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INTEGRATING HUMAN RESOURCE DEVELOPMENT
WITH TECHNOLOGY



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Short Profile

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ABSTRACT:

Use of technology in human resource management activity is evolving rapidly. HR professionals must use these technologies appropriately in order to help organizations to utilise and increase their human capital base. Use of these information technologies on different types of HR activities has been discussed in the paper. The central focus of this paper is to study the interface between two

fields of study Human Resource Development (HRD) and Information Technology (IT). This paper highlights how technology based learning tools and instruction strategies can be useful for the organizations. The purpose and nature of available technology support system at the enterprise level such as SAP, ORACLE and Microsoft Dynamics etc. as well particularly for employee development learning software such as Saba, Skillsoft etc. has been mentioned. This paper also explored key technology trends such as increased use of portals, intranet, HR data privacy, virtual tools etc. The comparison among selected technology service providers specifically for learning and development has also been performed. This paper offers useful insights for HR practitioners about the technology based learning available, its uses and suggest a selection criteria to select the most appropriate one for the employer organizations.

KEYWORDS

Human Resource Development, Information Technology, E-Learning.

INTRODUCTION :

HRD is an emergent field that is built upon various disciplines including business, education and psychology. E-learning involves the use of technology based learning formats such as Digital training, gaming, learning management system, synchronous and asynchronous learning tools. Human resource development can be looked upon both at micro (at individual, group, or team level) as well as at macro level. At micro level, HRD presents the improvement in the quality of employees so as to achieve higher levels of productivity whereas macro level is in the context of improving the quality of human life, i.e. people's development for the nation's wellbeing as we have Ministry of Human Resource Development in India. McLean & McLean, 2001 have given more holistic definition of Human Resource Development as any mechanism that has the potential to develop individuals' work-based knowledge, expertise, productivity, and satisfaction, whether for the individual or group/team, or for the benefit of an organization, community, nation, or the whole of humanity. IT is only tool and compliment to the people who use such systems. This paper intends to highlight the technologies available to facilitate human resource development in an organization.

REVIEW OF LITERATURE

Human resource development can be explained as set of systematic and planned programs designed by an institute to provide its members with the appropriate skills to meet current as well as future job requirements (Werner, 2006). HRD is a process for increasing and unleashing human expertise through organization development, training and development for refining performance on the job (Swanson, 1995). Though there are many studies which focus upon the use and impact of technology in human resource management activities and literature on IT and HRD is relatively sparse. A study by Kottemann et al 2009 assessed Internet Communication Technology (ICT) usage in three domain viz. individuals, business, and government. Taking data from 122 countries and using PLS analysis they have found that education quality is positively associated with ICT use by individuals and governments, but weakly with ICT use by business. On-the-job training, however, is positively associated with all three domains of ICT use.



E-HRM

Electronic Human Resource Management or e-HRM uses information technology as a central component for delivering all HR services efficiently and effectively by modifying information flows, social interaction patterns, and communication processes (Stone & Lukaszewski, 2009). In eHRM system, it is possible for line managers to arrange and conduct performance appraisals, plan training & development, evaluate labour costs, and examine indicators for turnover and absenteeism on the computer systems. Systems of eHRM are gradually supported by advanced software produced by private suppliers such as SAP, Oracle, PeopleSoft and

Genesys. There are three types of e-HRM operational, relational, and transformational (e-HRM, 2015). Operational e-HRM is concerned with administrative HR activities such as managing payroll function and employee personal data. Relational e-HRM is concerned with supporting various business functions by various HRD mechanisms such as training system, recruitment, and performance management. Transformational e-HRM involves strategic HR activities such as knowledge management, aligning HR activities with business strategy such as strategically aligned training.

Though there are many studies on human resource information system, e-HRM, literature is relatively sparse when we see the use of technology for employee development. This paper focuses on identifying the key technology providers for human capital for the corporate clients and thus provides useful insights to the HRD Practitioners.

RESEARCH OBJECTIVES

Following are the objectives of the study:

1. To identify and classify the major E-learning tools and technology trends in the HRD field.
2. Compare and contrast some major technology service provider in HRD domain.
3. To propose a selection criteria to select the appropriate technology support for effective human resource development in an organization.

RESEARCH METHODOLOGY

This paper gives initial insights on the technologies available for employee development in the organization. Only secondary data sources were used for the research work. Technology services providers were identified on the bases of global presence in terms on number of clients they serve (market share). Then comparative analysis of their offering especially for learning and development was done using company product information and data sheet.

STUDY RESULTS AND DISCUSSION

E-learning tools and technology trends in the HRD field: Learning Management System & Web based instructional technologies

Major web based instructional technologies are LMS (learning management system), synchronous learning tools and asynchronous instruction technologies for formal training and development (Bartlett, 2008). Boehle (2005) states that companies are now seeking a 'complete approach' to elearning also known as learning management software having content, authoring, collaboration, and assessment tools from one source. Learning management system is software that mechanizes the administration of training programs (Chapman, 2005). This includes software applications that track training, course management, chat, discussion boards, and authoring for powered learning.

McIntosh (2015) has specified following features of Learning Management Systems:

- Online course
- Instruction management
- Blended learning
- Talent management which includes tools for hiring, performance evaluation, compensation and incentives, succession planning, employee retention and plan career of employees.
- Communication and collaboration amongst employees (Web 2.0) also called social learning and networking.
- E-Learning development techniques (including authoring and publishing of the content online).
- Content management.
- Assessment/testing of employee learning and development.
- Virtual classrooms instructional format.
- E-Commerce. The ability to charge users for the courses internally for employees and externally (for example for partners) is a feature which is now being included in systems. Also called extended enterprise when organizations use their system to extend their offerings to other stakeholders such as customers/suppliers/partners, etc.
- Reporting. All good systems provide good reporting generating functions and customize it.
- Mobile and Social learning.
- SaaS (Software as a Service). Some LMS offered as software that is installed internally in the organization.
- E-learning standards: There are a many E-learning standards that exist to help support interoperability of courses and applications such as AICC, SCORM (Sharable Content Object Reference Model)

On the basis of the market share following are the six largest LMS vendors in the corporate market (McIntosh, 2015):

- SumTotal (including GeoLearning) (now owned by Skillsoft)
- Saba
- Meridian
- Outstart (now owned by Kenexa/IBM)
- Plateau (purchased by SuccessFactors which was then purchased by SAP)
- Learn.com (purchased by Taleo which was then purchased by Oracle in Feb. 2012)

Table1: Comparative analysis of largest learning management vendors

	SumTotal	Saba	Meridian	Outstart (Kenexa)	Success Factors	Learn.com (Oracle Taleo)
Product Name	Offers two different LMSs -Learn: Maestro -Learn: Enterprise	Learning@Work	Meridian LMS	Kenexa LMS	SuccessFactors Learning Management System	Oracle Taleo Cloud Service
Industry Experience	15 years	14 years	8 years	--	--	
Product (LMS) standout features	-Widget based system -Integrated with entire talent management system -Social Collaboration features	-Course authoring -Hosted services -Unlimited users -Blended learning -Performance assessment	-Course authoring -Blended Learning	-Data Management	-Hosted services -Goal setting -Skills assessment -Performance tracking -Bookmarking	-Authentication tools -Course authoring -Career tracking
Pros	-Easy to use -Affordable -Very comprehensive	-Work offline and online -Good communication features	-Mobile learning -Third party e-learning courses -Served Client in various types of industries	-Easy to use and user friendly	-Mobile access -Discussion forum -Different template -Multiple delivery format -Works on all mobile platforms	-Individual based plans -Includes external training -Active directory -Custom user interface
Cons	-Criticized for lack of innovation -Weak social learning functionality			-Focuses more on e-learning -Do not have mobile learning platform		-Lack of mobile platform
Suitability	Ideal for larger organization	Small-Medium Business		More appropriate for education sector	More appropriate for education sector	
Cost	Starts at \$57/user/year for 250 users and under, and goes down to \$26/user/year for 5,000 users and up	Subscription based pricing	Data is available only on product request	Data is available only on product request	Data is available only on product request	Subscription based pricing

(Source: Compiled from the companies' website and product data sheet.)

SYNCHRONOUS LEARNING TOOLS

Synchronous learning tools allow for real time interaction between learners and facilitators. This includes instant messaging, chat room, and real time video conferencing (Bartlett 2008).

Instant messaging is useful for live interaction by a small group of people. One example is of Moodle which offers chat module from the open source learning management software. Interactive video is frequently used for training especially when the instructor has geographical remoteness.

SIMULATION

Boehle (2005) suggested simulations as the next generation of elearning platform. Interactive online simulations allow the imitation of business environments and create circumstances in which the participants work in teams or groups and make appropriate decisions. Action based learning in the online environment creates circumstances where the members learn by doing (Bartlett, 2008).

ASYNCHRONOUS LEARNING TOOLS

Asynchronous Learning tools do not require real time interaction announcements. Discussion boards, email, blogs and recorded lectures are the main forms of asynchronous learning (Bartlett, 2008). Discussion boards permits for the information to be stored and saved over the time period. Email is widely used to make announcements, updates, and to give/receive feedback whereas discussion boards allow for participation and interaction with each other on a specified topic. A blog denotes to an individual, web page, kept by the author in the form of reverse chronological diary order (Wagner, 2003). While much of the software for blogs (WordPress, Blogger, Tumblr, Quora) allows for fast publication of traditional text based information and images. Traditional Blogs are in the format of a normal text format. Lately newer blogs have even been introduced that have inbuilt feature of video and audio capability. A major benefit of pre-recorded lectures is that they can be provided in numerous ways using DVD, CD or on the Internet with technologies such as plugins and/or java enhanced browsers. Moreover, programs such as OnCue by Impactica, RealPresenter, and others permit the user to have video, audio, PowerPoint, and text in the delivery (Bartlett, 2008).

ENTERPRISE WIDE –DEVELOPMENT SOLUTIONS

Enterprise wide development solutions also known as Enterprise Resource Planning is business management software (usually a suite of integrated applications) that a company can use to collect, store, manage and interpret data from many business activities, including:

- Product planning, cost
- Manufacturing or service delivery
- Marketing and sales
- Inventory management
- Shipping and payment
- Accounting
- Human Resources

ERP is enterprise business software offering software application in various domain areas for the timely storage, management, retrieval and usage of business information in an integrated manner.

Three major market players Oracle, SAP, and Microsoft were identified having well established software application for human capital management in their ERP suit.

ORACLE'S PEOPLESOFT ENTERPRISE eDEVELOPMENT

PeopleSoft eDevelopment is serving of Oracle's PeopleSoft Enterprise wide Human Capital Management family of products. It's a self-service solution that supports employees' personal and professional development while working in a company. Employees over worldwide can access collaborative tools provided in PeopleSoft eDevelopment that help them through the steps to career success, allowing them to become fully engaged employee in managing their careers. This helps to drive the organization to higher level of success through employee development. Providing employees with better development opportunities in the company increase employee morale and staff retention, improves organization's performance and also helps in employer branding. It offers services for employee management, employee engagement, service delivery, and talent management for a company (oracle.com, 2015).

SAP ERP CORE HUMAN RESOURCES

SAP ERP software offers its services to automate, streamline, and extend Core Human Resources processes. It can be used to leverage employees' skills and talents, while giving every opportunity to achieve their career goals (sap.com, 2015). It gives services on automation of employee administration, payroll, legal reporting processes, support compliance and time management with changing global and local HR regulations and policies; and also to understand, evaluate, and measure employee's contributions to the organization wide performance measures; Also, to attract, hire, and empower the talent – and make new employees productive quickly on the job; highlight where talent lies and train and cultivate workforce, align employees' objectives with overall business objectives.

MICROSOFT DYNAMICS

Microsoft Dynamics ERP provides intuitive tools and techniques, plus role-based, individualized dashboards and key performance indicators directed to the specific jobs that employees do. This can make jobs easier and provides fast, clear, and controlled visible information on the employee (Microsoft.com 2015). Microsoft Dynamics AX Human Resources gives one simple solution for HR. A single, unified HR system that helps take the administrative complexities, freeing organization to focus on tomorrow. It's an integrated part of the overall Microsoft Dynamics AX ERP system that interoperates with the Microsoft tools like Office and SharePoint.

Microsoft Dynamics AX Human Resources is built on nimble and flexible architecture, a company can choose and use only the parts they need and, if they like, can easily add more later on. This offers single-handed efficiency and encourage effective, one-click collaboration among employees.

CRITERIA TO SELECT THE APPROPRIATE TECHNOLOGY SUPPORT

Based on the literature review and analysing the corporate practices following key factors are

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proposed to select the appropriate technology for the human capital management and development in the organization;

- Functions and capabilities: the needs of the company in terms of compliance needs, existing collaboration and web tools, type of courses offered, administration of requirement, requirement of employees, training administration issues and deadlines for course completions are some of the organization specific requirements should be included in request for proposals.
- Size of the organization
- Cost: There are very different costing models leasing, one time purchase, annual subscription, fixed cost, variable cost etc.,
- Hosting options: In-house hosting, vendor hosting, or third party hosting
- Reporting: It should be checked whether vendor provides auto generated reports, ROI figures or not.
- Implementation issues: To the extent after sales service provided by the vendor
- References: Obtain the references of the vendor's product from its client's, particularly from the same industry and of the same size.
- Pilot testing: Possibility of pilot testing the technology and support offered by the vendor should be considered.

CONCLUSIONS AND IMPLICATION OF THE STUDY

With the increase in bandwidth and the automation of employee data, there are endless opportunities for using Information technology for Human Resource Development. The field of HRD is at an historic point in which we can demonstrate value and relevance to the modern, technology-enabled organization. Many in the field of HRD have sought a balance between the needs of the individual and the needs of the collective for learning and performance. But HRD has been late to incorporate technology strategically in practice and in academic preparation programs (Bennett, 2014). This paper intended to highlight the offerings of the major Learning management system providers in the market with their respective pros and cons. Development and Learning is not one level phenomena it happens at the organization level, team and individual level. Development of human resource requires simultaneous change and development in others business processes too. ERP system is used by the companies for achieve its results by better managing and integrating its processes. Thus, key enterprise wide application providers were also highlighted in the paper.

Fagan (2014) recommends viewing technology as a combination of the social and material, which is a more holistic approach in HRD and IT interface.

Though this paper gives initial insights over the use of technology in HRD field and proposes criteria for selecting appropriate IT application but it lacks empirical evidence for the same. Thus, future research in the area might focus on the empirically testing this criteria as well as the impact of these IT application on the business and processes of the company.

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