



RISING NEED OF INFORMATION TECHNOLOGY IN HUMAN RESOURCE MANAGEMENT

¹Ayushi Agarwal, ²Aayushi Mishra, ³Ajai Kumar Singhal³

¹Research Scholar, ²Senior Research Fellow, ³Professor

Department of Commerce and Business Administration

University of Allahabad

Prayagraj

Abstract:

The internet has a huge influence on our daily lives. In today's world, virtual connections outnumber physical ones. It has fundamentally altered human culture, including how we work, learn, and spend our free time. IT, as a mechanism made available to individuals and organisations through hardware, is critical in the development of human resources. When addressing the growth of persons inside a firm, the importance of information technology cannot be overstated. This study investigates the growing significance of information technology (IT) in human resource management. The top management is well aware of the internet's potential in the twenty-first century and wishes to use information technology to the greatest degree possible to fulfil organisational goals and objectives. The use of information technology will ensure the achievement of company goals as well as the optimization of labour.

Keywords: Information Technology (IT), Human Resources Management, Recruitment, Human Resources Development.

I. INTRODUCTION:

Today, every corporation recognises that its people resources are their biggest asset for growth. The process of growth and development without human participation is pointless since humans are both the objective and the method of advancement (**Kolinsky, 1998**). The availability of fresh and experimental information is the foundation of human resource growth, and the information is a rational process known as information technology (IT) that may assist generate and construct new human resource strength. According to new technologies, the evolution of companies and employees is one of the most significant aspects shaping modern society. The evolution of modern information technology has been ongoing (**Hajizade Moghadom, & Vajdi**

Dastgerdi 2010). Technology and HRM have a wide range of effects on one another; therefore, human resource professionals should be able to adopt technologies that enable the re-engineering of HR action, be able to maintain technologically-driven organisational and work project changes, and be able to maintain a conducive managerial climate for innovative and knowledge-based organisations (**Manpreet, Loverdeep, Shiny, & Shivani, 2014**). Information and communication technologies (ICT) - an umbrella term for technologies combining the internet, new media (social media), mobile communication, and computers - enable the organisation to modernise its internal processes, structures, core competencies, and relevant markets on a global scale. Information and communication technology (ICT) permeate all economic sectors and have ramifications for nearly every business (**Helfen and Kruger, 2002**). HRM should be centred on the strategic aim, and these strategic objectives are producing information technology strategies to plan for implementing the human resources strategies plan in the field of information technology.

II. LITERATURE REVIEW:

Stone, E. F., & Stone, D. L. (1990) stated that with the increased gathering of employee data made feasible by HRIS, employee privacy concerns will only increase in significance. This article describes the fundamental challenges of privacy in companies and how they might be addressed. It is a good introduction to privacy concerns.

Cappelli, P. (2001) said that utilizing the Internet for recruitment purposes is essential to attracting prospective job seekers. In this post, Cappelli offers four essentials for handling the e-recruitment process properly. These include the use of the Internet to recruit candidates, the use of technology to sift applications, discrimination difficulties, and the ability to swiftly discover and select the best prospects.

Weichmann, D., & Ryan, A. M. (2003) article focused on employee attitudes, emotions, and computerised test performance. The data indicated that there was no difference between paper-pencil and computerised test responses. Computer anxiety and experience did affect performance results, indicating that businesses employing computerised or online testing should consider the role anxiety and experience may play.

Bauer, T. N., Truxillo, D. M., Paronto, M. E., Weekley, J. A., & Campion, M. A. (2004) stated that utilizing technology to assist screening approaches can minimise screening implementation costs. This study examines views of organisational fairness and attractiveness across three screening technologies: face-to-face, telephone, and interactive voice response (IVR). The results indicate that there are no changes in applicant attractiveness or most views of fairness, with the exception of procedural justice perceptions.

Potosky, D., & Bobko, P. (2004) in their article examined the research on Internet-based selection testing. It focuses specifically on difficulties of measuring equivalence between online and paper-pencil administration. Practical guidance is also provided for measurement equivalency, application answers, and technology design challenges.

Sitzmann, T., Kraiger, K., Stewart, D., & Wisher, R. (2006) in their article focuses on employee attitudes, emotions, and computerised test performance. The data indicate there was no difference between paper-pencil and computerised test responses. Computer anxiety and experience did effect performance results, indicating that businesses employing computerised or online testing should consider the role anxiety and experience may play.

Gueutal, H. G., Marler, J. H., & Falbe, C. M. (2007) This study examines how advances in HR technology are influencing the skills required of HR personnel. It focuses on how technology is decreasing the demand for conventional HR generalists while boosting the demand for experts, such as HRIS specialists and super content masters who can assist employees in navigating complicated HR challenges.

Hornik, S., Johnson, R.D., & Wu, Y. (2007) Utilizing more modern technology is one approach for firms to improve their training outcomes. This article concludes that it may not be the technology itself that counts, but rather how the course design and technology correspond to the preferred learning styles of the trainees. When learners discovered a mismatch, they communicated less, were less interested, and did somewhat worse than when a match existed.

Lievans, F., & Anseel, F. (2007) Computerized in-basket chores can minimise administrative expenses, enhance realism, and permit more quick feedback. In this work, a cloning technique is employed to create a computerised replica of a paper-and-pencil in-basket exam. The scores on the computerised in-basket test were comparable to those on the paper-and-pencil job, indicating that well-designed in-basket exams may be transferred to computer-based assessments.

Johnson, R. D., Hornik, S. R., & Salas, E. (2008) Communication is essential to the development of effective e-learning courses. This study discovered that those who communicated more did better and were happier with the course. In addition, research indicates that it is essential for students to feel as though they are in a shared learning environment. The stronger learners' perceptions of a shared learning environment, the larger their course satisfaction and utility evaluations (i.e., the more they saw the value in the course).

The Idea Behind IT is *"Technology is a collection of procedures, techniques, methods, equipment, tools, and machinery used to provide a product or service. "Technology is the application of science to industry by means of systematic, directed practises and research"* (**Tarogh, 2002**). Information technology is a collection of instruments designed to improve information systems, and the disadvantages of information technology are typically the result of excessive usage of this system and faulty or insufficient design of information systems. The misuse of these systems by their users (designers and IT professionals) is the primary cause of difficulties and chaos. Information technology is more of a concept, a strategy, a way of thinking, and a tool for innovation in human fields (**Ahmadi, 2011**). Implementation, expansion, and protection of information systems constitute one of the most important business evaluations in IT direction, and managers and companies confront new problems in this area. Information technology is a collection of cognitive and cultural systems that may be referred to as the culture of information building. In the absence of a culture of information building, what constitutes information in IT is an information-centric concern. Combining and

interconnecting a number of usefully generated systems and supercomputers, computers, connections, and wires produces information technology. Information technology refers to the system of societal and organisational information creation and collecting. IT enabled access to information from everywhere by making computer programmes cheaper, simpler, and more compact (**Mohammad Nejad, 2011**).

III. OBJECTIVE OF THE STUDY:

Leaders believed that one of the most significant effects of the internet and information technology on human resource management is how technology alerts business and lifestyle. With these considerations in mind, an attempt is made to respond to the subsequent questions.

- 1) To know the Information technology (IT) influences the HRM Function.
- 2) To know the advantages and disadvantage of information technology on the employee as well as organizations.

IV. RESEARCH METHODOLOGY:

Internet and information technology's (IT) impacts on human resource management is investigated through a systematic and exploratory approach in the current study. Secondary data sources include books, periodicals, published articles, journals, the Internet, seminar papers on internet and information technology and human resource management, etc.

V. ROLE OF IT IN HUMAN RESOURCE FUNCTIONS:

In the modern era of information technology, easier communication and data transmission is the third wave of Alvin Toffler in a global society, and economic markets are challenged to obtain a larger portion of global advantages (**Davoudi, 1999**). Today, every firm uses computer technology and information systems to communicate everywhere. IT and the internet are very effective in organisational learning, effective communication with employees, an impressive organisational learning process, and the availability of information at any time and place, as required by managers to utilise their skills and abilities in the organisation and to reduce their weaknesses and other factors in a timely manner (**Ghorbani and Sangani, 2011**). Information technology has altered the organisation, including the following human resources function:

VI. E-Recruitment:

E-recruitment uses web-based technologies to assist companies attract a larger and more varied candidate pool. The decision to adopt an e-recruitment strategy is motivated by a number of business goals, including the desire to:

- Increase recruiting efficiency and cut expenses: Online recruitment may reduce cycle times by 25 per cent and recruitment expenses substantially and enhance applicant quality and quantity. E-recruitment enables firms to efficiently reach candidates throughout the country or the world.
- Establish, promote, and grow brand identity: In an informal survey conducted by the authors of this article, around one hundred job-seeking college students were asked to evaluate the web presences of two unfamiliar companies. Students saw the company with a less technologically advanced and dynamic recruitment website as a less desirable employer and as not being an industry leader (even though it was). According to the students, the company's website represented a lack of creativity and quality.
- Enhance the objectivity and standardisation of recruitment procedures.
- Increase applicant convenience: Applicants that utilise web-based support during the recruiting cycle learn about the organisation, its culture, and available positions online. By streamlining the application process, companies reach out to individuals who may not be actively seeking employment, but who may find a vacancy and decide to apply due to the convenience of the application procedure.

(i) Best Practices: E-Recruiting

- The website for recruiting must be dynamic, aesthetically beautiful, and user-friendly. Individuals are used to highly sophisticated, socially-focused consumer websites and will evaluate a potential employer's website based on these expectations.
- Applicants should be able to select how they view information on the recruitment site. This can lead to a reduction in candidates who are ill-suited for the business and increase applicants' capacity to judge their fit with the organisation.
- The website for recruiting should provide a wealth of information about the company's culture, HR brand, and work environment.
- E-recruitment should not be a company's exclusive way of recruitment, since this may result in negative effects and a reduction in diversity.

VII. E-Selection:

E-selection utilises technology to assist firms manage the process of selecting the best job candidates—those who possess the appropriate knowledge, skills, and abilities for each position and who may be the greatest match for the organization—in a more efficient manner. Faced with demands to continuously enhance the

accuracy of selection techniques and to comply with legal requirements, companies consider technology as a means to actively manage the selection process and give additional proof of the success of the selected selection method. Among the business drivers for e-selection technology adoption are:

- Reducing the amount of time and resources necessary to handle the selecting process: Using e-selection, AirTran Airways was able to minimise by one-third the time required to bring new workers up to corporate performance criteria.
- Increasing selection test administration adaptability: Previously, job seekers were required to visit an on-site or off-site testing centre to take the selection exam in a proctored setting. Candidates can now take web-based assessments in either proctored or unsupervised situations. For instance, several retail firms, such as Lowe's, Home Depot, and Target, employ kiosks near the customer service area to give application exams.
- Enhancing the usefulness of selection tests: Although companies already have the capacity to examine the validity of a selection test for new employees, an HRIS may assist the organisation in utilising longitudinal performance data to evaluate the selection test's ability to predict long-term performance and tenure.
- Enhancing an organization's capacity to give candidates with adaptive testing: Adaptive testing can lessen candidate boredom by avoiding excessively simple or difficult questions. Research indicates that adaptive testing can cut testing time by 25% to 75% without compromising test reliability or validity.

(i) Best Practices: E-Selection

- Before adopting e-selection, ensure that any variations in performance on the online exam are not attributable to the delivery method or a lack of familiarity or expertise with technology, but instead reflect underlying knowledge, skills, or talents.
- Ensure that any online selection exam is not only genuine and dependable in general, but also for your firm in particular. Although web-based testing might save time and money, it must adhere to the same criteria as paper-and-pencil exams.
- Only administer early selection exams using unsupervised web-based testing if security and cheating are not a concern.
- Integrate the data from selection with other functions, such as the performance management system, in order to evaluate and enhance your selection procedures.

VIII. E-Learning:

Your organisation engages in e-learning or e-teaching when training materials, course interactions, and course delivery are facilitated and mediated by technology. According to recent estimates, corporations spend about

\$40 billion annually on e-learning programmes, which is more than quadruple the amount invested in 2004. 26, 27 A recent poll revealed that approximately 60 percent of firms have implemented e-learning or plan to do so within the next year, despite the fact that technology adoption in training is not yet as widespread as in other HR functions. Among the business drivers for e-learning are:

- Reduce training expenses. In a few of years, organisations that use e-learning can achieve significant savings of 40 to 50 percent. 29 IBM, for instance, estimated yearly savings of more than \$400 million due to e-learning. 30
- Increasing employee learning flexibility and autonomy. Because e-learning may decrease travel and time away from the business and home, employees embrace its flexibility. In addition, employees may control their own learning and participate in training at a time and location of their choosing, enabling them to maintain a healthy work-life balance.
- Improved tracking and administration of staff training. Regulators frequently mandate specific training, and verifying successful course completion may be a significant burden for firms. Employees may be obliged by law to take OSHA training, seminars on sexual harassment, or protocols for patient care. A HRIS may assist employees in keeping track of which courses they have successfully finished and which prospective training opportunities may be suitable for their requirements. Additionally, managers may monitor training, decreasing redundancy and training expenditures.

(i) Best Practices: E-Learning

- Create courses that encourage employee communication and involvement. This can facilitate the growth of learning communities and knowledge networks, hence enhancing organisational learning as a whole.
- Consider integrated learning. By bringing learners together for segments of the learning process, blended learning can help employees overcome certain feelings of isolation.
- Any online course should be designed with course design and solid learning concepts in mind. E-learning is not synonymous with merely uploading existing content online.
- Provide training to assist employees in learning to handle an online environment and themselves in a less organised learning setting than a traditional classroom.

(ii) E-Training:

- HR manager trains new staff in the organization in a more efficient manner possibly through the information technology.
- Trainers work directly with new staff through the information technology and training programs.

VIII. E-Performance Management:

E-performance management employs technology to automate the gathering of performance data, the monitoring of employee work, and the facilitation of the creation and distribution of performance evaluations. Organizations employ e-performance management for a variety of reasons, including:

- Improving access to performance data: In most performance evaluation systems, the latency between job activities and performance feedback is a difficulty. With real-time data, managers can offer more rapid feedback, and employees may notice a stronger correlation between their conduct and their performance evaluations (PA).
- Providing data that can make PAs more valuable and impartial: Automatic system collection of performance data can lessen managers' predisposition to focus on irrelevant actions or attitudes. In addition, when performance data can be gathered by the HRIS and performance averages can be calculated, a basic template of performance feedback may be prepared for the employee using predetermined metrics and measurements. Instead, of gathering information and filling out forms, managers may devote their time to the "value-added" aspects of performance management, such as mentoring and coaching people.
- Reducing prejudice in evaluations: Frequently, a manager's judgments are skewed by his or her most recent observations of an employee. This can be avoided if managers have ready access to performance data throughout the whole review period.
- Linking performance data to other human resource information, such as individual development plans, remuneration and incentives, work assignments, and training opportunities.

The HR manager utilises information technology to collect employee performance data and evaluate employee input for the organization's benefit. There are a variety of hardware and software applications that enable HR managers to assess employee performance and define performance standards. The HR manager evaluates the employee's actual performance to the standard performance, eliminates any disparities, and provides more training.

(i) Best Practices: E-Performance Management

- Design the system so that data can be gathered and evaluated at different levels of granularity, and so that employees can understand the link between observable actions, performance requirements, and incentives.
- Determine with workers the sorts of data the system will collect. Capture data that enables them to be more effective in their work and regularly update the acquired data to facilitate performance enhancement.
- Remember that humans are adept at judging which actions are rewarded and which are not. Behaviours that are not readily recorded by the e-performance management system are likely to diminish when awards are based on computer-captured data.
- If data not recorded by the e-performance management system are crucial for performance evaluations, effort should be taken to ensure that data acquired by the system does not mistakenly become the only basis for the evaluation

- Focus of a performance monitoring system should be on delivering feedback to employees in order to improve performance, as opposed to merely collecting data about them.

IX. E-Compensation:

Compensation was one of the early HR activities to be automated, and today practically all firms employ technology to automate payroll operations. The significance of modern e-compensation systems extends well beyond the automation of payroll operations. E-compensation use web-enabled technologies to aid in the design, implementation, and administration of compensation systems. An HRIS enables firms to expedite and automate the compensation planning process, simulate suggested changes in compensation plans, maintain employee compensation history, award incentive pay and bonuses, and give higher quality information to decision makers. 61 percent of firms utilise e-compensation systems or aim to deploy them within the next year, according to a recent poll. 45 Multiple business factors contribute to the expansion of e-compensation technology: There is pressure to limit labour expenditures. E-compensation solutions can improve access to internal and external wage and compensation data. Then, the data may be included into complex compensation models and indicators, which can assist managers in better planning and modelling the expenses associated with various incentive programmes. Through improved access to information and improved compensation models, businesses may have greater control over compensation expenditures.

- Raising employee awareness of external market wage information: Perceptions of injustice or imbalance in compensation will have a detrimental effect on production and morale. As a result of having simple access to web-based wage information, employees are now more educated about how their earnings compare to those in the local market. This information may encourage the organisation to maintain an up-to-date and internally equal remuneration system.
- Faster detection of insufficient compensation arrangements: Organizations can respond swiftly to adjust pay packages in order to attract and retain candidates with high potential and top performers.

(i) Best Practices: E-Compensation and Benefits:

- Integrate your e-performance management system with your e-compensation system.
- Ensure that the information in your e-compensation system is up-to-date. It is unclear that the system will facilitate the construction of effective and equitable pay plans in the absence of current internal and external wage data.
- Ensure that suppliers give employees with accurate and timely information on benefits such as health insurance and retirement planning.
- To facilitate employee browsing, structure the perks section of the website around major life events.

X. Human Resources Development:

Information technology is also required for the development of human resources in society and organisations; it sets the development principles of human resources based on the needs of employees and society. Information technology contributes to Human Resource Development by continuously enhancing human skills and quality. Information is constantly created, disseminated, processed, and managed in the information technology process; therefore, information technology will be the answer to issues when employee training and human skills are integrated to improve and increase productivity (**Saberi and Khademi, 2015**).

XI. Idea Management tool:

Information technology also plays a significant part in the idea management tool by giving data on the number of employee-submitted improvement recommendations and by facilitating the generation of new ideas inside the firm. It may also supply the organization's cost and revenue statistics and aid in the execution of the new plan for the organization's future benefit. The primary objective of the online information support for idea management is to strengthen the organization's foundation and provide all employees the opportunity to contribute. To propose their proposal at the meetings and decision-making processes of the company. The following are benefits of information technology:

- Save time and money.
- Cut costs
- Increase work productivity

XII. Human Resources information system (data storage):

Human resources information system (HRIS) is an integrated system that acquires and stores data for HR-related analysis and decision-making (**Hendrickson, 2003**). Technology simplifies and facilitates human resource operations. The HR manager now keeps and retrieves company files electronically (**Selvan V, 2015**). HRIS provides information regarding employee data, job characteristics, employment application requirements, selection and staffing, employment procedure, professional and individual development, corporate structure, educational costs, performance evaluation, organising, and personal planning, among other things (**Lippert and Swiercz, 2005**).

(i) Best Practices: Optimizing Your Results When Implementing HRIS in E-HR:

When using e-HR solutions, you must redesign and simplify HR operations. Remember that e-HR is a powerful means to implement an HR strategy, but it is not an HR strategy in and of itself.

- Automate fundamental HR administrative processes and assist managerial decision-making using the HRIS.
- Communicate with employees to ensure they comprehend the collection and utilisation of e-HR data.
- Utilize HRIS data to formulate more complicated and strategic HR inquiries. Metrics are important, and the HRIS may provide managers with potent analytic tools to assist them make difficult decisions.
- Enable employees to manage their own data via the HR website and allocate staff basic HR responsibilities. Design the HR website with current information, intuitive navigation, and a beautiful look. Bring the HR website in line with employee expectations. If employees cannot locate the information they require on the internet, they will contact HR.
- Find a balance between technology and interpersonal engagement. Do not allow technology to control your connection with your staff. A robust e-HR approach poses the danger of severing human ties with job candidates and workers.
- Employ non-technological options where applicable. Despite the fact that e-HR should be a significant component of a company's HR strategy, it should not be the sole answer. Technology is not a substitute for an effective HR strategy and capable workers.
- Keep in mind that e-HR is not limited to only huge enterprises. Small and medium-sized enterprises can also benefit from HR technology help. As suppliers continue to offer additional solutions for these types of businesses, possibilities will only increase.

XIII. DISADVANTAGES OF INFORMATION TECHNOLOGY FOR THE EMPLOYEES AND ORGANIZATION

- The increment in the information technology shrinks the job opportunities in the organization and a large number of employees become unemployed.
- If the employees do not have knowledge about the information technology, then employee can't get the desired job in the company.
- It can be expensive to build new information technology system in the organization.
- It is risky from data security point of view.

XIV. CONCLUSION:

It is evident from the analysis that information technology contributes significantly to the organization's internal operations. Utilizing a computer, printer, fax machine, telephones, robotics, etc. expedites the transmission of information. With the use of information technology, HRM plans may be developed more swiftly and work performance can improve. Information technology consists of employee- and organization-specific software and hardware and plays a crucial role in human resource development (**Ghorbani and Sangani, 2011**). The functions of planning and management, recruiting, training and development, and maintenance are all influenced by information technology in the human resource management industry as a whole.

Human resource information systems have drastically impacted the delivery and management of HR services within enterprises. Utilized properly, HRIS may make HR personnel more productive, better knowledgeable, and better equipped to articulate how they offer value to the organisation. Research indicates that firms that combine good HR management practises with effective HR technology are more likely to be productive and profitable. Managing this technology so as to maximise its benefits while avoiding its drawbacks is a challenge for HR leaders.

XV. REFERENCES:

1. Ahmadi, A. (2011). "The Role of Information Technology in Planning the Organization Resources E-Journal of Elites, Elite National Foundation of Azerbaijan –E-Sharghi," pp15.
2. Bauer, T. N., Truxillo, D. M., Paronto, M. E., Weekley, J. A., & Campion, M. A. (2004). Applicant reactions to different selection technology: Faceto-face, interactive voice response, and computer-assisted telephone screening interviews. *International Journal of Selection and Assessment*, 12, 135-148.
3. Cappelli, P. (2001). Making the most of online recruiting. *Harvard Business Review*, 79, 139-146.
4. Davoudi, A. (1999). Development of Human Resources and Administration. *Tadb Journal Tehran*, 41.
5. Gardner, S.D., Lepak, D.P and Bartol, K.M. (2003). Virtual HR: The Impact of Information Technology on the Human Resources Professional, *Journal of Vocational Behavior*, vol 63(2), pp 159-179.
6. Ghorbani, M., & Sangani, S (2011). "The role of Information Technology on the Organizational Effectiveness in Mashhad City Hall" *World Applied Sciences Journal*, vol 13(9), pp 2095-2107.
7. Gueutal, H. G., Marler, J. H, & Falbe, C. M. (2007). Skill sets for the e-HR world. *IHRIM Journal*, XI (2), 9-15.
8. Hendrickson, A. R (2003). "Human Resources Information System: Backbone Technology of Contemporary Human Resources" *Journal of Labor Research*, vol 24(3), pp 3781-394.
9. Hajizade Moghadom, A., & Vajdi Dastgerdi, S.S. (2010). "Information Technology Projected Based Organization and Employee Satisfaction: A Case Study of Iran. *Word Applied Science Journal*, vol 10(10), pp 1176-1184.
10. Hornik, S., Johnson, R.D., & Wu, Y. (2007). When technology does not support learning: Conflicts between epistemological beliefs and technology support in virtual learning environments. *Journal of Organizational and End User Computing*, 19 (2), 23-46.
11. Johnson, R. D., Hornik, S. R., & Salas, E. (2008). An empirical examination of factors contributing to the creation of successful e-learning environments. *International Journal of HumanComputer Studies*, 66, 356-369.
12. Kolinsky, R. (1998). "The new competition and human resources: how disadvantaged are low-income LDCs? Paper prepared for a conference on globalization and learning" Sep, Oxford.

13. Kaur, M., Sindhu, L, S., Sharma, S., Narang, S. (2014). "Information Technology in Human Resources Management: A Practical Evaluation" *An International Journal of Advanced Computer Technology*, vol 3(12), pp 1437-1442.
14. Lievens, F., & Anseel, F. (2007). Creating alternate in-basket forms through cloning: Some preliminary results. *International Journal of Selection and Assessment*, 15, 428-433.
15. Lippert, S.K, and Swiercz, P.M. (2005). "Human resources information system (HRIS) and technology trust" *Journal of Information Science*, vol 31(5), pp 340-353.
16. Nejdairani, F., Rasouli, R., & Behraves, M. (2011). "The Effect of Applying Information Technology on Efficiency of Parks and Green Space Organization: A Case Study. *Middle- East-Journal of Science Research*, vol 10(2), pp 224-232.
17. Potosky, D., & Bobko, P. (2004). Selection testing via the Internet: Practical considerations and exploratory empirical findings. *Personnel Psychology*, 57, 1003-1034.
18. Selvan, V (2015). "Study on the role of technology in human resource management". *International Journal of Applied Research*, vol 1(7): pp 472-475.
19. Saberi, A., Khademi, B (2015). "Explaining the Role of Information Technology in Human Resource Development- Case Study: Staff and Faculty Members of Islamic Azad University, Darab" *International journal of economy management and social science*, Vol 4(1), pp.67-74.
20. Sitzmann, T., Kraiger, K., Stewart, D., & Wisher, R. (2006). The comparative effectiveness of web-based and classroom instruction: A meta-analysis. *Personnel Psychology*, 59, 623-664.
21. Stone, E. F., & Stone, D. L. (1990). Privacy in organizations: Theoretical issues, research findings, and protection strategies. In G. Ferris & K. Rowland (Eds.), *Research in personnel and human resources management*, Vol. 8, (pp. 549-411). Greenwich, CT: JAI Press.
22. Tarogh, K.H (2002). "Technology Management: key to success in competitiveness and wealth creation.
23. Weichmann, D., & Ryan, A. M. (2003). Reactions to computerized testing in selection contexts. *International Journal of Selection and Assessment*, 11, 215-229.

<https://www.shrm.org/hr-today/trends-and-forecasting/special-reports-and-expert-views/documents/hr-technology.pdf>

<https://www.ijariit.com/manuscripts/v3i2/V3I2-1327.pdf>

<https://www.jetir.org/papers/JETIR1807884.pdf>

https://www.researchgate.net/publication/257978898_Information_Technology_in_Human_Resource_Management_An_Empirical_Assessment

https://essay.utwente.nl/59968/1/MSc_Yu_Long.pdf

<https://gjimt.com/N14.pdf>