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TUNNEL VISION: LIMITED USE OF HUMAN RESOURCE INFORMATION SYSTEMS (HRIS)

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ABSTRACT: This article presents a review of the literature on the uses and potential uses of HRIS from administrative to strategic purposes. It focuses on the fact that these systems are largely restricted to administrative use and this is exemplified through two case studies.

Keywords: Human resource information systems, human resource management

INTRODUCTION

In the late 1950s and 1960s, driven by the rapid and substantial growth of the computer industry, some large organizations, particularly in the USA, first began to develop and apply computer systems to service their Personnel function. Since that time, the Human Resource Information System (HRIS) has emerged in the twenty-first century as a human resource management tool. However, despite the inexorable spread of these HRISs into HRM operations, the use of these systems is primarily administrative with few organisations using them to their fullest potential (Ball 2001; Tansley et.al. 2001).

Most organisations maintain HRIS to document relevant staff information, such as age, gender, years of service, classification, qualifications and previous work history. Existing research suggests that HRIS are used almost exclusively for HR administrative purposes rather than facilitating a strategic focus for HR within an organisation At present many organisations use their HRIS for cataloguing employee history, compensation and staff issues, in other words, as a human resources records management system. However, there are some organisations that use their HRIS for more strategic issues such as future training needs and succession planning.

This article focuses on the use of HRIS through examination of the literature and development of case studies on the use of HRIS in two organisations in Melbourne, Australia.

Historical perspective

Despite the fact that payroll was one of the first business functions automated in the mid 1940's, and the US Defence Forces used computers for personnel information and analysis in the 1950's, most other organisations were limited in the use of HRISs until the 1970s and 80s. Then they were used mainly for payroll and employee records, in other words administrative purposes (Walker, 1980; Zurakowski & Harris, 1984; Kavanagh et.al., 1990). In many organisations HRISs are still relegated to an administrative role (Salmon 1992a; Ball 2001), but there is increasing use of information for operational purposes particularly in regard to compliance issues such as EEO (Williams 1995). Strategic use of HRISs

is limited (Salmon 1992; Boudreau 1995; Williams 1995). Until the 1990's HRISs rarely appeared as a topic in HRM textbooks, with Kavanagh, Gueutal and Tannenbaum (1990) publishing the first textbook on HRISs, which is still arguably the definitive text in the area despite its age.

HRIS Potential

Rampton et.al. (1999, p.22) state that `An HRMS provides an organisation with data storage and retrieval, primary administrative support, reporting and statistics, and program monitoring capabilities'. They go on to make a case that these four capabilities can provide a platform for more strategic use of information such as human resource planning. Anthony et.al. (1996) also suggest that an HRIS can become a valuable tool in facilitating strategic planning when it is tied to the corporate strategy. Walker (2001, p.3) substantiates this, strongly arguing that human resource technology has to meet three specific objectives, that is, be strategically aligned and provide business intelligence as well as being efficient and effective.

Boudreau (1995) emphasises that the 'focus should be on "doing the right thing", not "doing the same things right"' (p.8) and that the challenge is to ensure the information facilitated by the HRIS is what the business needs, not simply what the technology can provide. What do we mean by doing the same things right?

Kavanagh et.al. (1990) cites the case of an annual EEO compliance report which used to take three weeks of one person's time but which an HRIS could generate in three hours.

Another commonly quoted advantage is the streamlining of recruitment and selection processes, matching jobs with people (Berry 1994; Glatzer 1995). Thus, from hundreds of applicants, selectors can rapidly screen CV data to identify a shortlist of those who, say, have a postgraduate qualification in electronic engineering, x years of management experience and fluency in Indonesian.

Strategic Exhortations

In the 1980's the strategic potential of information and information technology was being exhorted if not exploited. McFarlan (1984) stated 'As it moves from a strictly supporting role in the back office, computer based technology offers new competitive opportunities.' Zurakowski and Harris (1984) found a number of US organisations were interested in using HRISs for strategic purposes such as personnel planning and identification of job requirements. A year later, in 1985, Porter and Millar stated 'It is hard to underestimate the strategic significance of the new information technology.' (p.149)

This strategic significance has been struggled with over the intervening years, with some successful but many more unsuccessful results in terms of strategic information systems. In fact, a recent British study found that administrative use of HR information predominates, with 'a focus on the administrative and electronic replication of the filing cabinet' (Ball 2001, p.690). Hoplin (1995) suggests that the problem is that for many years information

technology and business strategy 'have been out of "sync"' (p.24). There are many reasons for this, including the structure and culture of organisations and the accompanying politics, but it is beyond the scope of this paper to explore these areas. Suffice to say that the HRISs are not the only information systems that are failing to realise their strategic potential.

The literature reviewed continually emphasised the potential strategic value of HRIS (Kavanagh et.al. 1990; Salmon 1992a; Boudreau 1995; Ball 2001). Unfortunately, their strategic use is not always limited by the system but by the use of it. While HRIS information should be able to help organisations, too often the system is viewed as a discrete HR system. As Anthony et.al. (1996) state, HRIS information should help decision makers better understand how HRM can be a valuable competitive tool... Its use is limited only by the extent to which the organisation uses it to make strategic HR decisions. (p.213)

However, many HRIS are isolated from other organisational information systems and, in fact, HRIS modules are often not integrated (Kavanagh et.al. 1990) A survey of prominent technologically advanced organisations found that, 'It appears that too few professionals possess the requisite skills and knowledge to select, install and maintain integrated HRIS (Hannon & Brandes 1996, p.253-4).

Salmon (1992b) suggests that if the individual responsible for the HRIS is an administrator or information systems technician it is unlikely that the information from the HRIS will be used for strategic purposes. In fact, the HRIS is likely to be underutilised and probably not integrated with other information systems.

Salmon (1992b) also believes that one of the limitations has been the fact that in the development stage, and when requests for tender are being developed, a narrow view restricted to the HR department and its needs has evolved, with little concern given to business or organisational needs. Kossek et.al. (1994) add to this, believing that the few longitudinal HRIS studies neglect to consider organisational change issues or the perspectives of the user groups. An HRIS may take years to fully implement and it is a challenge to sustain the users' support during implementation. Users' input and interest has to be carefully managed (Kossek et.al. 1994).

Boudreau (1995) suggests that HR managers still continue to focus on the tangible dollar-value benefits of administrative efficiencies while neglecting to fully consider the strategic benefits that are less concrete. Winter (1993) concurs with this in suggesting that HR is not as closely tied to the direct profit making resources of an organisation. He implies that the perceptions of HR limit it to its 'employee record keeping roots'. Turnbull (1994) also believes that the HR culture restricts the use of HRIS:

> Our entire business culture is solidly entrenched in functional exclusivity. Almost from the moment careers begin we find ourselves described - and limited - by our job title. "HR Officer" holds an entire set of sub-texts, including assumptions about one's knowledge and skills, and, unfortunately

the presumed lack thereof - to be able to function in finance or information systems, for example.

According to Turnbull (1994) HRIS vendors cater for this HR functional exclusivity and thus HR departments often end up with systems limited by their blinkered perceptions. Townsend and Hendrinkson (1996) support this in stating that information is considered only in relation to functional needs, which means that information as an independent (and potentially strategic) resource is virtually ignored.

Mohrman and Lawler (1997) suggest that the compliance role of the HR function limits it to a bureaucratically correct role that encourages predictable and orderly development of people and their careers. This 'bastion of the status quo' role restricts HR vision and the potential of the HRIS (Townsend and Hendrinkson, 1996). This is again voiced by Beatty (2001, p.152) who states that, The cultural issues that have historically limited the human resource function's ability to think and act strategically (which continue to pervade many HR departments despite huge gains made in the "status" of HR's role as a strategic business partner) stem from HR's long history as a reactive, almost "defensive" function in the organisation.

Boudreau (1995) suggests that if the focus is broadened to view the HRIS as part of corporate wide information systems and evaluated against corporate wide information criteria then HR information can be used strategically.

What does 'strategic use' mean?
Anthony et.al. (1996) outline the characteristics of a strategic approach to human resource management, which quite clearly includes HRIS:
- Explicitly recognizes the impact of the outside environment
- Explicitly recognises the impact of competition and the dynamics of the labour market
- Has a long-range focus (three to five years)
- Focuses on the issue of choice and decision making
- Considers all personnel, not just hourly or operational employees (Anthony et.al (1996, p.12)

Berry (1994) also believes that in order for organisations to optimise the value of their HRISs 'a first requirement is a new, more business-based vision of what the HRIS can do to improve the performance and profitability of the company' (p.22). Three objectives that can provide value to the organisation can be put forward to justify a new or improved HRIS. These, Berry (1994) suggests are increased HR productivity, labour-cost control and improved performance measurements.
Broderick and Boudreau (1992) developed a model that illustrates how human resources division of work can facilitate competitive use of HR resources with HRIS an integral part of this. Based on three primary drivers of HR competitive objectives formulated by Schuler and Jackson (1987), they propose three sectors with administration labelled as cost leadership, operations as quality/customer satisfaction and planning/creative (strategic) as innovation. While they suggest that

the lines between these areas are usually not clear cut, the model gives a useful conceptual framework in which to illustrate how resources can be used to ensure that the HRIS fulfills its role to its full potential along the continuum from administration to strategic (Broderick & Boudreau 1992).

This model, together with the approaches suggested by Anthony et.al. (1996) and Berry (1994), illustrates the strategic value-adding capability of the HRIS through its administrative, operational and innovative roles in supporting and facilitating the competitive use of HR resources. In the administration role the HRIS allows 'higher output for given labour cost' in that processes are streamlined, standardised and more accurate, leading to a reduction in costs. The operations role facilitates continuous improvement, with more system flexibility and access, enabling line management and other clients to share information and decision making. The innovative/strategic role facilitates HR vision and creativity as a vital component of organisational strategic planning (Broderick & Boudreau 1992).

Several authors provide innovative examples of strategic use:
- succession planning, where the value can emerge not just from administrative efficiencies but by changing the decision process; for example, reports can cover a much wider population, hence better succession plans, better management selections and greater strategic value for the organisation (Boudreau 1995; Rampton et.al.1999);
- models and forecasts of, for example, the age of the workforce to assist in projecting future compensation, pension and health benefit costs (Boudreau 1995);
- a manager working on the annual salary budget while on a business trip downloads the current data, trend data, and inputs from the boss onto a laptop computer. The manager analyses *if-then* scenarios to optimise salary decisions, records the decisions, and has them in the boss's email the next morning (Sobkowiak & LeBleu 1996, p.63);
- a gas company identifies via a benchmarking process that its employee-initiated separation rate is higher than current levels in its industry. Further analysis reveals that nearly 60% of departures during the year had less than three years service. Using a combination of national and industry benchmarks and organisation-specific business knowledge (e.g. direct and indirect costs of those departures) the HR manager will be able to calculate the cost of employee-initiated turnover and identify the implications this has for the organisation (Howes 1997, p.49).

How can the strategic use of HRISs be facilitated?

If upper level management has the vision that HR are vital strategic organisational members and thus champion the HRIS, it is more likely to be integrated with other organisational information systems (Salmon 1992). This will enable it to be used for strategic purposes. However, it is necessary to have a 'hybrid' HRIS manager, with significant HR knowledge and responsibility as well as information systems expertise in order for the information available from the HRIS to be viewed as an important strategic resource (Hannon & Brandes 1996).

In the development and implementation stages, users must be consulted. In a strategic system this means administrative (HR), operational (line managers) and strategic (top management) users must be actively involved in the project (Kossek et.al. 1994). As Kossek et.al (1994) say

> Like Samuel Beckett's classic play, "Waiting for Godot" in which, after a long wait, Godot never does appear, there is the potential danger that the organisational strategy of investing in information technology to enhance human resource effectiveness may never fully succeed unless users' views of the HRIS and its implementation process are carefully managed. (p.136)

> Most importantly, Walker (2001, p.3-4) believes that
> Human Resources (HR) Technology must accomplish several objectives to be considered successful:
> *Strategic Alignment* must help users in a way that supports the goals of the business.
> *Business Intelligence* must provide the user with relevant information and data, answer questions, and inspire new insights and learning.
> *Efficiency and Effectiveness* must change the work performed by the Human Resources personnel by dramatically improving their level of service, allowing more time for work of higher value, and reducing their costs.

Case studies

As a way of addressing the issues raised about the use of HRIS, let us now consider examples. We carried out interviews in seven organisations in Victoria, Australia. Confirming what overseas studies have found, these organisations use their HRISs for administrative and operational purposes with limited strategic use and views about strategic potential. The following two case studies illustrate this.

Organisation A

Organisation A is a large retail organisation employing 155,000 employees. They have implemented an Enterprise Resource Planning (ERP) system, the HR module of which stores data for 15,000 employees. Apart from this HR module there are many disparate systems such as career planning, performance management and recruitment and selection, some of which are still paperbased. The HR module is underutilised, for example only five percent of recruitment and selection is processed through the system, with some parts of the organisation using self-developed systems that cannot be interfaced with the HRIS. Also the recruitment system is not integrated with the payroll module.

The system is being used primarily for administrative purposes largely because of organisational political problems, the main one being constant wranglings between HR and Payroll about ownership of data. This has lead to data integrity problems and limited the use of information to an administrative level. There is limited line management access to the system as well as line managers resisting implementation and change. Operational level information is rarely generated by them. Senior management philosophically endorses the HRIS but provides little impetus for the change process. Furthermore, there is minimal senior management use of the system.

Strategic use of the system is virtually non-existent. The organisation has plans to implement the career development, succession and people management modules but does not appear to have conducted any implementation support program and the general feeling was that full implementation of the HR module for anything beyond administrative and basic operational information generation is unlikely in the foreseeable future. An example of its fragmented approach is illustrated in this quotation:

> In terms of performance management we just plan at the edges; we've got a good structured performance management system in so far as a process and procedure is concerned but not necessarily controlled or administered properly by the HR system.

The HRIS contains data on under 10% of the employees which severely restricts the use of information organisationwide. There are political problems which affect data integrity and integration of crucial parts of the system to the Payroll module. This combined with an ad hoc implementation of the complete HR module has restricted the use of the system to administrative tasks. Limited strategic HR information is generated through disparate self-developed systems. Future plans for further development of the HR module are not formulated.

Organisation B

Organisation B is a local government organisation with 1000 employees. The organisation has recently undergone many changes with amalgamations between various bodies occurring. Four payrolls had to be integrated into one system, and this occurred over a twelve month period They have recently implemented an integrated HRIS, largely restricted to basic employee data and payroll.

HR is centralised and senior management and line managers have no access to the system. Standard administrative and operational reports are distributed regularly with ad hoc reports generated by HR on request.

While the payroll module contains all basic employee data, it is not integrated, for example, with occupational health and safety or training and development. Training is decentralised, but 'isn't a big issue' with a consequent disregard to formalised data collection and storage in the HRIS. Likewise with occupational health and safety data:

> I'm not sure about the OH&S; I presume there has probably been some information around, but I would say that it's still at the next stage as far as getting OH&S up. OH&S isn't part of HR, just the Workcover part.

The system is largely used for compliance purposes, that is to meet mandatory government reporting requirements. The HRIS is also restricted by the culture of HR, with information being supplied through standard reporting or on request. Training has been restricted to HR personnel so that knowledge of the HRIS strategic capabilities is limited.

Future planning includes access for line management, but the system will largely remain an administrative tool. Organisation B views implementation of their system positively, contending that it has streamlined payroll related processes. There are plans to encourage line and senior management use, but there has been little interest from these groups who largely prefer to have HR information forwarded to them. HR in this organisation has a largely reactive and compliance approach which subsequently restricts use of the HRIS to an administrative role.

Conclusion

The predominately administrative use of HRISs discussed in the literature is exemplified by the case studies. While the potential strategic value of HRISs is obvious, many organisations are limited to administrative use of HR information.

Organisation A has many political hurdles to overcome before their HRIS can become much more than an administrative tool. The system caters for less than 10% of employees and the HRIS cannot provide the competitive advantages suggested in previous studies (Broderick & Boudreau 1992; McFarlan 1994).

In Organisation B HR plays a compliance role and the HRIS is basically used as a payroll system with 'a focus on the administrative and electronic replication of the filing cabinet' (Ball 2001, p.690). This is typical of what Turnbull (1994) describes as HR culture restricting the use of the HRIS.

Both organisations studied support the findings of Ball (2001, p.691) who found that 'in general HRISs are still being used administratively.'

> In conclusion, Sobkowiak and LeBleu (1996) state that
> HRIS has to go through a metamorphosis for the good of the corporation and the human resource function. It has to become a tool for empowerment rather than control; a tool for sharing rather than just storing; a tool for feedback not just feed in. Companies that take advantage of the internal and external forces working toward change will achieve strategic advantage in the workplace and in the marketplace. (p.64).

There is considerable scope here for further research into the experiences of particular organisations, with a view to developing best-practice strategies for organisations who wish to derive optimal contributions from their Human Resource Information Systems.

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