

The Influence of Information Technology in Human Resource Activities

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Abstract

In this generation, computers and the internet have widely influenced the way business processes are being done. From business registration, daily operations, up to business closure, technology has made things simple, efficient and effective.

Human capital is one of the most important things needed for a business to be successful. With the arrival of technology, human resource processes are changed. This paper discusses the emersion and application of information technology in human resource management processes.

Keyword : Human Resource Management, Information Technology

1. Introduction

First, let's define the term "resource", it is a source of supply, support or an available means[1]. Furthermore, in the context of business, this key term can be classified as physical, intellectual, financial and human resources[2]. Physical resources include assets such as land, building, machineries, vehicles, computers, furniture and equipment. On the other hand, Intellectual resources, include, brands, proprietary knowledge, patents and copyrights. Financial resources include money, credit lines or a stock option pool. Finally, Human resources (HR) include the people. It resides in the knowledge and motivation of the people in the business and it improves with experience, which no other types of resources can do[3]. Because of this, it is regarded as the most crucial resource that creates the largest and longest lasting advantage for a business entity.

The Human Resource Department (HRD) is the one in charged with the management of people resources. Human Resource Management is defined as a system of activities and strategies focusing on successful management of employees at all levels of an organization in order to achieve the organization's goals[4]. To achieve this, the business entity must make employee productivity as one of

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the major goals. In order to develop high performance and effective workers, Jones and Barlett suggests to input in areas such as the establishment of a legal and ethical management systems; job analysis and job design, recruitment and selection; distribution of employee benefits; employee motivation; negotiations; employee terminations, determination of emerging and future trends; and strategic planning[5]. Human Resource Management helps in maximizing productivity & reducing cost by putting right person at right place.

Human Resource Management is a process consisting of four main functions. This includes staffing, development, motivation, as well as maintenance of resources[6].

Processes included in staffing are strategic HR planning, recruitment and selection. Strategic HR Planning wherein an organization ensures that each department in the organization has right number and kind of people capable of effectively and efficiently completing those task that are assigned to them which is aligned with the company's mission and strategic goals. Recruitment is the process by which a job vacancy is identified and potential employees are notified in order to have an adequate pool of professionals which are qualified for the position. From that pool, criteria for the position will be made and the best fit applicant is selected[7].

Development includes orientation, employee training, employee development, organizational development and career development. The new employee is then introduced to a work unit in the organization. Then the new hire will be taught of the things that his position does, further training is given in order to increase productivity. The employee development is focused is on a future position within the organization for which the employee require additional competencies. Career development is focused to provide the necessary information and assignment to help employees realize their career goals. The HRD also has to deal with facilitating system wide change in the organization.

In Motivation, a job design is necessary to stimulate the performance and recognize the capacity needs of the one who perform it. Performance management would also be useful in order to appraise work done by an employee. The HRD is also the one in charge of the compensation management and employee benefits[7].

Lastly, Maintenance includes the design and implementation of programs to ensure that employee us healthy and safe. HRD must also maintain good communication and employee relations[7].

As technology improves, organizations can use information systems to effectively manage the

increasing number of business processes including those which involves HR tasks. Each IT tool assists HR professionals in the delivery of services in different functions. These tools may include web data bases used for learning at work, decision making and completing works[8]. HRM generally uses IT as the improved HR Information Systems (HRIS).

2. Review of Related Literature

An empirical study conducted by Mamoudou and Joshi (2014) said that globalization brings the requirement to think how IT can contribute to the fulfillment of business strategy in the frame of Human Resources management in order to steer the business towards excellence and reach competitiveness in the market[9]. Even if the questionnaire revealed that IT sustains reaching HR goals moderately, precise plan of implementation of information system can significantly support strategy to attain the defined key performance indicators.

A Czech article presented an insight to processes, performance drivers and ICT tools in human resources (HR) management area. The study showed how a dedicated human resources information system (HRIS) can support HR managers and how HRIS is being used in Czech companies[10].

In addition, the study of Unall and Mete (2012) defined Human resource Information system as an integrated system acquiring and storing data used to make analysis, make decisions in the field of HR. The study also tackled the electronic Human resource management and its benefits[8].

Alwis (2010)[11] also made an attempt to find out the background of the e-HR adoption in the Sri Lankan context and its impact on the role of the HR professionals. The study suggested that if an organization is going to adopt this; they must first evaluate employee attitudes, organizational characteristics, culture and the way of collaborating those with HR and IT. This adoption should not be done in an ad hoc way for it should be planned and implemented in the proper manner. The software selected must be well identified for suitability reasons and of course its cost must not exceed its benefits. The adoption of e-HR by HR professionals will make a significant change in their roles by making them strategic partners in business. Furthermore, Nazari et al. (2012)[12] stated that important parts of the organization will be affected by this organized HR technology. Including processes on how to manage the new environment. The environmental forces that were involved with information

technology will be eclipsed.

By shifting its focus from administration or personnel management to strategic Human Resource Management, Information technology is expected to improve the performance of HRM. The study also concluded that HR practice is becoming more and more challenging day by day. A lot of new problems will arise, involving retention, attraction of employee, dealing with different cultural people, managing work force diversity, technological and informational changes. HR professionals must also be up to date when it comes to technology in order to get new skills through education and overcome these problems[13].

Sensor systems and Internet of Things offer new opportunities for building applications that have information and control in human resource information system previously very difficult or even inaccessible[14]. Another paper having the same author also puts forward an application in the cloud computing environment of human resource management architecture which provide cloud computing environment of vast human resources information organization[15].

3. Discussion

The emergence of Information technology and Human Resource Management made the Human Resource Information Systems (HRIS). This is an integrated system that helps organizations acquire, store and retrieve information to make analysis and decisions in the field of human resource[16]. This is not limited to the computer hardware and software applications that comprise the technical part of the system. This also includes the people, policies, procedures and data required to manage the HR function[17].

This HRIS supports different activities such as identifying potential employees, maintaining employee records and creating programs to develop talents and skills.

HR systems are present in each level of management in an organization as shown in [Fig. 1]. At the operational level, these systems are involved in processing of payrolls and tracking the recruitment and placement of the firm's employees. At the middle management level, HR systems help managers monitor and analyze the recruitment, training, allocation, and compensation of employees. Strategic-level HR systems identify the manpower requirements such as skills, educational level, types of positions, number

of positions, and cost in order to meet the organization's long term business plans and strategic goals [18].



[Fig. 1] HR Activities in the Levels of Organizational Management

Technology in HR ranges from simple spreadsheets to complex calculations. These things are made easier with the aid of technology tools. [Fig. 2], shows the HR capability model as describe by [16].



[Fig. 2] Human Resource Capability Model

The Human Resource Capability Model consists of activities involving people development, resource management, employee relations and communication, HR information and accounting, retention and reward of employees.

3.1 IT in People Development and Performance Management

Company employees must be well trained. Mostly, these employees are being taught and coached before they start working but there are also instances that employees just learn during the actual situations. Due to the evolution of work in offices, some technical training must be required for the employees in order to adapt in the new systems. The problem arises if they are in full time work. Since business operations are ongoing, the employee and the HRD would have a hard stage in setting a time for training.

In these days, with the aid of technology, people development can be made easier and more comfortable on both parties. There are software tools for training needs analysis and career management and succession planning.

Useful technology tools in this area are online virtual classrooms and simulations, Wikis, Communities of Practice, Blogs and other Social Learning applications, Job aids and references, Books, videos and CD-ROM instruction, Context-sensitive online guides, Self-directed learning labs, Mobile and tablet and Development roadmaps[19].

When it comes to performance management, there are online appraisal systems having 360-degree feedback. Some business companies also have online and desk-top software for questionnaire formulation to be used for self-appraisal systems. These two things are useful and are compared to see whether there are deviations from self-evaluation and supervisor's evaluation.

3.2 IT in Resource Management

Uses of technology in resource management include online recruitment. This is one of the most useful tools of HR because it exposes the opportunity to a wide area. They can furthermore collect a pool of qualified individuals for a certain position. In online recruitment, there are websites where HR professionals can use. The internet will also be very useful for background checks of individuals. In the interview portion, there are many internet applications that one can use for cam-to-cam interview. Though online recruitment is good and fast, the study conducted by Kapse et al. suggests that traditional methods of recruitment should not be replaced by the online recruitment; perhaps, it should just be a supplement[20]. There are also technology software tools that can be used in selection, induction

packages, HR planning and forecasting[16].

3.3 IT in Employee Relations and Communication

There are several technologies that facilitate employee relation communication. Aside from the wired and mobile telephony technologies, organizations also use intranet as a network for communication. An intranet is established with Local Area Networks and Wide Area Networks. This is a private network accessible only to an organization's staff. Large organizations usually uses intranet for important internal communication and collaboration, and provide a single starting point to access internal and external resources[21]. This also became a communication network of the HRD and the employees.

3.4 IT in HR Information and Accounting

Again, the intranet is used as a medium for information dissemination. When it comes to the accounting of payroll, there are software and online accounting payroll application that helps solve salaries and compensation with the integration of HR metrics. Of course, salaries will depend upon the number of hours that employees are rendering to the organization. To get this data for accounting purposes, daily and hourly attendances can be monitored through biometrics technology. Other offices might still have attendance sheets, clock cards or simple attendance software in computers.

Time and attendance software captures work time for salaried and hourly employees for budgeting and hourly allocation, Work time (start/stop time) or exceptions data import, Labor allocation for analysis and budgeting purposes, time allocation to departments/projects/ tasks, Process approval (time off & timecard), view of balances and time taken, automatic calculation of overtime, absence management, timely submission of time sheets, timesheet audits, use of time clocks and compliance with overtime rules[22].

Going back to HR metrics, this helps monitor, develop, and drive corporate strategies. It can also be useful to access, analyze, and present human capital information. There is what we call base and complex metrics. Base metrics include data such as cost per hire, employee turnover, and days to fill an open position. On the other hand complex metrics includes data about talent management, performance management and return on investment measurements. Furthermore, the HR Metrics tool also has the ability to make comparisons against company averages and industry standards or comparisons which are

crucial to business intelligence[22].

3.5 IT in Retention and Reward

Reward systems may also be inputted into the payroll software. For instance, when a contracted employee in the manufacturing industry have reached or exceeded the number of products made, reward can be added automatically to his salary after the input of the required information in production has been made. The same may apply to sales persons who have exceeded the required level of sales.

Because there are software which monitors log-in and out, information regarding attendance can be immediately generated. With this information you can be able to see who has the greatest absences and check whether they have violated attendance policies. You can see the punctual employees that can be retainable if proven to have good performance. You can also see who is always late and because of this information, the management can immediately do the proper sanctions.

Because of information technology, salaries and rewards can be directly deposited into the employee's bank account through real-time/online banking technologies.

4. Conclusion

Information Technology has surely improved human resource activities. Transactions were made simple, efficient and effective. However not all HR functions must be purely relied upon technology because HR deals with the people. Most especially when it comes to recruitment, online recruitment is good but the researcher still believes that the personal job applications are still effective in some situations. Again, technology is very useful but Information technology and the classical Human Resource Management processes should complement each other to be effective.

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