HRIS IMPLEMENTATION IN UNIVERSITIES: ISSUES, OPPORTUNITIES AND CHALLENGES

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ABSTRACT

Human resource management (HRM) has evolved into a strategic functional area in various organisations in the recent years. Essential human resource functions have become critical for the overall functioning of the firms. Human resources management must be performed in line with the strategic purpose of the organization. Information systems play a vital role to help human resource management to integrate into the overall systems of the organization. HRM is considered information intensive and is a complex process. This resulted in the evolution of Human Resource Information Systems (HRIS) in the last two decades. HRIS is a comprehensive and systematic method of collating and validating data needed by an organization regarding its human resources. In this back ground, this research paper attempts to review the limited research on the implementation of HRIS in various organisations. The focus of this research is to highlight the implementation of HRIS in universities. The paper presents a review of the past research and highlights the major findings of the earlier research on implementation of HRIS in university education system.

Key words: Adoption; consequences; human resource information system; human resource management; universities;

Introduction

Human resource information system (HRIS) is defined as a system which is employed to access, store, modify, retrieve and distribute the relevant information about a firm's human resources (Kavanagh et al, 2012). In the new millennium, HRIS has assumed strategic significance for increasing firm competitiveness. HRIS is critical to the functioning of an organization since most of the HR processes can be implemented to improve the functioning of the firm. HRIS uses technology that assists the processing of information related human resources of a firm (Chakraborty & Mansor, 2013).

The growing utility of HRIS can be attributed to the increase in the usage of internet across the globe. The design and implementation of HRIS has operational, relational and transformational consequences. According to the results of the earlier research, HRIS is considered to provide three main benefits for all firms: cost reduction, improvement of services and re-orientation of HR managers to become more strategic in their approach.

The primary purpose of any HRIS is to provide accurate and timely information regarding human resources of an organization HRIS can be used for strategic, tactical and operational decision making. HRIS helps in increasing the competitiveness of firms by improving HR operations and management processes. The ability of the firms to leverage the potential of an effective HRIS depends on various factors – size of the organization; amount of top management support and commitment; availability of resources; HR philosophy of the company and its vision; managerial competence and the motivation of employees in adopting to change.

During the past three decades, research on HRIS had acquired a unique position in the information systems research domain. This is due to the fact that HRIS has an impact on every individual employee of any organisation and consists of sensitive personal data regarding the employees. Despite the vast amount of research conducted in the area of HRIS, HRIS

implementation is still faced with a few problems. This is possibly due to the fact that many firms are not fully aware of the critical factors that lead to successful implementation of HRIS.

HRIS is defined as the interrelated components working together to collect, process, store and disseminate information to support decision making, coordination, control, analysis and utilization of an organization's human resources management activities. The concept has three stages of development. The first stage is mechanical processing of the routing data relating to the paper work at the operational level in the organization. The second stage of management information system (MIS) involves some amount of detailed investigation and flexibility in report generation. The third stage is decision support system (DSS) which assists decisions at higher levels in the work place. Hence, HRIS is considered as a systematic procedure for collecting, storing, maintaining and recovering data required by the organisations about their human resources, personnel activities and organizational characteristics. The fundamental aim of the HRIS is to facilitate strategic, tactical and operational decision making, to appraise programmes, policies, practices, to aid in daily operations, to provide information and support to the management, development and utilization of HR in an organization.

Successful employees, process and technology changes that enable a new level of productivity and performance leads to innovation. In the design of any integrated solution such as HRIS, these three components play a very important role – employees; process and technology. Redesigning the role of HRIS not only enhances the performance of the function but it also has the capacity to transform the HR area into a repository of new wealth. HRIS also has a probable responsibility in decision-support and strategic maneuvering and this helps in taking informed decisions, to extract most out of human resources, to streamline HR processes and better allocation of human resources.

Human Resource Information System (HRIS) is a cross-disciplinary subject that encompasses the two critical areas of Human Resource Management (HRM) and Information Technology/Systems (IT/IS). With the rapid emergence of Enterprise Resource Planning (ERP) Systems that attempt to integrate various business modules within the information architecture of a business enterprise, HRIS has become a critical area of attention for management professionals. HRIS is the composite of databases, computer applications, and hardware and software necessary to collect/record, store, manage, deliver,

present and manipulate data for human resources. Despite the data intensiveness of the HRM function, it is one of the last management functions to be targeted for automation. Powered by information systems and the internet, today almost every process in every function of HRM is being reengineered.

The rapid development of the Internet during the last decade has also boosted the implementation and application of electronic Human Resource Management (e-HRM). Surveys of HR consultants suggest that both the number of organizations adopting e-HRM and the depth of applications within the organizations are continually increasing. In addition, an escalating number of practitioner reports provide anecdotal evidence that e-HRM is becoming increasingly common and may lead to remarkable changes Consequently, academic interest in e-HRM has increased, as several special issues of HR-related journals demonstrate. In the interim, there is an initial body of empirical research in e-HRM. However, since this research stems from several disciplines and is scattered throughout numerous journals and since initial reviews are not encompassing (Anderson, 2003; Lievens & Harris 2003; Welsh, Wanberg, Brown, & Simmering, 2003), the results of these studies remain unclear at present.

Even though the e-HRM concept is widely used today there are hardly any explicit definitions. The few detectable definitions are rather general and emphasize the Internet supported way of performing HR policies and/or activities. Leaning on these intensions, the following definition of e-HRM can be specified: e-HRM is the (planning, implementation and) application of information technology for both networking and supporting at least two individual or collective actors in their shared performing of HR activities. This concept highlights several crucial aspects of e-HRM. At the outset, e-HRM utilizes information technology in a twofold manner: First, technology is necessary to connect usually spatially segregated actors and enable interactions between them irrespective of their working in the same room or on different continents, i.e. technology serves as a medium with the aim of connection and integration. Second, technology supports actors by partially – and sometimes even completely – substituting for them in executing HR activities. Hence, information technology serves additionally as a tool for task fulfillment.

The planning aspect accentuates the systematic and anticipated way of applying information technology. The shared performing of tasks through at least two actors' points out that the sharing of HR activities is an additional feature and underlines the aspect of interaction

and networking. The consideration of individual and collective actors takes into account that e-HRM is a multilevel phenomenon; besides individual actors, there are collective actors like groups, organizational units and even whole organizations that interact in order to perform HR activities. Beside e-HR(M), there are some further concepts which obviously refer to the same phenomenon. Widely accepted are such terms as virtual HR(M), web-based HR(M) or business-to-employee ("B2E").

"Virtual HRM" refers to technological mediated networks of different internal and external actors providing the firm with the HR services needed without the further existence of a conventional HR department which therefore becomes "virtual". E-HRM is additionally open to less developed varieties of technology application, e.g. the shared performing of an application process by a conventional HR department and an applicant via the Internet. "Web-based HRM" couples the concept to Internet technologies. E-HRM, as well, is particularly web-orientated, but also comprises additional technologies like networked ERP Systems.

Finally, "business-to-employee" reduces the concept to the internal actor categories of "Business" (presumably line managers and HR professionals) and "employees". In contrast, e HRM is open to further relevant actor categories like applicants or consultants. To sum up, these further terms undoubtedly direct attention to main characteristics of the same phenomenon but are of somewhat narrower intensions. Thus, in order to comprehensively embrace relevant aspects, the e-HRM term is used.

In this research paper, an attempt is made to understand the past and current status of HRIS implementation in various organsations. The primary focus of this research is to highlight the status of HRIS implementation in various universities across the globe. The next section presents a review of literature followed by a section on the research methodology. Subsequently, a discussion on the status of HRIS implementation is presented. The last section presents the conclusions and future research directions for effective implementation of HRIS in universities.

Review of Literature

Hosie (1995) examined the significance of HRIS in improving quality in higher educational institutions. The author highlights that people and information will be the future focus of advances in strategic management systems both in educational and commercial/industrial circumstances.

Bisaso et al (2008) investigated the use of computer information systems (CIS) in education management in Uganda and Botswana. The findings explore the levels of use, the impact of CIS use and the factors that influence the utilization of the CIS among educational institutions in both the countries. The findings indicated that user perceptions of the impact of CIS were very positive in general. The extent of CIS usage was found to be specifically dependent on the extent of training and the support of the HRIS administrator. The authors concluded that carefully designed user training courses are considered important in promoting wider and effective use of HRIS among the educational institutions in Uganda and Botswana.

In the context of higher education institutions, Rawat (2008) states that the efficiency and effectiveness – quality of an HRIS will enable universities to format a profile of their staff – their strengths and weaknesses, so they will know what they have in the personnel sense. Accordingly, they will be able to structure appropriate development promotion training and recruitment. Therefore, then, right people will be in the right place at right time-quality human resource and personnel management. Rawat (2008) also argues that nowadays higher education institutions face a significant task; improving learning environments at the same time, reducing administrative operating cost. Moreover, the ability to effectively budget for and managing different types of employees, recruiting and retaining skilled members requires full integration of HR data with student information systems. Therefore, with so many demands, higher education institutions need a powerful business solution that will help them managing student, graduates and employment information and financial data. Therefore, application of HRIS system in higher education institutions provide the utmost updateability use of resources, speed, compatibility, updateability, accessibility, data integrity, privacy and security (Rawat, 2008)

Rezgui and Marks (2008) explored the factors affecting information systems awareness and security among university staff in UAE. The research concluded that various factors like conscientiousness, cultural assumptions & beliefs and social conditions affect university staff behavior and attitude towards work, in general, and information security awareness, in particular.

Payne et al (2009) compared the performance appraisal system using online method and traditional paper-pencil method at a large southern university in USA. 293 employees were respondents for online performance appraisal system and 372 employees were respondents for traditional appraisal system. The results indicated that online appraisal system either had positive

or no effect on employee perceptions regarding the appraisal system. The authors concluded that universities need to remove the security concerns of the employees regarding the online appraisal system before implementation.

Altarawneh and Al-Shqairat (2010) investigated the implementation of HRIS in Jordanian universities. The sample included respondents from 6 Jordanian universities which have more than 1000 employees. A structured questionnaire was employed with four sub-sections – general information; HRIS applications (15 questions); HRIS barriers (11 questions) and HRIS benefits (11 questions). The findings of the research indicated that quick response and timely access to information were the main benefits of HRIS. Inadequate financial support, resistance to cultural change and lack of commitment from the top management was found to be the key barriers to implementation of HRIS among Jordanian universities.

Bambir et al (2010) analyzed the HRIS practices at University of Zilina in Slovakia and University of Zagreb in Croatia. The authors have employed popular HRIS models and have identified important indicators of HRIS implementation in universities. The indicators identified by the authors include: number of academic people involved in formation of university strategies; existence of HRM bodies; existence of HRM strategy; number of HRM representative involved in strategy formation in universities; existence of HR development; total amount of money spent on education and training of academic employees; amount of money spent on education and training per employee; percentage of all employees who are trained in the areas of performance evaluation and other HR activities. The findings of this study have helped to define and develop HRM process and HRIS for the universities.

Davarpanah and Mohamed (2013) employed the DeLone and McLean information systems success model to investigate the implementation of HRIS in a Malaysian university. A convenient sample of 103 respondents among a population of 6000 teaching and non-teaching staff of a university in Malaysia was considered for the research. Data was analyzed using factor analysis and reliability analysis. Based on the analysis, the following factors were considered to have a significant impact on implementation of HRIS – information timeliness; understandability of the information; completeness of information; system responsiveness; functionality; responsiveness, technical competence; empathy and safeguards against information security. The authors concluded that information quality, system quality, service quality, structural assurance

and user satisfaction were critical success factors in the effective implementation of HRIS in the university.

DeLone and McLean proposed an interactive and taxonomy model to conceptualize and operationalise the information system (IS) success factors. In the model, six components of information systems success were proposed: information quality, system quality, user satisfaction, use, individual impact and organizational impact.

Samkarpad (2013) investigated the scenario of HRIS implementation in universities and affiliated institutions in Hyderabad region (India). The author studied how the institutions of higher education adopted HRIS in their functioning. The study concluded that there is no significant association between perception of respondents regarding the applications, benefits and barriers of HRIS.

Bamel et al (2014) have explored the usage, benefits and barriers of HRIS in 7 seven state universities in India. A 26 item questionnaire was employed for registering responses from 90 faculty members in the sample of universities. Descriptive statistics, t-test and ANOVA test were used to analyze the responses. The main findings of the research indicated that HRIS is mainly used for administrative function and not as a strategic function. Among the benefits of HRIS 'absence monitoring', 'performance appraisal', 'compensation management' and 'discipline procedure' were identified as the main benefits. 'Quick response and access to information', 'improving employee services' and 'reducing paper work' were perceived to be the main benefits of HRIS. The findings of the research also indicated that 'lack of commitment of top management', 'inadequate knowledge' and 'lack of expertise in using HRIS' were identified as the principal barriers to implementation of HRIS in Indian universities.

Phahlane and Kekwaletswe (2017) studied Human resource information systems (HRIS) that are adopted and used in various organizations all over the world with a specific emphasis on universities in South Africa that have also adopted and are using such systems for their human resource (HR) purposes. The authors concluded that there is still a lack of understanding on how organizations such as universities adopt and use HRIS. The research study provides a conceptual research framework for HRIS adoption and use. Specifically this research addresses the determinants and dimensions of HRIS as both a process (adoption and use process) and as an outcome in a university. The simultaneous examination of both adoption and use, and how the

adoption process may influence use is a novel, holistic approach to understanding IS within organizations

Research Methodology

A systematic bibliographical search on HRIS research studies was conducted to include for this research. Various online resources like Emerald, Elsevier, SAGE, Wiley, Springer and Proquest have been searched to identify the most relevant studies on HRIS. Among the various past studies, this research focused on the latest studies during the new millennium (2000 onwards). The specific focus of this research was on the studies that reported the implementation of HRIS in universities/educational institutions. The studies included in the literature review concentrated on the results of the empirical studies of HRIS implementation in various universities.

Discussion

Analysis of various studies on HRIS implementation in universities indicated that some studies focused on the factors affecting HRIS adoption while many of the other studies highlighted the factors affecting the consequences of HRIS implementation. The factors affecting HRIS implementation were classified as technological, organizational, people and environmental factors. Similarly, the factors impacting the consequences were found to be classified as technological, organizational and people factors.

Among the organizational factors impacting the consequences of HRIS implementation, a few factors were found to be more significant. They are – costs; effectiveness; efficiency; communication; relationships; services; HR planning; knowledge management and strategic focus. Among the people factors the following factors were found to be important. They are – attitudes/beliefs and satisfaction. In the case of factors affecting HRIS adoption, technology factors included the following – applications and characteristics of information; integration of HRIS with the overall organizational information systems. Additionally, organizational factors included demographic profile of the firm; knowledge & skills of employees and organizational policies. Lastly, people factors included communication systems; culture of the organization; training and leadership which had an impact on adoption of HRIS implementation.

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The primary purpose of this paper was to introduce the academic and practitioner field of human resource information systems (HRIS), emphasizing that an HRIS is at the intersection of IT and HRM. The evolution of the field of HRIS, from its initial role of a record keeper concerned with only transactional HR activities, such as changing addresses on employee records, to one of becoming a strategic partner was covered in detail. This evolution demonstrated that, as IT improved over time, so did HRM, and these improvements made their marriage into HRIS that much easier. The advances in the field of HRIS also led to a reduction in the percentage of time that HR professionals spent on routine transactional and traditional activities and an increase in the percentage of time spent on transformational ones.

The increase in time spent on transformational activities improves the "value added" by HRM programs to the strategic plan of an organization. The distinction between HRIS and e-HRM was discussed along with the development of HRIS and how it has helped enable HRM to become a strategic partner in organizations, which then led to the emergence of strategic HRM (Strategic HRM) as a field of study.

Conclusion

Research on HRIS had witnessed considerable progress in the recent years. A review of the past literature indicates that HRIS has evolved as a key success factor in achieving organizational effectiveness. The key finding of this research is that notably all the studies focused on two domains of HRIS – a) factors affecting HRIS adoption and b) factors affecting HRIS consequences. All the factors focusing either on HRIS adoption or HRIS consequences were broadly divided into technological, organizational, people and environment factors.

In the context of universities or educational institutions, past research was limited to a few countries. Some studies have been reported in the context of emerging economies like India, Malaysia and some African countries. In the Indian context, very few studies have focused on HRIS implementation in universities though a few studies were reported in sectors like banking or hospitality industries.

India is fast developing as an educational hub in the international scenario and hence effective HRIS implementation in Indian universities will help in enhancing the organizational performance of the universities in the future. Effective implementation of HRIS will help

organisations to provide accurate and timely information for HR decision making for all the stakeholders. The growth in the field of information technology will serve as an empowering tool for HR professionals in universities and will help them to provide increased value in their contribution in enhancing the quality of university education system in the long run.

References

- Altarawneh, I.,& Al-Shqairat, Z. (2010).Human resource information systems in Jordanian universities. *International Journal of Business and Management*, *5*(10), 113.

- Bambir, D., Drozdová, M., &Horvat, J. (2010, January).Applicability of Existing HRM Models in Order to Develop HRIS Model for University.In *World Multi-Conference on Systemics, Cybernetics and Informatics (14; 2010).*

- Bamel, N., Kumar Bamel, U., Sahay, V., &Thite, M. (2014).Usage, benefits and barriers of human resource information system in universities. *VINE: The journal of information and knowledge management systems*, *44*(4), 519-536.

- Bisaso, R., Kereteletswe, O., Selwood, I., &Visscher, A. (2008).The use of information technology for educational management in Uganda and Botswana. *International Journal of Educational Development*, *28*(6), 656-668.

- Chakraborty, A. R.,&Mansor, N. N. A. (2013). Adoption of human resource information system: A theoretical analysis. *Procedia-Social and Behavioral Sciences*, *75*, 473-478.

- Davarpanah, A., & Mohamed, N.(2013, November). Human Resource Information Systems (HRIS) success factors in a public higher education institution context. In *2013 International Conference on Research and Innovation in Information Systems (ICRIIS)* (pp. 79-84).IEEE.

- DeLone, W, H., & McLean, E, R,. (1992). "Information SystemsSuccess: The Quest for the Dependent Variable," *Informationsystems research,*3 (1), pp. 60-95

- Hosie, P. (1995). Promoting quality in higher education using human resource information systems.*Quality Assurance in Education*, *3*(1), 30-35.

- Kavanagh, M. J., Thite, M., & Johnson,R. D. (2012). Human resource information systems: basics, applications, and future directions (2nd ed.). United States of America: Thousand Oaks : SAGE.

- Payne, S. C., Horner, M. T., Boswell, W. R., Schroeder, A. N., & Stine-Cheyne, K. J. (2009). Comparison of online and traditional performance appraisal systems. *Journal of Managerial Psychology*, *24*(6), 526-544.

- Phahlane, M. M., &Kekwaletswe, R. M. (2017,March).A conceptual research framework for human resource information systems adoption and use in universities. In *Information Communication Technology and Society (ICTAS), Conference on* (pp. 1-6). IEEE.

- Rawat, M.(2008).Application of Human Resource Information System (HRIS) In Higher Education – HolisticApproach. In: Trusting Islam, Knowledge and Professionalism in ECER Development Conference, 15-17December, Kota Bharu, Malaysia

- Rezgui, Y.,& Marks, A. (2008). Information security awareness in higher education: An exploratory study. *Computers & Security*, *27*(7), 241-253.