Chapter 39
Promoting Success in the Introduction of Health Information Systems

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ABSTRACT

The significant number of publications describing unsuccessful cases in the introduction of health information systems makes it advisable to analyze the factors that may be contributing to such failures. However, the very notion of success is not equally assumed in all publications. Based in a literature review, the authors argue that the introduction of systems must be based in an eclectic combination of knowledge fields, adopting methodologies that strengthen the role of organizational culture and human resources in this project, as a whole. On the other hand, the authors argue that the introduction of systems should be oriented by a previously defined matrix of factors, against which the success can be measured.

1. INTRODUCTION

The success behind the Introduction of Information Systems (IIS) can be as important as the system itself. Notwithstanding its qualities, if a system is not successfully introduced it will not achieve its primary goal: enhancing the performance of a company. On the contrary, it may contribute to the degradation of operations and become a risk factor in the business field.

Several reports of unsuccessful introduction of information systems cases in the health field (Ash, Marc, & Enrico, 2004; Avison & Young, 2007; Balka, 2003; Heeks, 2006), as well as our personal knowledge of a few cases, led us to the investigation and identification of the factors that should be explored in order to promote the success of IIS in this area. This analysis will contribute to

a wider investigation where we intend to develop a change management methodology for the introduction of health information systems.

Current organizational context is extremely dynamic, so the performance, the success and the very survival of organizations depend on their capacity to adapt themselves or even to take the lead in change. On the other hand, information systems assume a significant role in supporting the organizations business processes. This reality raises several questions. Will the organizations successfully rise up to this challenge? How effective will their answers be? Have the existent theories and models revealed themselves effective for the Introduction of Information Systems in organizations? If so, can they be improved? These are some of the questions that frame this investigation.

In this investigation, the term "Introduction of Systems" does not refer only to the entry of the system but also, in a wider sense, to the complete development of an information system, with all tangible and intangible effects associated with the information system introduction or change.

In the following sections we analyze different areas that frame the development of these systems and different risk factors associated with the IIS, we highlight the role of change management in the promotion of success in information systems and the importance of human resource management in this process, we identify some of the references that should be considered in the promotion of successful IIS, we discuss the criteria that should be observed when measuring success and, finally, we list a few conclusions.

2. THE NATURE OF SYSTEMS DEVELOPMENT

The available literature reports several unsuccessful cases in the introduction of health information systems (Avison & Young, 2007; Day, 2007; Heeks, 2006). This lack of success is mainly explained by a development process lag between the final organization and the organization for which the system was developed. This lag stems primarily from social and human questions that do not receive the appropriate consideration (Brooke & Maguire, 1998).

The development of systems is generally approached as a technological question. However, the body of literature reveals another perspective, according to which information systems should be primarily regarded as social systems (Kukafka, 2003; Ryan, 2010). The influence of this interpretative perspective in practice has been growing. This work intends to follow and deepen this perspective. If information systems are more than a decision-making support tool and if the projects go beyond the applications of the system development cycle described in manuals, then technicians need to understand a whole new set of questions, mainly social and organizational questions.

Figure 1 depicts a set of fields, without assuming an exhaustive character, and reveals that the development of systems, even in a relatively static situation, is a complex area. But considering that most organizations work in dynamic environments, the degree of complexity is significantly higher.

Methodologies for the development of information systems are mainly focused in a subset of organizational problems. Stuart Maguire (2000) proposes a higher alignment between technologies and the business area of the organizations where these technologies are being introduced. The author underlines the distinction between a simple implementation, with a more technological nature, and the introduction of a system with a higher social inclination, where all organizational process-induced changes are taken into consideration. In the present article, as was previously mentioned, we will pursue the latter perspective. Historically, Information System developers tried to reduce the complexity of this organizational

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