Proposals for Postgraduate Students to Reinforce Information Security Management Inside ITIL®

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ABSTRACT

This paper is complementary to the previous work published and awarded as Best Student Paper at the International Conference EDUCON 2010 (sponsored by the IEEE Education Society): “Filling the gap of Information Security Management inside ITIL®: proposals for postgraduate students”. This paper reviews and updates those different proposals made at UNED, for post-graduate students, at the area of IT Services Management and tries to fill the gap of the treatment due in ITIL® (Information Technology Infrastructure Library) to Information Security Management. The treatment given to Information Security Management in ITIL, both versions 2 and 3, are analyzed. The different post-graduate courses offered that fill these methodologies and the opinions and evaluations of the students are discussed.

Keyword: ISMS, ISO 27001, ITIL, IT Services Management, Professional Education

INTRODUCTION

Every kind of organization is increasingly dependent of IT services to satisfy their corporate objectives and to cover their business needs (Ruiz, 2007). This tendency provokes that IT (Information Technologies) Service Management is becoming an important factor for the success or failure of business in many organizations. A cause of the increase costs of
IT services and low quality services is due to inadequate IT Services Management or does not work of desirable form (Ruiz, 2007).

But first of all, what is Service Management? Service Management is a set of specialized organizational capabilities for providing value to customers in the form of services. And, what is a Service? Service is a means of delivering value to customers by facilitating outcomes customers want to achieve without the ownership of specific costs and risks.

There are a number of widely applied standards and methodologies used for the alignment of Information Technologies (IT) departments with the business, inside each organization. One of the most relevant is called ITIL® (Information Technology Infrastructure Library). ITIL is the most widely accepted approach to IT service management in the world. ITIL provides a cohesive set of best practices, drawn from the public and private sectors internationally.

After this introduction of the context where we have done our research, the rest of the paper is organized as follows.

First, we do a small introduction to ITIL (Information Technology Infrastructure Library) both versions (2 and 3) and ISO/IEC 27001 (International Organization for Standardization, 2005). In the next section we present the Security Management basis needed and its relation with ITIL. After that, this paper describes different proposals made at Electrical and Computer Department from UNED (Spanish University for Distance Education), for post-graduated students, at the area of IT Services Management. We try to fill this knowledge gap, of paramount importance, of security treatment due in ITIL. We explain the characteristics of these topics at distance courses, and how we try to stimulate the acquisition of practical knowledge by the students, promoting the practical work as a significant part of their works for the course.

Finally, we show the students evaluation of the last three years for these two courses that really encourages us to refine the courses and follow in the same direction.

**ITIL® VERSION 2**

ITIL (Information Technology Infrastructure Library), nowadays the most widely accepted IT service management framework in the world. ITIL arose in the ‘80s developed by the Office of Commerce of the British Government (Office of Government Commerce - OGC UK). It provides a set of best practices detailed description, grouped in books, offering an extensive list of roles, threats, procedures and responsibilities that can be adapted to almost any kind of IT organization. The enormous amount of topics that those publications cover makes ITIL a reference, more essential day by day, to establish new improvement goals inside an IT organization.

ITIL Version 2 (which appeared at the end of the ’90s) has two main areas related to Service Management as you can see in Figure 1: Service Support and Service Delivery. ITIL provides a set of best practices for the ITSM, promoting a quality approach to obtain effectiveness and efficiency in the use of Information Systems.

The other four ITIL version 2 core books (Planning to Implement Service Management, The Business Perspective, ICT Infrastructure Management and Application Management) are out of our research, because they do not have processes so they have not the same importance than Service Support and Service Delivery have.

Inside Service Support book we can find the following six parts (which are five processes and a function): Incident Management, Problem Management, Configuration Management, Change Management, Release Management and a very important function: Service Desk.

Inside Service Delivery we can find also six parts (which are processes too): Service Level Management, IT Financial Management for IT Service, Capability Management, Availability Management, IT Service Continuity Management and Security Management.

ITIL processes all together are shown in Figure 2, on the right you can see Service Support processes and on the left you can see Service Delivery ones:

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