The Many Sides of Human Resource Information Systems

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ABSTRACT

The history of human resource information systems stretches to the 1960s, when human resource data were separated from payroll systems. In the 1980s, researchers and practitioners became more interested in human resource information systems, and in the 1990s several studies, articles, user experiences, opinions and descriptions were published in journals, magazines and on the internet. Still, despite the number of literature, no survey or framework exists that constructs a synthesis of the fragmented issues of human resource information systems from both of these viewpoints, that is, information systems and human resource management. In this paper, an initial framework for human resource information systems is introduced to underline the importance and the need for consolidating the knowledge on the phenomenon.

Keywords: Human Resource Information Systems, Human Resource Management, Human Resources, Information Systems, Information Technology

INTRODUCTION

The history of human resource information systems is short in terms of both practice and research. In practice the history begins in the late 1950s with payroll systems and continues into the 1960s when the first automated personnel systems were separated from payroll systems and the data of employees was made available (Kavanagh, Gueutal, & Tannenbaum, 1990; Martinsons, 1997; Walker, 1982; Walker, 1993). In the 1960s and 1970s, only large companies could afford to invest in the hardware and software required for human resource information systems. Additionally, the computers were bulky and the software was difficult to use.

At that time, the main task of human resource information systems was the record-keeping of employee data. Later, the technology was further developed and cheaper equipment as well as more versatile software for human resource activities became available (Haines & Petit, 1997; Kavanagh et al., 1990; Walker, 1993).

Since the 1980s there has been debate about human resource information systems and their role in organizations (DeSanctis, 1986; Kovach, Hughes, Fagan, & Maggitti, 2002). The history of research on the topic, for its part, starts in the 1980s when researchers became interested in human resource information systems (DeSanctis, 1986; Walker, 1982). In the 1990s several studies, articles, user experiences, opinions and descriptions were published in journals, magazines and on the internet (Axel, 1998;

Broderick & Boudreau, 1991, 1992; Elliot & Te-vavichulada, 1999; Haines & Petit, 1997; Hubbard, Forcht, & Thomas, 1998; Kossek, Young, Gash, & Nichol, 1995; Kovach & Cathcart, Jr., 1999; Rodger, Pendharkar, Paper, & Molnar, 1998; Stroh, Grasshoff, Rudé, & Carter, 1998; Tannenbaum, 1990; Townsend & Hendrickson, 1996; Van der Linden & Parker, 1998).

Various issues have arisen from these discourses and publications. In addition, some researchers have constructed models and definitions for human resource information systems (e.g., Broderick & Boudreau, 1992; Kavanagh et al., 1990; Mayfield, Mayfield, & Lunce, 2003; Walker, 1982; Walker, 1993). Human resource information systems have developed continuously and today they have their own role among other managerial information systems in organizations. However, the research on human resource information systems is still in its infancy.

Though the research of human resource information systems has just recently begun to develop (see Ball, 2001; Mayfield et al., 2003; Hussain, Wallace, & Cornelius, 2007), there are quite a few studies that explicitly discuss human resource information systems, upon which proper theories can be built. Still, the common research areas of human resource information systems can be categorized under the following five research streams: The first stream concentrates on technological choices and the challenges of designing and implementing the systems (Ball, 2001; DeSanctis, 1986). The second stream approaches the subject from the perspective of software design (Cascio & Awad, 1981; Haines & Petit, 1997; Niederman, 1999). The third stream criticizes the above streams and instead stresses the organizational use of human resource information systems (Ball, 2001; Hussain et al., 2007), the users of human resource information systems and their processes (DeSanctis, 1986; Haines & Petit, 1997; Ruël & Bondarouk, 2004a) and the usage and utility of human resource information systems in organizations (Amit & Belcourtm, 1999; Kovach & Cathcart, 1999).

The fourth stream, then, rather than focusing on the system itself, focuses on analyzing and explicating the past, current and future developments of human resource information systems (Atwater, 1995; Haines & Petit, 1997; Kossek et al., 1994; Niederman, 1999; Tannenbaum, 1990; Townsend & Hendrickson, 1996; Van der Linden & Parker, 1998). The fifth stream brings into the discussion the vagueness of the conceptual development of the research on human resource information systems and demonstrates how the research on human resource information systems is in its early stages (e.g., Mayfield et al., 2003). The underlying assumption, based on the above streams, is that there is no single simple view for looking at human resource information systems, but that the different angles should be taken under examination holistically in order to understand this complex phenomenon as a whole (Lippert & Swiercz, 2005).

As has been reiterated, the research on human resource information systems has resulted in many discussions which, however, are still in their beginnings or are waiting to be opened up. There is a lack of research which constructs a synthesis out of the fragmented studies of human resource information systems. Hereafter, the objective of the present study is to review the extensive literature and internet sites on the subject and introduce an initial conceptual framework of human resource information systems for future studies. The intent of the framework is not to cover the human resource information systems field as a whole, but to signal that it is now time to build more rigorous theoretical frameworks and conduct theory-driven empirical studies. The research question to be answered in this paper is: What are the elements of effective research design for studying human resource information systems as a multidisciplinary research subject?

The present paper proceeds so that first the main concept of the study, namely human resource information systems, is defined. Secondly, the initial framework of human resource information systems is presented as a research structure for future studies of human resource

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