Use of Information Technology for Talent Acquisition in IT and ITES Sector

Dr. Renu Bhargava
Director, Indira School of Business Studies
Pune, India

Abstract

Despite an era of global recession qualified staff is still rare due to the demographical situation worldwide. Companies are forced to develop new cost saving recruitment strategies to ensure the necessary supply of talent, while recruitment budgets are pruned. In this area, the use of information technology creates interesting opportunities to contact candidates and process applications, not only more economically but also more quickly. The actual value of the contribution made by IT in HR is nevertheless still disputed. Many human resource systems are presently being modified so they can be administered using various forms of computer technology. These technological advances are being driven primarily by strong demands from human resource professionals for enhancements in speed, effectiveness, and cost containment.


Introduction

The researcher has clearly put forth the argument for adopting Information Technology as a functional reality for facilitating procurement of human resource within the IT sector. The usage, implementation and impact of information technology must be weighed with respect to the strategic direction of the firm. This study is meant to provide a perspective to the reader to understand the relevance of adopting information technology as a suitable model for sourcing talent. At the same time there is scope for further research to examine how Human Resource (HR) professionals and managers in different organizations can establish suitable model of procurement using technology with clear understanding of its effects on strategic HR decisions regarding procurement, with respect to talent acquisition. This insight drives the current inquiry into one of the principal levers of modern human resource management identified as Human Resource Information System and its us talent acquisition. This research paper is presented through case study approach and presents results obtained from the survey of seven IT and ITES companies, regarding the use of an automated recruiting and screening system. The system must allow, at the most fundamental level, provision for recruiting and the automated administration of professionally developed, job-related questions aimed at deciphering whether an applicant meets the job requirements. Model of information technology existing in each case has been centered on following HR Life Cycle stages for Procurement from Vacancy to Recruitment. The purpose of this paper is to discuss the contribution of Information Technology to staffing in emerging IT markets. This includes a comparison of the relevant aspects of recruitment and implications derived from case study investigation of seven IT and ITES Firms. The author of this paper concludes that the functionality of IT in Recruitment should be supplemented with local adaption in
order to achieve the best support for talent acquisition. Based on case study this paper contends that information technology is a powerful tool in forging this link, and advocates an increased understanding of this concept to develop its maximum potential. The study aims at investigating what role if any does information technology play in procurement. This study describes how Information technology is expected to drive Human Resource’s transition from a focus on pure procurement to talent acquisition. This strategic role is expected not only to add a valuable dimension to the HR function, but also change the competencies that define HR professional and practitioner success. The researchers used two techniques to investigate the IT impact on recruitment for these firms. Both questionnaire survey and in-depth semi-structured interviews were used. Whilst the former was used to obtain responses from HR professionals in organizations, the latter targeted a small number of senior executives, in order to gain deeper insights into emerging issues in recruitment. The theoretical framework for this paper is based on HR literature concerning staff Recruitment and applications of knowledge-based systems. The argument is illustrated by data accumulated from seven IT firms.

Research Design

Current desk research is supplemented with case study documentation of seven IT and ITES firms and just as Bromley (1990) has described case study as a “systematic inquiry into an event or a set of related events which aims to describe and explain the phenomenon of interest” (p. 302); the field data has been used as harbinger for conceptual data, thus establishing the contextual relevance. While there is utility in applying this method retrospectively, it is most often used prospectively. The nature of the research questions required that the procurement activity of each case be studied through the gathering of an array of data. This enabled the researcher to develop greater levels of understanding about the management of procurement in each firm utilizing IT. The interview data comprised semi-structured interviews conducted with executives across a range of roles in the organisations including: HR, IT, and Operations. Interviewees were selected on the basis of their involvement in the decision to implement or upgrade IT in their organizations.

Literature Survey

Management scholars have long called for stronger and more explicit paths between strategic planning and applications in human resources. Yet implementation guidance for this vital connection has proved elusive (Lawler, E. E., Levenson, A., & Boudreau, J. W. 2004). Although there has been a growing body of academic interest in information technology, the majority of interest is around how information technology supports and integrates with corporate strategy to enable competitive advantage (Broderick and Boudreau 1992; Hannon et al 1996; Minneman 1996; Tansley et al 2001; Williams 2000), and the presence and ‘fit’ in different organisations (Ball 2001; CIPD 2007). There is limited and dated research around the information systems skills and knowledge of the HR specialist (Bratton John and Gold Jeffrey (2003). HRM activities such as planning and recruitment play enormous responsibilities on the supervisors and managers alike. These activities require analyzing jobs, planning employee needs, and sourcing requisite employee pool for selection (Dessler et al., 1999). However, the human resource management function has faced a scuffle in justifying the use of information technology and its position in organizations for procurement. In another development, the need for HR to become a strategic partner is being felt increasingly, where information
technology provides management with strategic data not only in recruitment but also in merging information technology data into large-scale corporate strategy (Buckle Patrick y, Minette Kathleen, Dennis Joy and Michaels Jeff (2004). Thus it can be presumed that the data collected by utilizing information technology provides management with decision-making tool. Through proper HR management, firms are able to perform calculations that have effects on the business as a whole. Such calculations include turnover rates and costs, time required to fill certain jobs, return on human capital invested, and human value added. It must be noted though, that, none of these calculations result in cost reduction in the HR function and most notably, it supports the provision of executive reports for decision making (Gerardine DeSanctis,1986).

Moreover, Buckley et al., (2004) in their study ‘The use of an automated employment recruiting and screening system for temporary professional employees’: A case study, showed conservative savings due to reduced employee turnover, reduced staffing costs, and increased hiring-process efficiencies. The researchers revealed a cumulative savings yielded a return on investment and that was attributable to the use of information technology. Furthermore, Gardner et al., (2003), in their research work ‘Virtual HR: the impact of information technology on human resource professional’ investigated the extensive use IT influence on jobs in professional occupational segment of human resources (HR). They concluded that extensive use of IT enabled HR professional to have more information autonomy, and it is positively associated with HR professional spending and a more time on IT support activities. In addition, functional specialists reported increased time demands for both transformational activities and IT support activities. More so, the result supported the theorized impact suggesting that with more IT, HR tasks are further automated (Broderick and Boudreau, 1992; Greengard, 1999; Groe and Pyle, 1996; Hatlevig, 1995; Wilcox, 1997). Baran et al., (2002) examined the differences in HR practices and the effects of new HR practices on organizational change.

Information Technology (IT) is introduced by presenting the various definitions, development, costs and benefits, as well as their functions and relationship with HRM. Information technology shapes an integration between human resource management (HRM) and Information Technology. Even though these systems may rely on centralized hardware resources operationally, a small group of Information System specialists residing within the personnel department increasingly manage, support, and maintain them. Lando et al., (1994). Information technology can support planning, administration, decision-making, and control. The system supports applications such as employee sourcing and selection and placement, payroll, pension and benefits management, intake and training projections, career-planning, equity monitoring, and productivity evaluation. These information systems increase administrative efficiency and produce reports capable of improving decision-making (Gerardine DeSanctis, 1986). Recent developments in technology have made it possible to create a real-time information-based, self-service, and interactive work environment. Personnel Information Systems have evolved from the automated employee recordkeeping from the 1960s into more complex reporting and decision systems of late (Gerardine DeSanctis, 1986: 15).Today, managers and employees are assuming activities once considered the domain of human resource professionals and administrative personnel. This represents a significant break with the past, but an improvement in overall organizational effectiveness. Consequently, given the authority and relevant accessible information for decision-making, both managers and employees respond more quickly to changes (Lengnick-
Halland Lengnick-Hall, 2002). Information technology as a technology-based system is used to acquire, store, manipulate, analyze, retrieve, and distribute pertinent information regarding an organization’s human resources (Tannenbaum 1990). Information technology also provides a systematic procedure for collecting, storing, maintaining, retrieving, and validating data needed by organization about its human resources, personnel activities, and organization unit characteristics (Kovach et al., 1999).

**Data Analysis**

Case review in the seven IT and ITES firms centered on analyzing following aspects related to facilitation of Talent Acquisition by utilizing Information Technology:

**Use of Information Technology for Strategic Decisions regarding Talent Acquisition**

Case study analysis of the firms indicates that strategic decisions regarding acquisition are facilitated by the utilization of information technology in these firms. However the degree and extent of application varies. In these firms, interventions such as Performance management, Skill Management Systems, Productivity Assessment, Appraisal Process and Attrition Analysis create data internally for strategic decisions regarding talent need. It is felt by respondents that an effective information technology system must connect outcome from all such interventions to provide data relevant for sourcing decisions. Fifty percent of the cases had enterprise wide data availability and for such companies’ automated work force planning helped strategize the employee intake for future; and for the others a combination of information technology systems and hard data analytics firmed sourcing decisions. Two of the stated cases have vast global presence and for them talent acquisition and talent management is achieved by using information technology to map requirement with available talent, for over forty thousand associates. The respondents faith in reliability of information through information technology applications have portrayed that as the functionality is developed into organizational analytics and modeling of data to support more strategic decisions and predictive qualities, the risk and costs further escalate, and such organizations are working to strengthen the systems further for zero risk functionality of using information technology for talent acquisition.

**Processes Supported by Information Technology**

The case study analysis has revealed that in respondent organizations information technology applications support planning, administration, decision-making, and control. In the said organizations IT supports applications such as employee selection and placement, payroll, pension and benefits management, intake and training projections, career-mapping, equity monitoring, and productivity evaluation. The extent of utilization varies in each organization. Such systems are utilized mainly to increase administrative efficiency and produce reports capable of improving decision-making. In the two largest firms IT provides management with strategic data not only in recruitment and retention strategies, but also in merging IT data into large-scale corporate strategy. Two third of the firms visited are utilizing IT to perform calculations that have effects on the business as a whole. Such calculations for instance, include health-care costs per employee, pay benefits as a percentage of operating expense, cost per hire, return on training, turnover rates and costs, time required to fill certain jobs,
return on human capital invested, and human value added. It must be noted though, that as per the respondents, none of these calculations result in cost reduction in the HR function. At a basic level of communication where the IT application provides access to HR information, the system is designed to automate existing processes and provide alternatives to existing time consuming HR functionality. However, as the systems deliver more interactive HR functionality (e.g. transnational talent requisition and employee turnover) the complexity of the system increases costs, involves higher degrees of organizational interaction and thus higher risk at relying completely on technology to identify suitable talent. However for such firms the most important implementations of IT systems are in recruitment, as the need for diverse talent is critical with respect to peculiarity of client projects and this is followed by its utility in Training, and Performance Management Systems.

**Impact of Information Technology in Managing Talent Acquisition.**

Case analysis brought forth the utilization of information technology in these firms for talent acquisition. Such systems help to track attrition and talent shortfall and manage exit data for future sourcing in such firms; IT application in these firms also helps to look at skill gaps at the time of sourcing for talent and hiring decisions. The respondents stated that success of the system for talent acquisition depended on integration of all HR systems with right output from one system flowing in as input to the subsequent system. For instance, information on employee development emerging from Performance Management System, which in turn flows for competency mapping, therefore identifies need for talent acquisition. This enterprise wide resource planning was a challenge for one third of the organizations studied, and these organizations were still coming to grips with reliability of information. Such organizations were combining Information technology enabled data with traditional mode of data sync, thus enhancing the scope for analysis and process improvement. The major challenge these firms face is in getting the right talent and getting the talent with least time lag from time of sourcing to selection, without increased cost of sourcing.

One third of the firms stated that IT helped in acquiring talent by strategizing sourcing partners, such as enabling sourcing for vendors, vendor development particularly for temporary staffing, creating alternate channels for recruitment and developing referrals. Maximum utilization of IT was witnessed for sourcing from the application stage to interview stage, with scores for facilitating correct fitment. Moreover, the most visible function of IT application for these firms is the output generated. To generate valuable output for computer users, the IT applications have to process that output, make the necessary calculations, and then format the presentation in a way that is understood. For instance staff requisition from across strategic units in domestic and overseas destination adds new data to the database after data have been entered into the information system. Information technologies contribute positively to staff recruitment for global IT service providers as indicated in the cases under review. Especially its importance was felt in minimizing turnover, as it supports allocation of employees to international engagements, including scheduling and training. Such companies studied have adopted to culture and local labor market differences that influence the HR functionalities needed. The case studies indicated the necessity for local requisitions to adapt to global needs expressed through IT. These companies feel that the development of IT over the last twenty years has been driven by imperatives to improve the service of the HR function, further compounded by the growth of global enterprise-wide information systems (GEIS) which are being used and such software system allows an organization to share common data across functional areas of enterprises operating transnational and which
produce and access information in a real-time environment. Historically human resourcing specialists in these organizations have focused their skills and knowledge on HR management processes, such as resourcing. An interesting response from one case under consideration conveyed the utilization of IT to connect with new recruits for employer branding.

**Challenges in utilizing IT for Talent Acquisition**

Despite all seven case studies stating that the information technology implementation or upgrade in their respective organizations is undertaken with the aim of utilizing functions that are of a strategic nature, thereby enhancing the strategic contribution of the HR function, further probing suggests that progress towards making these changes is being hindered by a range of technological, managerial and organizational challenges. While some of these challenges could be attributed to the management of new technologies in general, findings demonstrate that several are in fact specific to HR and reflect the complex nature of the management of people, the allocation of resources to technology implementation in areas such as talent acquisition which can be managed without technology intervention.

The data across all the cases indicated some or all of the following challenges for the organizations and each of these is discussed in the following section using cross-case analysis:

An inconsistency in the importance attributed to IT for talent acquisition, resulting in difficulties in sustaining management commitment to the project and in obtaining the resources necessary to fully develop the new or upgraded information systems. A tendency to underestimate the complexity of IT and its impact on the employee behavior and processes of the organization. The barriers to user acceptance of the pervasive information technology and the consequent underestimation of the importance of change management. Allocation of insufficient resources to implementation of IT and, in some cases, the increased delegation of responsibilities to vendors and consultants. The major challenge for HR management is how to manage the tension between the need to adapt practice to meet the needs of the IT versus customizing the technology to fit existing practices and the unpredictability involved in the management of people. Associated with this challenge is the decision of where to locate the management of the IT i.e. within Information Technology or as an HR technology group within HR. Our case organizations have varied responses to this dilemma, but all suggest that management of the system has significant implications for knowledge transfer between IT and HR and thus the ability to realize value from IT. This aspect opens doors for further research in delving into evolving role of HRM in a technology savvy environment where HR becomes a facilitator to the operations management function. Another challenge which has hindered the ability of some of the case study organizations is the inability to exploit the potential of IT significantly, and the reasons attributed by them is the barriers associated with the acceptance of new or upgraded IT applications among key end-users of the system and the importance attached to managing the change.
Conclusions

Despite the benefits of information technology for corporations in talent acquisition such as perfect match of talent with jobs, reduced time and costs per hire, the increased use for some firms has also led to glut of applications. Therefore some of the companies who are forced to find the best candidate in times of a "War for Talent” need help to find this needle in a haystack.

One solution for handling such contingency situation could be in e-commerce to recommend products or services to customers purchasing specific products. Recommender systems could assist the recruiter to find the adequate candidate within the applicant's database. In order to support this search and selection process it is suggested by the researcher to conduct a design science approach to integrate recommender systems in a holistic e-recruiting architecture and therewith provide a complete and new solution for IT support in staff recruitment.

We conclude that the use of HR technologies is in a state of flux with most organizations continuing to use a mix of traditional and technology-based HR methods. Furthermore, technology-based solutions are not necessarily a panacea for HR managers: nearly a third reported that their attempts to use HR technology have resulted in limited or moderate success, with certain inherent challenges. At the same time, and in line with a social constructionist approach to the study of technology challenges illustrates that utilization of technology is also determined by the agency of its users and the social context within which it is adopted. Therefore only through an appreciation of both the material and the social context can a more informed understanding of the challenges that surround information technology and its implementation for sourcing can be obtained. These socio-contextual factors are compounded by the fact that each case study organisation has experienced significant change, for example in ownership and structure of information technology for sourcing and other administrative decisions. For instance staff requisition from across strategic units in domestic and overseas destination may add new data to the database after data have been entered into the information system. Moreover, the most visible function of an information technology is the output generated. To generate valuable output for computer users, the information technology have to process that output, make the necessary calculations, and then format the presentation in a way that could be understood. However, the note of caution is that, while it is easy to think of information systems in terms of the hardware and software packages used to implement them and to measure them by the number of workstations, applications or users who log onto the system, the most important elements of information technology are not the computers, rather, the information. The bottom-line of any comprehensive information technology have to be the information validity, reliability and utility first and the automation of the process second.

HR professionals rely on the information technology in fulfilling job functions such as employee requisitions by various departments or divisions. Thus, for the HR professional there is an increasing reliance on the information technology to fulfill even the most elementary tasks of calculating the vacant positions and its implication on cost. As human capital plays a larger role in competitive advantage, functional managers expect the information technology to provide functionality to meet the unit’s goals and objectives. Moreover, managers rely on the information technology’s capabilities to provide superior data collection and analysis, especially for resume processing, recruitment and potential
retention of sourced candidates. An important conclusion that the researcher makes here is the importance of integrating technologies with management of HR. Developments in Information Technology have dramatically affected traditional HR functions with nearly every HR function such as staffing, experiencing some sort of reengineering of its processes. However, this process of change has created significant challenges for HR professionals resulting in the transformation of traditional processes into on-line processes. Another advantage that has emerged and felt by respondent firms is the increased efficiency. Rapid computing technology has allowed more transactions to occur with fewer fixed resources. Typical examples are processing applications for filling job vacancies and matching these with prospective candidates for better match. Though technologies of early mainframes provided significant efficiencies in these areas, the difference is that the record processing efficiencies that were once only available to large firms are now readily available to any organization size. Another advantage stated by the firms is the Increased Effectiveness. Most often, as with processes, computer technology is designed to improve effectiveness in terms of the accuracy of information or by using the technology to simplify the process. This is especially the case where large data sets require reconciliation. However, onerous manual reconciliation processes may be executed faster, but also with near perfect accuracy using automated systems. For instance, matching job requirements with candidate’s specifications, Using computer technology in these processes ensures accurate results and offer substantial simplification and timeliness over manual processing. Consequently, the vast majority of HR functions have had some degree of automation applied in order to gain both efficiency and effectiveness. Online recruitment centers, along with the ability to conduct virtual interviews, background checks, and personnel tests on-line have dramatically changed sourcing and recruitment processes, increasing the geographic reach of firms for potential employees.

In conclusion, the researcher noted that for senior HR professionals, strategic use of technology was increasingly the norm, irrespective of company size. Significant implementations on HR systems, particularly for IT sector firms are in recruitment, as the need for diverse talent is critical with respect to peculiarity of client projects and this is followed by its utility in Training, and Performance Management Systems. Information technologies contribute positively to staff recruitment for global IT service providers as indicated in the cases under review. Especially its importance was felt in minimizing turnover, as it supports allocation of employees to international engagements, including scheduling and training. Such companies studied have adopted to culture and local labor market differences that influence the HR functionalities needed. The case studies indicated the necessity for local requisitions to adapt to global needs expressed through technology usage. These companies feel that the development of information technology over the last twenty years has been driven by imperatives to improve the service of the HR function, further compounded by the growth of global enterprise-wide information systems (GEIS) which are being used and such software system allows an organization to share common data across functional areas of enterprises operating transnational and which produce and access information in a real-time environment. Historically human resourcing specialists in these organizations have focused their skills and knowledge on HR management processes, such as resourcing. The introduction of this technological resource suggests the introduction of new skills and competencies for the HR specialist, in particular project management and information systems. The requirement for these new skills and knowledge sets has been a challenging learning journey for many within the HR profession.
The focus of this study was to gain an insight into the current status of IT adoption in organizations to support resourcing. For some firms technology was used mainly for administrative purposes, that is, it played a traditional support role for functional requirement of procurement. There are firms that utilize more sophisticated technology applications, such as Internet-based recruiting and these more sophisticated applications tend to occur within very large, information technology-intensive companies.

The main conclusion of this paper derived from the case studies is the realization that the use of business information technology is in a developing and retrieval mode of application. In spite of this, it is wise to recognize the positive influence that these systems have in the recruiting process, and it is worth believing that information technology will gain a place in many organizations in the short and medium term. Regarding the commonest applications of information technology, our findings indicate that a fairly large percentage of firms rely on these systems for at least one of the stages of the recruitment process. Nevertheless, the presence of these applications is scarcer for the most complex and delayed in time tasks, such as decision making processes, because they require, in return, more complex information technology. This conclusion is therefore reinforced by the findings expressed above, since it is the developing stage of information technology what leads to this decompensate situation.

It was also observed that two groups of organizations lead the information technology implementation trend: the parent companies, with regard to their subsidiaries, and the largest firms in terms of number of employees. This seems a logical finding because their more complex structures may benefit more of the advantages of information technology to increase the efficiency of their recruiting processes. Besides, information technology is found to be preferred in combination with other HRM practices. This reveals that human judgement is still the main criterion for making decisions in this area, albeit assessed or supported by the information provided by the information technology.

References

14. impact of information technology on human resource professional


