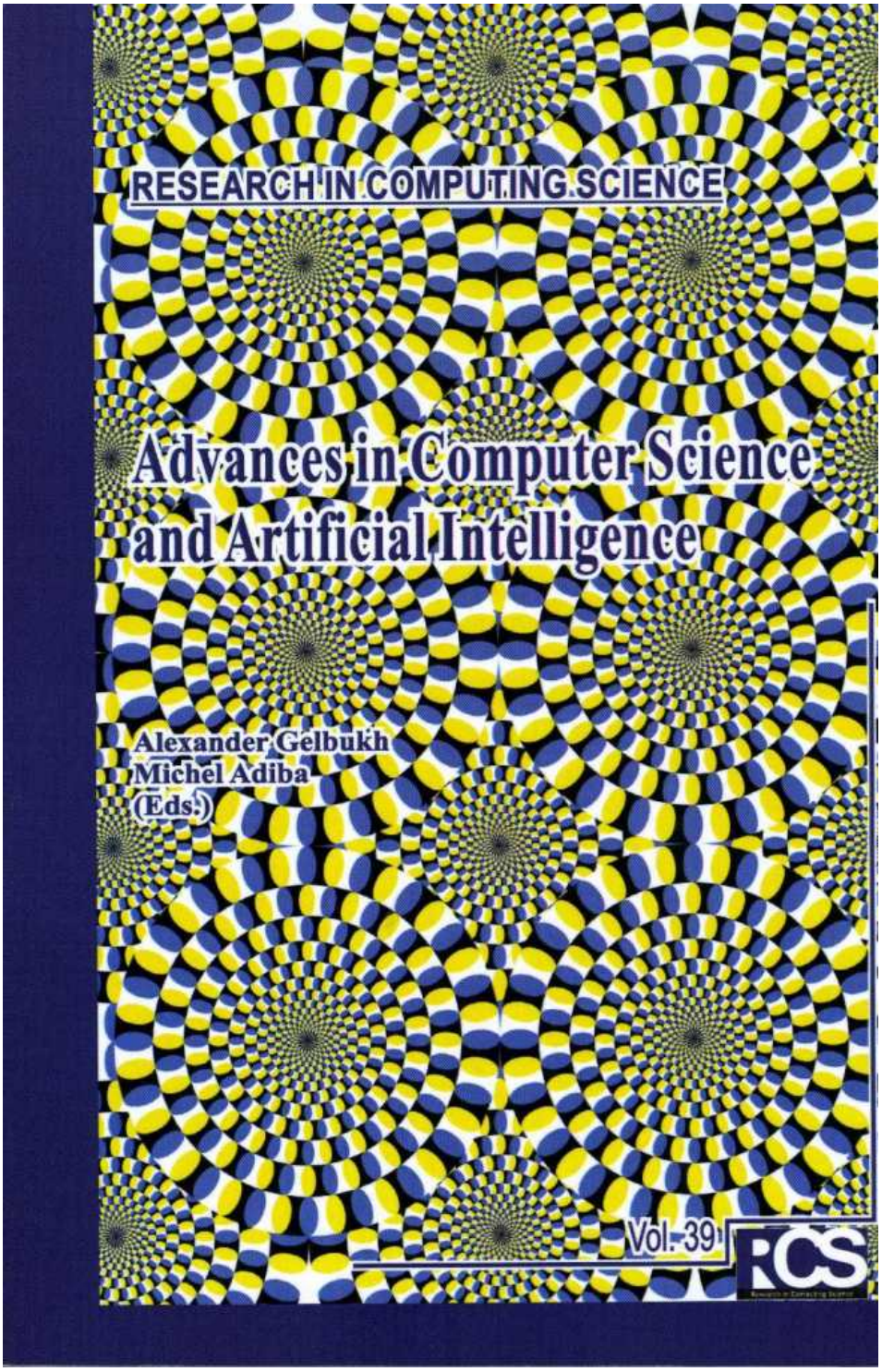
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Comparative Analysis of the ISO 10006:2003 against other Standards and Guidelines related to Software Project Management

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Abstract. Nowadays, the Project Management field is in a stage in which its processes and concepts are being normalized and harmonized. The standard ISO 10006:2003 is an example of it. The goal of this standard is to provide an orientation about the concepts, elements, and guidelines for the quality of Project Management practices through eleven processes. This paper presents a comparison of the processes defined in the ISO 10006 with those defined in the PMBOK of PMI, ICB of IPMA, SWEBOK and the Mexican Standard NMX-I-059-NYCE-2005. The purpose of this work is to describe a conceptual framework to be taken into account in project management initiatives for software processes, which can be used by software project managers.

1 Introduction

The need of having highly motivated and prepared personnel in software development processes has been discussed since the sixties [1]. Today, despite that the software industry considers itself as a solid industry, and although most of the software projects are developed by highly specialized people, surprisingly, this is an industry characterized by not having highly quality products and services [2]. Software quality implies the necessity of accomplishing some parameters to allow establish the minimal levels by which a product can be considered a quality product [3].

Reports and statistical analysis have been performed to determine the status of software projects, for instance the project European Software Process Improvement Training Initiative (ESPITI), and Extreme Chaos of the Standish Group. The main goal of ESPITI is to determine the principal needs in the quality systems field, and to maximize the benefits of software process improvement in the European industry, by means of training and capacitating programs [4]. Lee and Wassenhove (as referred in [5]), in 1999 analyzed the profiles of the problems in software production, and its relationships with the organizational context of the European units of software development. One significant result of this study was that the production units are affected by the deficiencies in the requirements specification, and the use of quality achieving methods.

On the other hand, a decade of data of the Chaos research has showed some of the success or failure factors affecting software projects. From this data it can be observed that the most important problems are related with software specification, and project management and documentation [5]. The Chaos report of 2000 revealed an improvement in Project Management of Information Technologies related with the development and establishment of standards and best practices. It was observed that successful projects increased, failed projects decreased, and canceled projects tended to stabilization [6]. The above was a consequence of the initiatives for applying process improvement models in the software projects. Data revealed an increment of 100% in projects successfully finalized in comparison with the initial statistics [5].

Nonetheless the benefits of applying Project Management novel techniques and despite the standardization of the mechanisms used to evaluate software quality; the references to the international standard ISO 10006:2003 in Software Processes reference models are minimal, even when this standard is focused on project management. The latter contrast with the use of the Project Management Body of Knowledge (PMBOK) as a mechanism to generate best practices, taking into account the main topics of Project Management, which can be included for its use in processes maturity models [8].

The ISO 10006:2003 and the PMBOK are tools required and essential for managing projects. However, it is not clear how the content of the ISO 10006:2003 relates to the Software Engineering Body of Knowledge (SWEBOK) or to a process's reference model like the Process Model for the Mexican Software Industry – MoProSoft. The Project Management process does not distinguish between types of projects. This means that the projects knowledge and best practices are useful for most types of projects. Therefore, having successful projects, independently of the type of project, depends on the correct use of the skills, knowledge, techniques and tools of the project leader and his/her personnel [6], in order to create a product or to provide a service [7].

This paper describes the processes required for managing projects that are described in the ISO 10006:2003 standard and those defined in the PMI and IPMA guidelines. Additionally, the Project Management practice is presented as a key discipline into the SWEBOK, and also in the Project Portfolio Management and Specific Projects Management processes defined in the Mexican Standard NMX-I-059-NYCE-2005. The processes and knowledge areas related to project management are comparatively analyzed to identify their correlations inside the software projects. The rest of this paper is organized as follows: in the next section the ISO 10006:2003 standard is described, to later introduce what the PMI and IPMA states about the Project Management process; the latter is done in section Three. Then, section Four presents how project management should be carried out according to the SEWBOK and CMMI. After that, in section Five we describe the manner in which the Mexican Standard NMX-I-059-NYCE-2005 aboard the processes related to Project Management. Finally, we present the results of our analysis in section Six to conclude the paper in section Seven.

2 ISO 10006:2003 Standard

Quality assurance in any productive system requires the total integration of all the elements composing the system, in order to attain the projected results. Any quality assurance model is exclusively aimed at preventing non-conformances, thus providing third parties with trust on the offered product or service.

The quality model of the International Organization for Standardization (ISO-9000), considers a group of standards related to quality assurance in a system generating a given product. Since its inception in 1987, this it is composed by three contractual models: ISO 9001, ISO 9002 and ISO 9003; and the included guidelines ISO 9000 and ISO 9004. Given the importance of this standard, the Technical Committee ISO/TC 176 *Quality Management and Quality Assurance*, decided that the 10000 series were also oriented to support the 9000 model.

ISO 10006 was prepared by the Technical Committee ISO/TC 176, Quality Management and Quality assurance; particularly the Subcommittee SC 2, *Quality Systems* under the title *Quality Management Systems – Guidelines for quality Management in project*s [9]. Its Second edition (ISO 10006:2003) cancels and replaces the first Edition of 1997. Its goal is to serve as a guide in aspects related to elements, concepts and practices within quality systems which might be implemented in the Project Management process or even improve the process quality [5]. This International Standard is not a guide to Project Management itself. The ISO 10006 discusses guidance on quality in project management processes. Guidance on quality in a project's product-related processes, and on the process approach, is covered in ISO 9004:2000, *Quality Management Systems – Guidelines for performance improvements* [9].

ISO 10006:2003 defines the term *project* as a unique process, consisting of a set of coordinated and controlled activities with start and finish dates, undertaken to achieve an objective conforming to specific requirements, including the constraints of time, cost and resources. Likewise, it refers to the concept of *process* as a set of interrelated or interacting activities which transforms inputs into outputs. Inputs to a process are generally outputs of other processes [9]. Project processes are those processes that are necessary for managing the project as well as those that are necessary to realize the project's product. Therefore, the quality in Project Management implies, on one hand, the quality of the Project process and, on the other hand, the quality of the final project represented by the product. Both are needed and require a systematic treatment. Failure to meet either of these two aspects could have significative effects [6].

Table 1 presents the processes defined in the ISO 10006:2003 Standard. These processes are grouped according to their affinity to one another. Eleven groups of processes are presented next [5]:

1. *Strategic Process*. - This process defines how to apply the principles of quality Management through the strategic process. For this, it considers that the Top Management is the responsible to create a proper environment for the quality and the continual improvement. It is necessary ensure the quality as in the process as in the products to achieve the objectives of a project; the needs of the customer and

others participants must be understood and interpreted in the best way to fulfill the project success.

2. *Resource-related Processes*. - The Resource-related processes aim to plan and control resources. Examples of resources include computer software, equipment, facilities, finance, information, materials, personnel, services, and space.
3. *Personnel-related Processes*. - The quality and success of a project will depend on the participating personnel. These processes aim to create an environment in which personnel can contribute effectively and efficiently to the project. These processes are: the establishment of the project organizational structure, the allocation of personnel, and team development.
4. *Interdependency-related Processes*. - Projects consist of a system of planned and interdependent processes and an action in one of these usually affects others. The interdependency-related processes are project initiation and project management plan development, interaction management, change management, and process and project closure.
5. *Scope-related Processes*. - The project's scope includes a description of the project's product, its characteristics and how they are to be measured or assessed.
6. *Time-related Processes*. - These processes aim to determine dependencies and the duration of activities and to ensure timely completion of the project.
7. *Cost –related Processes*. - All project costs should be clearly identified (cost of activities, overheads, goods and services). Cost estimation should consider relevant sources of information and should be linked to the project´s breakdown structures. It must develop the cost estimation and to establish, communicate and document a system of cost control.
8. *Communication-related Processes*. - These processes aim to facilitate the exchange of information necessary for the project. They ensure timely and appropriate generation, collection, dissemination, storage and ultimate disposition of project information. The communication-related processes are communications planning, information Management, and Communications control.

Table 1. List of processes for project management defined by the ISO 10006:2003 Standard.

Clauses	Name
5	*Strategic processes*
6	*Resource-related processes and Personnel-related processes*
7	*Processes related to the Interdependency, Scope, Time, Cost, Communication, Risk and Purchasing*
8	*Processes related to measurement and analysis and continual improvement*

9. *Risk –related Processes*. – This refers to uncertainties and project risks may occur throughout the project. Risk related processes are risk identification, risk assessment, risk treatment, and risk control. Solutions to eliminate, mitigate, transfer, share or accept risks, and plans to take advantage of opportunities should preferably be based on known Technologies or data from past experience, without adding new possibilities for risk. If a risk is identified then Contingency Plan must be implemented.
10. *Purchasing-related Processes*. - These processes deal with obtaining products for the project. Purchasing planning and control, documentation of purchasing

requirements, supplier evaluation, subcontracting, and contract control are specified.

11. *Processes related to measurement and analysis and continual improvement*. – This clause provides guidance on how the originating organization and project organization should learn from projects. Both should use the results of measurement and of the analysis of data from the project processes and apply corrective actions, preventive actions and loss prevention methods to enable a continual improvement in current and future projects. The project organization should decide which nonconformities should be recorded and which corrective actions controlled.

Annex A of ISO 10006:2003 lists and summarizes 37 processes that are considered to be applicable for the majority of projects. ISO 10006 is a guidance document; it is not intended to be used for certification or registration purposes [9]. According with [5], the lack of a certification or its generality is the reason it has not been able to impose itself in organizations.

3 Approaches in Project Management of the PMI and IPMA

The *Project Management Institute*, or PMI as it is known, was founded in 1969, it was the first professional institution focused on improving the state of the art in Project Management. In 1976, PMI published the Project Management Body of Knowledge (PMBOK). This document collected most of the best practices applicable to most projects. In 1996, the guide to the Project Management Body of Knowledge was published; it is a revision of project management knowledge and processes. The structure of the PMBOK of 2004 is composed of 3 elements:

1. Conceptual framework for Project Management. - Basic terms about project management, project life cycle, product life cycle, organizational structures, and the environment in which project management is carried out.
2. The norms for project management of specific projects.
3. Identification of nine project management knowledge area of the project management process, as shown in Table 2. These knowledge areas examine five Project Management Process Groups and represent 44 project management description processes. However, the guide to the PMBOK does not specify which of these processes are realized in each stage of the project life cycle [6].

PMBOK was adopted as the IEEE standard 1490-2003. Project Management is defined in the PMBOK as the application of knowledge, skills, tools, and techniques to project activities to meet project requirements [10].

The PMBOK defines a Project as a temporary endeavor undertaken to create a unique product or service. Temporary means that there must be a start and finish date for the project.

PMI also developed the first version of the *Organizational Project Management Maturity Model* (OPM3®). OPM3 relates with four maturity levels for their projects

domains, programs, and project portfolios; covering issues related to knowledge, measures and improvements. The OPM3 process consists on getting knowledge to identify how to replicate best practices in organizational project management, to measure the maturity level of the current project management, and to identify the way to continuous improvement, this last based on the knowledge of best practices and the current maturity level of the organization's project management [11].

Table 2. List of Knowledge Areas of the Project Management Process in the PMBOK of 2004.

Num	Knowledge Areas
1	*Project Integration Management*
2	*Project Scope Management*
3	*Project Time Management*
4	*Project Cost Management*
5	*Project Quality Management*
6	*Project Human Resource Management*
7	*Project Communication Management*
8	*Project Risk Management*
9	*Project Procurement Management*

On the other hand, the *International Project Management Association* (IPMA) was born in Switzerland in 1965. Seven years later, it founded the *Association for Project Management* (APM) in the United Kingdom. The objective of APM was to improve the professional development and the promotion of Project management. In that moment, the APM considered that the PMBOK did not reflected the knowledge bases that their professionals required, thus, it created its own Body of Knowledge (BoK)

In 1998, the IPMA published its BoKs under the name of IPMA Competence Baseline (ICB), with versions in English, French, and German. The purpose of this effort was to harmonize the national certifications in Europe. ICB describes the knowledge, experiences, and personal attitudes that one might expect for a project manager and its collaborators. There are certain similarities between the certification schemes of the PMI and the IPMA. They both argue for a professional recognition as an additional guarantee for a costumer deciding to choose an organization that has a certified project manager [11].

The ICB proposes a structure with 42 elements, 28 of them are key elements, and 14 are additional elements, all of them help to measure the knowledge and experiences grouped in five competencies domains. However, each national association is responsible of redacting its own detailed document for its certification program, and its reference document called the National Competence Baseline (NBC). To create the NCB, it is required the 28 key elements, and at least 6 additional elements. This allows certain flexibility, since each country can consider cultural issues and competencies development in their own in projects management. For instance, the Spanish representation of the IPMA, known as the Spanish Association for Project Engineering (AEIPRO) published the Basis for the Competence in Project Management: Spanish NCB 3.0. This document includes 7 additional elements, and replaces 4 of the additional elements with aspects such as the idiosyncrasy, ethic, and professional deontology.

Additionally to the PMI, IPMA, and AEIPRO, there are other institutions interested in the debate about the basic concepts related to Project Management, and its close relationships with the cultural, academic, and professional context in which it is performed. Examples of these institutions are: *Association Francophone de Management de Project* (AFITEP) and the *Société Suisse de Management de Project* (SMP) [12].

4 Project Management according to SWEBOK and CMMI

The IEEE Standard Glossary of Software Engineering Terminology, IEEE 610-1990 Standard, defines Software Engineering as the application of a systematic, disciplined, quantifiable approach to the development, operation, and maintenance of software. In this context, Software Projects success can be seen from two different points of view [13]: 1) the costumer perspective, measured through the level at which the final product is accordance to the specifications, together with the economic value to the business (cost/benefits); and 2) the developer perspective, measured through the costumer's satisfaction level, and the development productivity.

Software Project Management is defined as a discipline which uses knowledge and skills to fulfill the goals of a Project by means of the execution of a set of activities. This implies controlling the costs, duration, risks, scope, and quality of the project during the whole Project Management Process [14].

In parallel with the current version of the PMBOK, in 2004 the IEEE Computer Society established for the first time a baseline for the *Body of Knowledge for the field of Software Engineering*. The Guide to the Software Engineering Body of Knowledge (SWEBOK) was established with the following five objectives: To promote a consistent view of Software Engineering Worldwide, To characterize the contents of the Software Engineering discipline, to provide a topical access to the Software Engineering Body of Knowledge, to provide a foundation for curriculum development and for individual certification and licensing material, and to clarify the place-and set the boundary of Software Engineering with respect to other disciplines [10]. In establishing a boundary, it is also important to identify what disciplines share that boundary, and often a common intersection with Software Engineering. The chapter 12 of SWEBOK presents, as related disciplines of Software Engineering, the Computer engineering, Computer science, Management, Mathematics, Quality management, Systems engineering, Software ergonomics and Project management. Likewise, the Knowledge Areas (KAs) are treated as a chapter in the Guide. The SWEBOK KAs are Software quality, Software requirements, Software design, Software construction, Software testing, Software maintenance, Software configuration management, Software engineering management, Software engineering process and Software engineering tools and methods.

The Software Engineering Management KA can be defined as the application of Management activities to ensure that the development and maintenance of software is systematic, disciplined, and quantified. In other words, this area addresses the management and measurement of Software Engineering, which occur at three levels:

organization and infrastructure management, project management, and measurement program planning and control. The last two levels consist on the combined treatment of the Project Management process and Software Engineering measurement [15]. As well, the SWEBOK states that management without qualitative and quantitative measurement represents a lack of rigor, and on the other hand, measurement without management means the absence of purpose and context. The Software Engineering Management KA is composed of six sub-areas: Initiation and Scope Definition, Software Project Planning, Software Project Enactment, Review and Evaluation, Clouse and Software Engineering Measurement. The first five sub-areas largely follow the IEEE/EIA 12207 Management Process [10], and the sixth observes the IEEE 12207.0-96 Standard.

Additionally to the SWEBOK, there is a strong interrelationship between the *Capability Maturity Model® Integration* (CMMI^{SM}) for Software Engineering and Project Management. The purpose of CMMI is to provide a guide to improve the organizational processes and the capacity to manage the development, acquisition and maintenance of products and services. Considering that the Project Management Processes are defined and repeatable, the project activities can be systematized, becoming more effective [11]. In this way, the models obtained by utilizing the CMMI framework depend on the bodies of knowledge of Systems Engineering, Software Engineering, Integrated Product and Process Development, and on the Supplier Sourcing.

The CMMI specification provides 25 process areas (22 in the version 1.1). The areas defined in the maturity level 2 are [16]: Requirements Management, Project Planning, Outsourcing Management, Quality Assurance, Software Projects Monitoring and Control, and Software Configuration Management.

CMMI is a process improvement model for software development, which complements the ISO 9001:2000 standard. Similarities and differences of between CMMI and ISO 9001:200 are reported in several works [16].

Comparing CMMI with the ISO 10006 or the PMBOK is out of the scope of this paper. Here, we only wish to highlight how CMMI has been designed to develop and evaluate the capability of the processes of an organization working in big projects.

5 Project Portfolio Management in the NMX-I-059-NYCE-2005 Standard

MoProSoft, now represented by the Mexican Standard NMX-I-059-NYCE-2005, is based on internationally recognized practices and Standards [17], as shown in Table 3. It offers a new process structure, some new process-documentation elements, a more precise process relationship, and an explicit process-improvement mechanism.

The official name for the NMX-I-059-NYCE-2005 is: Information technology-Software-Processes and Models of Processes and Assessment for software development and maintenance [19]. This NMX-I-059-NYCE-2005 consists of 4 parts and complements the current Mexican Standards NMX-I-006-NYCE (parts 01, 02 and 03) and NMX-I-045-NYCE. Part 04 of the NMX-I-059-NYCE-2005: Guidelines for Processes Assessment (EvalProSoft), is based on the ISO/IEC 15504-2:1998.

Table 3. Representation of well-know practices and Standards used in MoProSoft [18].

Model or International Standard	Percentage
ISO 9001:2000	92%
ISO/IEC 12207	95%
CMMI level 2	77%
PMBOK Edition 2000	90%

Part 01 of the NMX-I-059-NYCE-2005 presents the 9 required processes, grouped into three process categories. Management Category defines the Process Management, Project Portfolio Management and Resource Management processes. This category deals with management practices for process, projects portfolio and resource-management based on the guidelines established by the Top Management category. Operations category addresses the practices of software development and maintenance projects. Each process identifies the roles involved, the training required, and the infrastructure resources needed to support activities.

The purpose of Project Portfolio Management is to ensure that the projects contribute to fulfilling the organization's goals and strategies. This process comprises planning, performance, and evaluation and control. *Planning*: Generates or updates Project Portfolio Management Plan to manage internal or external projects, considering Internal Project Realization Alternatives. It establishes the Customer Communication Mechanisms. *Performance*: For each project, project descriptions are generated, assigning the responsible for the Specific Project Management. *Evaluation and Control*: Comprises the analysis of the progress reports. To keep Business Management advised, the Quantitative and Qualitative Report and the Customer-related corrective or preventive action report are generated.

On the other hand, Specific Projects Management is the responsible of systematically establishing and carrying out the activities that allow complying with the goals of a Project on time and within expected costs. This process applies knowledge, skills, techniques and tools to each one of the following project activities (Planning, Performance, Evaluation and control, and Closing) [19].

Annex A1 of the NMX-I-059-NYCE-2005, presents the relationship of the 9 processes defined by MoProSoft v1.3 with International Standards and Models like ISO 9001:2000, CMM v1.1 and ISO/IEC 12207:1995/Amd.1:2002 (E) - Information Technology – Software life cycle processes. Both the process of Project Portfolio Management and Specific Projects Management are supported by PMBOK guide 2000 Edition, but the relationship is not presented in the same way that other standards and models. This paper presents not only the relationship of the elements of ISO 10006:2003 with ICB from IPMA but also with processes defined in PMBOK of PMI and practices of the Mexican Standard NMX-I-059-NYCE-2005. The aim is to present a broader view of the conceptual framework of the contents to be taken into account in Project Management initiatives for software processes.

6 Analysis

After reviewing literature [6, 7, 8, 9, 10], a descriptive study was conducted as a basis for future correlation research. The descriptive study was done by examining the processes of the ISO 10006:2003 Standard for project management with other models and guidelines (Table 4). The study found that the PMBOK and ISO 10006 cover similar knowledge areas or product realization processes (concerning scope, cost, time, risk, communication and purchasing) [6]. By association, also the SWEBOK covers them, as it specifies that the PMBOK 2000 version is used in the description of the Project Management as a key area of the body of knowledge of Software Engineering.

The BoK of PMI focuses on the processes needed to deliver the Project on time within budget and complying with the specifications for the scope. The Bok of IPMA proposes to develop the project context in parallel with the technology, commercial and general management in order to ensure compliance with the objectives of the Project in a successful manner [11].

The strategic process of ISO 10006:2003 considers one of the critical success factors in software projects, known as commitment from Top Management. The success factors are able to facilitate the acceptance and incorporation of Management practices and Software Engineering proposals for programs to software process improvement. Strategic process approach emphasizes the role of top Management in establishing an effective quality system.

This factor is also necessary in the implementation of NMX-I-059-NYCE-2005. It specifies that there must be a correspondence between the objectives and indicators from the process of Business Management with the rest of the processes required by the standard. Likewise, in Strategic Planning activity of Business Management process is generated like a product the Organization´s Strategic Plan. Unfortunately, PMBOK, ICB and SWEBOK do not consider the level of commitment from Top Management.

Communication-related Processes define means for communication and collaboration that are satisfactory and improve both project quality and performance. Therefore ISO 10006, PMBOK, ICB and NMX-I-059-NYCE-2005 view as a need the definition of communication plan, distribution of information and the delivery of activities reports. However, [5] points out that the description of the proposed mechanisms for communication is still fuzzy. The Mexican standard NMX-I-059-NYCE-2005 is the only standard that the assignment of responsibilities and work products should be identified, controlled and stored in the Knowledge Base.

An advantage of ISO 10006 is that it considers the process of measurement and analysis and continual improvement as a key process, while PMBOK does not take into account in a detailed manner the quality sections of that process. In the NMX-I-059-NYCE-2005 standard, the Process Management process is responsible for quality management of processes, while the processes of Project Portfolio Management and Specific Projects Management are responsible for quality management of the processes' products.

Table 4. Comparison of the project management processes.

	Standard, Model or Guide				
Process	**ISO 10006:2003**	**PMBOK**	**ICB**	**SWEBOK**	**NMX-I-059-NYCE-2005**
Strategic Process					
Process Strategic	x				x
Resource-related processes					
Resource planning and Resource control	x	x			x
Personnel-related processes					
Definition of Project organizational structure	x	x	x	x	x
Allocation of personnel	x	x	x	x	x
Interdependency-related process					
Development of formal documentation	x	x	x	x	x
Project Management plan development	x	x	x	x	x
Monitor and Control Project Work	x	x	x	x	x
Scope-related processes					
Scope planning and scope definition	x	x	x	x	x
Scope change control	x	x	x	x	
Time-related processes					
Activity dependency planning	x	x		x	x
Estimation of duration	x	x	x	x	x
Schedule control	x	x		x	x
Cost-related processes					
Cost estimation and cost control	x	x	x	x	x
Budgeting	x	x	x	x	x
Communication-related processes					
Communication planning	x	x	x		x
Information Management	x	x	x		x
Performance reporting	x	x	x	x	x
Risk-related processes					
Risk identification and Risk treatment	x	x	x	x	x
Risk control	x	x	x	x	x
Purchasing-related processes					
Purchasing planning and control	x	x	x		x
Contract control	x	x	x	x	x
Processes related to measurement and analysis and continual improvement					
Quality assurance	x	x	x	x	x
Quality control	x	x	x	x	x

An advantage of ISO 10006 is that it considers the process of measurement and analysis and continual improvement as a key process, while PMBOK does not take into account in a detailed manner the quality sections of that process. In the NMX-I-059-NYCE-2005 standard, the Process Management process is responsible for quality management of processes, while the processes of Project Portfolio Management and Specific Projects Management are responsible for quality management of the processes' products.

PMBOK and ICB recommend the skills, competences and profile of the project manager. NMX-I-059-NYCE-2005 defines the role of Project Portfolio Manager, which is similar to the Senior Manager role defined in CMM, assigning to it general responsibilities on the organization's projects. The Specific Projects Manager role is similar to the Project Manager role defined by CMM and is under the responsibility of the Project Portfolio Manager.

7 Conclusions

PMI was the first professional organization aimed at researching and promoting the state of the art in Project Management. They published the body of knowledge of that field, which was later adopted as an IEEE standard. This document presented a descriptive analysis of the processes defined by the ISO 10006:2003 standard. In addition, this standard was compared to other models and standards for Project Management and Software Projects. By following one of them, the project manager will be able to integrate semantic knowledge and recommendations into his/her projects, still taking into account the intrinsic characteristics of the project, in case a specific methodology is needed.

Nowadays, the organizations are interested in implementing a Project Management Maturity Model. Their attained level of maturity will vary for each of them and will be based on the scope and specific needs of the project and the capabilities of its resources, more specifically on the profile of the projects director.

We found out that the 3 categories of the NMX-I-059-NYCE-2005 standard take into account the 11 processes defined by the ISO 10006:2003 standard. Therefore, conducting a correlation study aimed to find out the level of such association in the context of the capability level of the processes defined in the 2nd part of the NMX-I-059-NYCE-2005 Standard was set as a future work inside our current project.

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