

PROBLEMS AND PROSPECTS OF TECHNOLOGY AS AN ENABLER OF STRATEGIC HRM

Mohan Thite
Griffith University

ABSTRACT

With the increasing emphasis on evidence-based management, the human resources (HR) function has enthusiastically embraced technology with a view to provide more efficient and effective delivery of HR services. Underpinned by new technologies, such as cloud computing and analytics, the e-HRM applications are becoming ever more popular; however, the intangible nature of people management, social processes and actors and holistic nature of technology project management highlight the limitations of technology in HR services delivery. This paper critically examines the role of technology in strategic HRM with specific reference to HR metrics and the learning and development function.

INTRODUCTION

In a highly global, technology-intensive and fast changing economy, organizations are in constant search of the optimum configuration of their internal resources in order to effectively address the challenges posed by the external environment and derive a sustainable competitive advantage over their rivals. The resource-based view (RBV) of the firm states that it is the firm's internal environment, that is, the resources and capabilities that are valuable, rare, difficult to imitate and substitute, which is the primary determinant and basis of strategy (Wright, Benjamin, & Snell, 2001). In the knowledge economy of the 21st century, the intellectual or human capital is increasingly seen as a key sustainable competitive advantage and this realization has transformed the human resource management (HRM) discipline from a staff/administrative function to become a strategic business partner (Thite, 2004).

It is widely accepted that technology has fundamentally altered today's world of work. Similarly, technology has had a profound effect on the way the HR function is conceptualized and practiced in contemporary organizations. Technology can be a key enabler to facilitate the HRM function to shift its emphasis from transactional to transformational in order for it to become Strategic HRM (SHRM). This can be achieved by automating and streamlining routine HR transactional activities and freeing up HR professionals' time to focus on activities that add value to the firm's bottom line and cement its future; empowering managers to access accurate, real time and comprehensive HR data; improve the speed and quality of decision making using business intelligence tools and essentially practice evidence based management (Hendrickson, 2003). A majority of organizations that have deployed Human Resource Information Systems (HRIS) tools and techniques have succeeded in freeing up HR resources from routine, transactional activities in order to focus on strategic aspects of people management, such as cultural change and building competencies.

While research indicates that information technology (IT) has indeed helped the HRM function to streamline and improve transactional HR activities and processes, particularly in large and complex organizations, it has had limited success in enabling it to become a strategic business partner (Parry & Tyson, 2011; Dery & Wailes, 2005) which suggests that IT systems are being used more for administration than for analysis or decision support (Haines & Lafleur, 2008; Ball, 2001). By some estimates, nearly half of the new IT systems are deemed to have failed in achieving their key objectives with regard to their strategic intent, budget and timeframe (Fisher & Howell, 2004). Research studies also show that the main reasons for the high failure rate of technology projects is not technology itself but its faulty implementation and poor understanding of social processes, including inherent organizational rigidity, inertia and resistance to change (Lengnick-Hall & Lengnick-Hall, 2006; Waring, 2004).

With regard to HRIS, the main reasons for its marginal role in strategically positioning HRM in knowledge-intensive learning organizations include:

- the inability of top management to place HR at the heart of business strategy and use it as a sustainable competitive advantage,
- mistaking technology as a message rather than as a messenger,
- “over promising and under delivering” record of HRIS/ Enterprise Resource Planning (ERP) vendors, and
- reluctance of HR professionals to overhaul their “tools of trade” that are more suitable to a learning organization (Thite, Kavanagh, & Johnson, 2012; Thite, 2004a).

In the backdrop of the above, this paper focuses on two specific aspects of HRM, namely, HR Metrics and the Learning and Development function, to illustrate the practical limitations and challenges of technology in HRM at the strategic and operational levels. It begins with an analysis of the potential and actual contribution of electronic HRM (e-HRM) as an enabler of SHRM and the critical success factors in the implementation of e-HRM projects. It then specifically focuses on HR Metrics and learning and development (L&D) to highlight why and how technology is not necessarily a panacea to the strategic positioning of HRM function.

E-HRM: Rhetoric and reality

Though the HR function has been using technology since World War Two, the process accelerated since the 1980s due to increasing competitive pressure, the need for cost reduction and productivity improvement and technology advancements leading to falling prices and increasing processing power and flexibility. The literature on e-HRM and human resource information system (HRIS) identifies several key advantages of leveraging technology in the delivery of HR services: reduction in transaction costs and cycle time; streamlining, reengineering and enhancing the efficiency and effectiveness of HR processes and functions; providing a comprehensive information picture as a single, integrated database enabling organizations to provide global structural connectivity across units and activities; improving employee satisfaction by delivering HR services more quickly and accurately to them and shifting the focus of HR from the processing of transactions to strategic HRM (Thite, Kavanagh, & Johnson, 2012).

While e-HRM concentrates mainly on web based and often stand-alone applications (such as e-recruitment and e-learning) including the use of social media, HRIS focuses on an integrated database system covering various business modules under the umbrella of enterprise resource planning (ERP). Both e-HRM and HRIS use technology as a nerve center for disseminating, connecting and conducting HR service delivery (Stone & Lukaszewski, 2009) and require organizations to possess diverse expertise, interdisciplinary comprehension leading to the modernization of the HR profession (Bondarouk & Ruël, 2009).

According to the CedarCrestone 2010-2011 HR Survey, HR technologies are overwhelmingly used for HR administrative applications, such as record keeping, payroll and benefits administration (90%) followed by service delivery, such as service portals and help desk (47%), workforce management (45%), talent management (43%) and business intelligence (37%). In the next three years, talent management, social media and workforce optimization applications (such as workforce planning and analytics) are expected to grow 90% or more clearly indicating an increasing focus on transformational HR activities rather than transactional processes. While firms spend most time and budget for business process improvement (79%), the survey cautions that “HR technologies cannot fix inadequate or broken processes” (p. 5).

Parry and Tyson (2011) examined the actual outcomes of e-HRM against desired goals in UK-based organizations and found that while introduction of e-HRM resulted in efficiency, service delivery and standardization with some transformational impact, there was no evidence of actual increased involvement of HR in business decision making. Similarly, in a case study of a government department in Netherlands, Ruël, Bondarouk, and Van der Velde (2007) found that “perceived quality of the content and the structure of e-HRM applications (had) a significant and positive effect on technical and strategic HRM effectiveness” (p. 280). In a large scale survey of 12 countries, Parry (2011) concluded that e-HRM may help HR to become more strategic but it may not necessarily reduce HR headcount as HR practitioners may be redeployed from doing transactional to more strategic activities.

In another case study, Bondarouk, Ruël, and van der Heijden (2009) reveal that “line managers and employees do have different, sometimes conflicting, viewpoints that result in different perceptions of the usefulness and value of e-HRM” and therefore, call for a “multi-stakeholder approach in e-HRM studies” (p. 587). After reviewing current empirical work on e-HRM, Strohmeier (2007) concludes that “e-HRM is an innovative, lasting and substantial development in HRM that results in new phenomena and major changes” (p. 34).

E-HRM Project Implementation: Critical Success Factors

According to Martin and Reddington’s (2010) model of e-HR, the relationship between e-HR architecture and e-HR outcomes is “moderated by a number of key factors, including the organization and resources of the HR function, the absorptive capacity of HR, the skills and preferred styles of HR professionals, the levels of technology acceptance among employees and line managers and the models of change used in implementing e-HR programs” (p. 1553). Parry and Tyson (2011) found that the realization of e-HRM goals was impacted by the extent of HR skills, training in e-HRM use, design of and engagement with e-HRM system and familiarity with technology.

Shrivatsava and Shaw (2003) assert that technology can transform HR when the focus is on its “informating” rather than automation potential. The former refers to increasing the explicit information content of tasks that ultimately reconfigures the very nature of work and social relationships that underpin productive activity. To achieve this, they recommend that firms should start by identifying operational, relational and transformational goals (in that order); exercise due diligence in needs analysis; focus on business needs rather than technology in driving business process reengineering; actively manage expectations and neutralize inhibitors throughout the implementation phase and monitor the changing needs of multiple stakeholders after institutionalizing technology implementation. To successfully acquire ERP software, Verville & Bernadas (2005) demonstrate that clarity of authority, a structured, rigorous and user-driven planning process, well defined evaluation criteria and partnership between implementation team, users and the vendor are the key success factors.

Researchers also emphasize the importance of top management commitment to provide adequate resources (Ngai & Wat, 2006), total employee involvement and buy-in (Barker & Frolick, 2003; Ehie & Madsen, 2005), continuous monitoring and feedback (Varma & Gopal, 2011), thoughtful consideration of system-design elements (Fisher & Howell, 2004), particularly based on the modern socio-technical view that prefers empowerment over control (Benders, Hoeken, & Batenburg, 2006), careful change management and cultural readiness (Motwani, Subramanian, & Gopalakrishna, 2005) and communication processes (Stone & Lukaszewski, 2009). Similarly, in the post-implementation stage, a systematic and planned review of overall project scope and planning, driving principles of project development, misfit resolution strategies and evaluation of benefits and user learning are critical (Nicolaou & Bhattacharya, 2006).

At a more general level, the technology acceptance model proposes that perceived ease of use and usefulness are primary determinants of technology acceptance (Ma & Liu, 2004). However, technology implementation can lead to both functional and dysfunctional or intended and unintended consequences. In order to minimize unintended consequences of technology implementation, such as users avoiding to use the system (inertia) or work around it (reinvention), some researchers highlight the importance of human agency perspective that directs attention toward social contexts and processes whereby rather than technology, variety of stakeholders or actors exercise social influence to alter the pattern of use leading to desired organizational change (Boudreau & Robey, 2005; Light & Wagner, 2006).

In contrast with the hard-wired, inflexible routines embedded in technology, particularly in vanilla-based ERP packages, the socio-technical view and human agency perspective prefer empowering employees with the required flexibility and discretion to overcome technology constraints as they learn to navigate the new system under the influence of different social actors. This approach supports Orlikowski’s (2000) “technology-in-practice” framework which argues that technology’s consequences emanate from user enactment and improvised learning rather than technical features of a new system and therefore should be proactively managed. Here, organizational factors, such as the nature and structure of work play an important role influencing how individuals use technologies (Dery, Hall, & Wailes, 2006).

HR metrics

One of the difficulties within the HR discipline is with the measurement of its effectiveness. Compared to other management functions, people management is more

sensitive, personalized, context-dependent and cannot be managed through a set of predefined techniques” (Thite, 2004a). The slippery nature of people issues makes it difficult to measure HR’s contribution to the bottom line. It should also be noted that change takes place relatively slowly in HRM (Gratton, Hope-Hailey, Stiles, & Truss, 1999). People’s expectations and motivation swing during economic ups and downs and HR policies may be viewed differently in different times. Therefore, any short-term assessment of HR effectiveness is fraught with danger and open to mis-representation. For example, Motorola does not believe in strict measures of evaluating training effectiveness and treats training as part and parcel of an overall management process (Pfeffer & Veiga, 1999).

Today, organizations resort to different types of employment, such as core, contract and casuals, to cater to changing business needs and many of them are outside the traditional boundaries of employment (Lepak & Snell, 1999). HR has to employ different strategies in recruiting, training, assessing and remunerating them as the one-size fits all attitude and policy no longer apply. However, the valuation of human capital is likely to be highly contentious as compared to that of inanimate assets and will greatly impact organizational commitment and morale.

Under these circumstances, the over emphasis placed on HR Metrics and Analytics in some HRIS products may harm the long-term health of an organization and fracture the social fabric, so vital in a learning organization. This may be one of the unintended consequences of HRIS implementation at the strategic level. As Boudreau and Ramstad (1998, p. 4) contend, “metrics theory and SHRM theory have not connected, to the detriment of both”. While the Balanced Scorecard approach goes beyond financial measures, “it has shown to be inadequate in various circumstances and across differing firm types” (Maltz, Shenhar, & Reilly, 2003, p. 187). Accordingly, we need a specific set of measures that are “logical, reliable, consistent and flexible” (Boudreau & Ramstad, 2002, p. 3) to assess the effectiveness of HR policies, procedures and processes which most of the current HRIS systems ignore as they stick to purely scientific approaches that seek statistical associations (Hesketh & Fleetwood, 2006) without regard to the role of human agency.

LEARNING AND DEVELOPMENT FUNCTION

Learning is a new form of labor (Zuboff, 1988). Learning to unlearn well-entrenched organizational defensive routines is very important so that people can question past routines and create new knowledge (Senge, 1990). Core competencies can become core rigidities and therefore how to learn is more important than what to learn (Thite, 2004b). HR professionals may sometimes unwittingly reinforce organizational defensive routines through inappropriate HR policies and procedures rather than helping organizations overcome unproductive assumptions (Argyris, 1986).

A large part of learning in the workplace is informal. However, by its very nature informal learning is harder to identify and mould as it does not occur in neat time slots or locations where it can be grabbed and leveraged. That said, one can create conditions conducive for learning to occur and be shared (Horibe, 1999). As we move away from the concept of training toward the concept of action-based-learning, HR professionals need to shift their focus to facilitating rather than controlling knowledge processes.

It is clear that there is a qualitative difference in the changing role of HR professionals from organizers of training to facilitators of learning from experience. The latter role recognizes that learning is a shared responsibility and that not all learning can be and need to be controlled because as much of what people learn, particularly tacit knowledge, takes place in informal social networks with little or no environmental support. Wenger and Snyder (2000) argue that a paradox exists because these communities are resistant to interference and supervision because they are self-organizing; however specific managerial efforts are required to develop and integrate these communities within an organisation. The full influence of these learning communities will be achieved only when this occurs. Therefore, more than directing learning, HR professionals have to help create a nurturing culture and structure that facilitate self, team and organizational learning on a continuous basis.

The analysis above illustrates the serious limitations of technology in the learning and development function at an operational level. Despite the lofty claims made by technology vendors of e-learning and distance learning packages, it is still the case that most learning is informal, on the job and undertaken in a social context. Careful consideration of underlying pedagogical principles is “often the most neglected aspect in any effort to implement e-learning” (Govindasamy, 2002, p. 287). While technological tools can certainly facilitate the learning process, it is the organizational culture that has an overriding effect on whether and how people learn. The technology acceptance models often ignore the dynamic interaction between social actors within an organizational context.

CONCLUSION

While the HRM function can benefit immensely from technology, particularly at the level of transactional and traditional activities, it is the transformational activities that lie at the heart of strategic HRM and have the greatest potential to radically enhance firm performance and competitive advantage. Here, the knowledge management literature informs us that it is the social architecture of the organization that underpins HR effectiveness rather than pure technological interventions that often ignore unintended consequences. When it comes to managing people, it is more grey than black and white, and therein lies the fundamental challenge for HR professionals seeking to harness the potential of technology in HR interventions.

Mohan Thite is an associate professor at Griffith University (Australia). He has a Ph.D. in Human Resource Management and post-graduate degrees in economics and personnel management and industrial relations from Swinburne University of Technology, Melbourne. His research interests include strategic HRM, knowledge management, and the interface between HRM and IT/IS. Contact: mthite@griffith.edu.au.

REFERENCES

- Argyris, C. (1986). Reinforcing organizational defensive routines: An unintended human resources activity. *Human Resource Management*, 25 (4), 541-55.
- Ball, K. S. (2001). The use of human resource information systems: A survey. *Personal Review*, 30, 677-693.

- Barker, T., & Frolick, M. N. (2003). ERP implementation failure: A case study. *Information Systems Management*, 20, 43-49.
- Benders, J., Hoeken, P., Batenburg, R., & Schouteten, R. (2006). First organise, then automate: A modern socio-technical view on ERP systems and teamworking. *New Technology, Work and Employment*, 21, 242-251.
- Bondarouk, T. V., & Ruël, H. J. M. (2009). Electronic human resource management: Challenges in the digital era. *The International Journal of Human Resource Management*, 20, 505-514.
- Bondarouk, T. V., Ruël, H. J. M., & van der Heijden, B. (2009). e-HRM effectiveness in a public sector organisation: A multi-stakeholders' perspective. *The International Journal of Human Resource Management*, 20, 578-590.
- Boudreau, J. W., & Ramstad, P. M. (2002). *Strategic HRM in the 21st century: From justifying HR to strategic talent leadership*. (Working paper no. 02-15). Ithaca, NY, USA: Cornell University Center for Advanced Human Resource Studies.
- Boudreau, J. W., & Ramstad, P. M. (1998). *Human resource metrics: Can measures be strategic?* (Working paper no. 98-10). Ithaca, NY, USA: Cornell University Center for Advanced Human Resource Studies.
- Boudreau, M. C., & Robey, D. (2005). Enacting integrated information technology: A human agency perspective. *Organisation Science*, 16, 3-18.
- CedarCrestone . (2010-2011). *HR systems survey. HR technologies, service delivery approaches, and metrics, 13TH annual edition*. Retrieved 9th January, 2014 from <http://www.euroinvestor.co.uk/news/story.aspx?id=11083093&bw=20100524006449>
- Dery, K., Hall, R., & Wailes, N. (2006). ERPs as 'Technologies-in-practice': Social construction, materiality and the role of organizational factors. *New Technology, Work and Employment*, 21, 229-241.
- Dery, K., & Wailes, N. (2005). Necessary but not sufficient: ERPs and strategic HRM. *Strategic Change*, 14, 265-272.
- Ehie, I. C., & Madsen, M. (2005). Identifying critical issues in enterprise resource planning (ERP) implementation. *Computers in Industry*, 56, 545-557.
- Fisher, S. L., & Howell, A. W. (2004). Beyond user acceptance: An examination of employee reactions to information technology systems. *Human Resource Management*, 43, 243-258.
- Govindasamy, T. (2001). Successful implementation of e-Learning: Pedagogical considerations. *The Internet and Higher Education*, 4 (3-4), 287-299.
- Gratton, L., Hope-Hailey, V., Stiles, P., & Truss, C. (1999). Linking individual performance to business strategy: the people process model. *Human Resource Management*, 38 (1), 17-32.

- Haines III, V. Y., & Lafleur, G. (2008). Information technology usage and human resource roles and effectiveness. *Human Resource Management*, 47, 525-540.
- Hendrickson, A. R. (2003). Human resource information systems: Backbone technology of contemporary human resources. *Journal of Labor Research*, 24, 381-394.
- Hesketh, A., & Fleetwood, S. (2006). Beyond measuring the human resource management-Organizational performance link: Applying critical theorist meta-theory. *Organization*, 13 (5), 677-699.
- Horibe, F. (1999). *Managing knowledge workers*. Toronto: Wiley.
- Lengnick-Hall, C. A., & Lengnick-Hall, M. L. (2006). HR, ERP, and knowledge for competitive advantage. *Human Resource Management*, 45, 179-194.
- Lepak, D. P., & Snell, S. A. (1999). The human resource architecture: toward a theory of human capital allocation and development. *Academy of Management Review*, 24 (1), 31-48.
- Light, B., & Wagner, E. (2006). Integrating in ERP environments: Rhetoric, realities and organisational possibilities. *New Technology, Work, and Employment*, 21, 215-228.
- Ma, Q., & Liu, L. (2004). The technology acceptance model: A meta-analysis of empirical findings. *Journal of Organisational and End User Computing*, 16, 59-72.
- Maltz, A. C., Shenhar, A. J., & Reilly, R. R. (2003). Beyond the balanced scorecard: Refining the search for organizational success measures. *Long Range Planning*, 36 (2), 187-204.
- Martin, G., & Reddington, M. (2010). Theorizing the links between E-HR and strategic HRM: A model, case illustration and reflections. *The International Journal of Human Resource Management*, 21, 1553-1574.
- Motwani, J., Subramanian, R., & Gopalakrishna, P. (2005). Critical factors for successful ERP implementation: Exploratory findings from four case studies. *Computers in Industry*, 56, 529-544.
- Ngai, E. W. T., & Wat, F. K. T. (2006). Human resource information systems: A review and empirical analysis. *Personnel Review*, 35, 297-314.
- Nicolaou, A. I., & Bhattacharya, S. (2006). Organisational performance effects of ERP systems usage: The impact of post-implementation changes. *International Journal of Accounting Information Systems*, 7, 18-35
- Orlikowski, W. J. (2000). Using technology and constitution structures: A practice lens for studying technology in organisations. *Organizational Science*, 11, 404-428.
- Parry, E. (2011). An examination of E-HRM as a means to increase the value of the HR function. *The International Journal of Human Resource Management*, 22, 1146-1162.
- Parry, E., & Tyson S. (2011). Desired goals and actual outcomes of e-HRM. *Human Resource Management Journal*, 21, 335-354.
- Pfeffer, J., & Veiga, F. (1999). Putting people first for organizational success. *Academy of Management Executive*, 13 (2), 37-48.

- Ruël, H. J. M., Bondarouk, T. V., & Van der Velde, M. (2007). The contribution of E-HRM to HRM effectiveness: Results from a quantitative study in a Dutch effectiveness. *Employee Relations*, 29, 280-291.
- Senge, P.M. (1990). *The fifth discipline: The art and practice of the learning organization*. London: Century Business.
- Shrivastava, S., & Shaw, J. B. (2003). Liberating HR through technology. *Human Resource Management*, 42, 201-222.
- Stone, D. L., & Lukaszewski, K.M. (2009). An expanded model of the factors affecting the acceptance and effectiveness of electronic human resource management systems. *Human Resource Management Review*, 19, 134-143.
- Strohmeier, S. (2007). Research in e-HRM: Review and implications. *Human Resource Management Review*, 17, 19-37.
- Thite, M. (2004a). *Managing people in the new economy*. New Delhi: Response, Sage.
- Thite, M. (2004b). Strategic positioning of HRM in the knowledge-based organizations. *The Learning Organization*, 11 (1), 28-44.
- Thite, M., Kavanagh, M. J., & Johnson, R. D. (2012). Evolution of human resource management & human resource information systems: The role of information technology. In M.J. Kavanagh, M. Thite, & R.D. Johnson (Eds.), *Human resource information systems: Basics, applications & directions* (pp. 2-34). Thousand Oaks, CA: Sage.
- Varma, S., & Gopal, R. (2011). The implications of implementing electronic – human resource management (E-HRM) systems in companies. *Journal of Information Systems Communication*, 2, 10-29.
- Verville, J., & Bernadas, C. (2005). So you're thinking of buying an ERP? Ten critical factors for successful acquisitions. *Journal of Enterprise Information Management*, 18, 665-677.
- Waring, T. (2004). Communicating the complexity of integrating information systems: A case study of the procurement of a payroll-personal system. *International Journal of Human Resource Development and Management*, 4, 431.
- Wenger, E. C., & Snyder, W. M. (2000). Communities of practice: the organizational frontier. *Harvard Business Review*, 78 (1), 139-145.
- Wright, P. M., Benjamin, B., & Snell, S. A. (2001). Human resources and the resource based view of the firm. *Journal of Management*, 27, 701-721.
- Zuboff, S. (1988). *In the age of the smart machine*. New York, NY: Basic Books.