Study of Smart HR Hybrid Competency in Industry 4.0

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ABSTRACT

The Rapid Industrial revolution and advancement in robotics, big data, and artificial intelligence will be having a far-reaching effect on various functions of an organization specifically on HR. HR professionals need to evolve technological changes in their job to support functions, innovation, and creativity in their organization. The advent of industry 4.0 has led to a constantly evolving, too fast pace and complexly interwoven world of connections, simulations and algorithms emphasizing the focus on the high level of Emotional Intelligence and the requirement of hybrid skills by the employees and the HR professionals. Inspired by these the paper tries to study how technology will change the future role of HR and the skills required by the future HR professionals and the various EQ Competencies & skills i.e. personal competencies & human-to-human abilities. And to study how the HR professional /manager need to develop and integrate their various hybrid skills such as people expertise and data science skill to make smarter, informed and strategic business decisions.

Keywords: Smart HR, Industry 4.0, Hybrid Competency, Tech smarter, Emotional Intelligence

INTRODUCTION

Industry 4.0 often known as the 4th industrial revolution promises smart digital technologies. It represents how these smart technologies will not only change the way how human resources will work but will influence the way organization functions and will be completely redefining work marked by the emergence of innovative technologies such as automation, artificial intelligence, cloud computing and the internet of things. state that with the advent of automation and artificial intelligence HR professionals

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can focus on a more strategic role rather than an administrative task for these the HR needs to be very adaptive with the fast-changing pace. All HR function have two aspects transformational and transactional were in the transactional will be replaced by automation to carry the repetitive redundant ask while the transformational still need to be carried by the HR in the organization (The economic times, 2018). Study state that it will provide these professional an opportunity to focus on more critical business functions rather than repetitive ask which can be taken over by machines. The future of the HR professional will be more inclined towards the advisory function such as counseling and motivating the employees. Technology will not make HR function defunct it will just take away the repetitive task and to survive HR professionals need to upgrade and reskill their competency themselves and need to consider it as an opportunity rather than a threat. There is an emerging need for HR Professionals to have a different kind of smartness. Emotional Intelligence (personal competencies and human to human abilities). The today work environment is becoming agile and dynamic which requires technical proficiency and kaleidoscope thinking was in silos skills and mindsets are replaced with cross overthinking. And hybrid jobs will be the need of the hour were in people with hybrid jobs are less likely to become professionally obsolete. Employees laced with a diversified skill set will get many more opportunities for the upper ladder than one specific skill. The future workforce needs to be multi-skilled and have expertise in big data, analytics, and cloud computing.

LITERATURE REVIEW

Human Resource is the foundation of any business organization. Technological advancement has transformed how Human Resource (HR) professionals use to functions and emphasize greater competencies to sustain in the competitive environment. With smart technology, HR Professionals need to be smart HR (Brijesh ET AL, 2018) (HRM activities are bifurcated into three parts (Transformational/Transactional/ Traditional) The first HR department was created in the earliest 1901 in response to a strike at the national cash register co. in Dayton, Ohio which was then known as personnel management. after world war 2 the idea of

the human resource department was embraced to handle the employees of the organization. Post half of the 20th century, a slew of work-related laws-including the Equal Pay Act (1963), the Civil Rights Act (1964), and the Family and Medical Leave Act (1993)-made the presence of HR specialists too evident.(Milligan et al,2018).Growing Technology has changed the core competencies in HR.(Suen et al,2018) giving rise to e - HR domain which is one of the most important functions of HR. it indicates how technology provides ease in carrying various HR functions such as recruitment, people management, skill development, training, career planning, and performance management. Were in machines can do the mundane work HR can work on more critical aspects such as counseling an employee retaining program. Studies convey that with the advent of E-HRM HR professionals can focus on strategic development value creation and knowledge management and intellectual development. By embracing digital technology, HR professionals are trying to create a shared culture and career development aspects.

 The study focuses on building a principle-based approach for developing HR capability The HR professional will be facing a series of challenges in regard to diversified workforce rising skill shortages, reconstructing talent infrastructure and talent practices and creating a new way of working that creates a win-win situation for everyone. the technology acceptance model (TAM) is a model based on user acceptance and usage of information systems (Huang et al,2013). This model focuses on two major aspects perceived usefulness and perceived ease of use. Perceived usefulness is the belief that using a system will enhance job performance and perceived ease of use emphasizes that it will require minimum effort (Huang et al,2013). With digitalization, human resources can become knowledge sharer by sharing knowledge, gaining wisdom and creating a platform with advent technology so everyone can share knowledge. Individuals are able to create an online community and share and communicate the latest details and resources (Shirky, 2012). HR professional plays a strategic role such as change agent, champion, business partner, Making the mission and vision statement and Promoting a culture of the learning organization and knowledge management (Mathew et al, 2010). It is a fundamental requirement for HR professional to get trained in technical aspect. Study suggest that it is important for HR professionals to develop certain

proficiencies (Haribabu, 2015) develop certain Study emphasizes that it is empirical for HR professional to leverage their technical skills and need to have an understanding about the future HR technology (SHRM). It states that with emerging technology there is a career path for HR professions such as "HR Technologist" these employees are extremely well versed with the technology used in HR. "For technology to success, it's important that the HR professional keep the role of technology in consideration (Moe). Automation, the internet of things and artificial intelligence is creating concern for many HR. Advancement in technology can be considered as a new opportunity since new jobs will be created which never existed before. The future generation is more inclined towards the gig economy as it provides them with working flexibility and to work on their specialized area of interest. Since millennial / Generation Z are the largest workforce and the generation that will represent nearly 75% of the workforce by 2030 freelancing and contract base jobs are increasing at an alarming rate. In today era Generation Z are joining the workplace at a very young age and nearly 75% of the population will be youngster by 2030.it's important for HR professional to study them and know how they can modify themselves to engage the future workforce. Study indicates that Generation Z has proficiency in digital technologies Organizations need to consider the micro trends in its industry while planning for their future workforce in the dynamic tech-savvy environment (Stoepfgeshoff, 2018). Study state that there is an effect of emotional intelligence on the influence of blue ocean leadership style on the strategic decision making of leaders that help to release an organization's unrealized talent and energy. (Daud et al, 2018). According to the CXO officer of burning glass technologies Matt Sigelman, the future job will require a breadth of skills and just not one specific skill which is coined as "Hybrid Skills". According to the journal report, the future HR professional & employees need to develop their technical skills to supplement their social skills. According to the journal report, the firms are expecting the growth of hybrid jobs by 21%. HR professionals need to adopt inclusive leadership style and emotional intelligence has become one of the important aspects for analyzing effective leaders for strategic decision making and has become an instrument for developing viable leadership skills in the organization. (Ealias et al, 2012). The future jobs will require both technical and creative thinking (Dow Jones Institutional News, New York,

2019). According to studies similar to humans, robots do not consist of emotional quotient and humans will act as important partners working with advanced algorithms. (The Business Times, Singapore, 2018). The future workforce emphasizes on the requirement of a new skill set such as empathy, innovation to steer the company (Brady et al, 2018) Study states that to sustain in these hybrid worlds were technology and people cognitively collaborate, the HR Professional and employees need to upskill, reskill and retrain themselves. The future will hold a high demand for HR Technologist, IT Communication Specialists, Creative Technologists, IoT Marketing Technology Strategists, User Experience Designers, Digital Storytellers. The study states people management, emotional intelligence judgment, and decision making will be the basic skill requirement of the future. Wearable internet, big data analysis, sensor-based life, smart city implementations will lead to Social Transformation. According to the reports, 77% of the CEO states soft skills, like emotional intelligence, as among the most valuable skill set.

MANAGERIAL APPLICATION

The advent of industry 4.0 lead too many challenges faces by the HR managers were in they need to focus on various aspects in terms of analysis and strategizing, planning and implementation, cooperation between man and machine, understanding the business models, human resources, Initiating change management and leadership role (Schneider, 2018). Increment of talent in the digital world is giving much more emphasis on talent management tools enforcing the manager to focus much more on predicting and understanding behavior (Winsborough et al,2016)

OBJECTIVES

1. To understand how new age revolution will affect the future HR Professionals in the organization and to explore the new challenging role in the era of Industry 4.0
2. To study the relationship between Artificial Intelligence & Emotional Quotient.

3. To understand the various skill requirement for the future HR Professional and the employees.

METHODOLOGY

To analyse the future trend in the HR profession with context to industry 4.0 and to understand the challenges, opportunities and barriers set ahead, exploratory type of research is used. An extensive literature was reviewed. The information was collected from secondary sources like research papers, books articles, etc. We also conducted one to one interview and gathered insights from experts from the domain of HR.

GENERATION Z

Generation Z or Gen Z are referred to as digitally tech-savvy people are born from 1992 onwards. Generation Z is comfortable with technologies and they are also known as the "digital natives". They are the first generation were digital technologies plays an important role in providing them with opportunities.

Physical Aspects

- The study states that they are born in the mid-1990s between (14-23) their parents are the millennials. and they are tech-savvy and highly multi-taskers and want Instant gratification
- Generation z is the "app generation" and YouTube is there top preferred learning method

Social Aspects

- Generation z is one of the most diverse generations and gig economy came into consideration were enterprises hired temporary workers and freelancer instead of permanent workers

- Advent digitalization led to the increment of the future workforce towards the gig economy. companies are opting for a gig economy as it benefits the organization from several perspectives such as labor welfare benefits like pensions, gratuity, and many other

monetary rewards can be avoided. (Morgan & Nelligan, 2018). And the public is adopting this trend because they want flexibility in working along with freedom which is offered by gig economy working patterns.
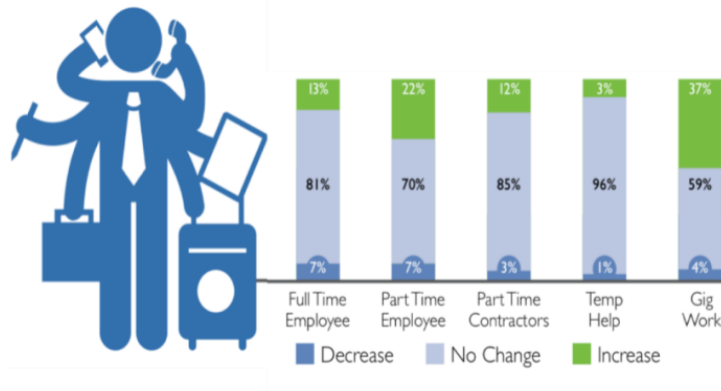

Fig 1.1 (Score 2017)

Factors that influence hiring a gig economy

Parameters	Percentage
Specialization in particular area	50.80%
To run the Business	47%
Availability of workforce	41.00%
Cash reserve for payroll of all employees	35.10%
Cost of employee healthcare	30.70%
Retirement benefits	20.10%
No requirement of workplace	10.40%

Fig 1.2 (Score, 2017)

Psychological Aspects

- **Do it yourself**: Generation z does it yourself type. They are highly independent and want to do everything on their own whether it is online shopping or choosing a career or finding a job for themselves.

- **Data Driven:** They are highly tech-savvy and data-driven and spend most of their day surfing on the various social media platform.
- **Optimistic:** Generation z can be called as a sober generation. They are very realistic and practical and highly optimistic and ambitious in nature at the same time they are pragmatic and aware of the forces that are beyond their control.

Financial Aspects

Generation z is not like the millennial who believes in a 9- 5 job. They want to make fast money thus digital technology has leverage and given them the opportunity for the same. Such as YouTube. by being a YouTuber and Instagram by marketing the product. By using an e-commerce website for online retailing. Since they are tech-savvy and ahead as compare with any other generation when it comes to the transaction such as mobile payment or bank transactions. They carry their bank branches in their pockets.

Future of Gig Economy

In India, the gig economy is a positive growing concept where many organizations and start-ups are transforming from a traditional way of working towards a more developed way. It has completely changed the concept of working. Technology has helped in consolidating urban and rural workforce and enabling centralized communication, real-time scheduling, tracking, dashboard and video conferencing. 64% of its population will be in the 20-35 age groups by 2021. So, the culture of the gig economy will be growing at an alarming rate.

Expectations of Millennial / Generation Z

- Transparency
- Self-reliance
- Personal freedom
- Flexibility
- They expect to be heard and responded

THE RELATIONSHIP BETWEEN ARTIFICIAL INTELLIGENCE & EMOTIONAL QUOTIENT

Artificial emotional intelligence is a technological brass ring for a growing number of companies and researchers that is helping business and organization to detect the human emotional level, for example, Affectiva an emotional measurement technology developed a wearable biosensor that measures electrodermal activity, "Q Sensor," that monitors changes in the user's emotional state by his/her skin and a cloud API to detect a range of emotion in human speech. These tools include apps that detect when students will be stressed out, vocal analysis software that helps diagnose mania and schizophrenia and programs that predict suicide risk based on social media posts. AI and robots will replace all mundane and repetitive tasks but what they can't replace are skills such as persuasion, empathy, and understanding that will become highly valued over all other skills in the future. EQ is one of the most critical "soft skills" that all the employees and HR professionals need to possess. The difficulty arises while using the software which evokes a negative emotional response, affecting employee productivity and performance. Digitalization platforms help in building up a layer of "emotional intelligence" to a software platform that led to positive emotional user experience by the help and preventing factors that led to user frustration. Emotional inputs are creating a shift from data-driven IQ-heavy interactions to deep EQ-guided experiences, for example, the system uses emotional analysis to adjust their response and decision-making process.

FRAMEWORK FOR FUTURE HR PROFESSIONALS

The advent of industry 4.0 is giving much more emphasis on the internet of the thing, artificial intelligence, cloud computing, advanced human and machine interfaces, smart sensors, augmented reality, big data analytics, customer profiling. HR has entered a new face of evolution were organizations need to restructure themselves as especially the HR function by focusing on workforce diversity and inclusion of business strategies. Industry 4.0 is changing the way organizations function It is changing the way HR professional functions by bringing the changes in their roles. In the current scenario, the HR professional is playing the role of a business

partner and strategist. They need to understand the various business functions in terms of the internal and competitive external environment. They also enacted the role of change agent. They play the role of a champion by facilitating various employee mobility opportunities for the workforce in the organization. Technology is reshaping jobs and affecting every aspect of the business, from marketing and customer acquisition and service to risk selection and distribution Emotional intelligence encompasses a wide range of critical interpersonal skills. Emotions influence our performance. As it is the communication between our emotional and rational brain. The more developed our emotional intelligence skills, the more effective we are at controlling them and using them to our advantage. It's a flexible set of skills that can be acquired and improved with practice over a lifetime. Professionals and employees will need to focus on skills and capabilities that artificial intelligence has trouble replicating-understanding, motivating, and interacting with human beings. Automation and robotics will lead to more hybrid jobs in an organization that will require candidates to possess cross-category skills.
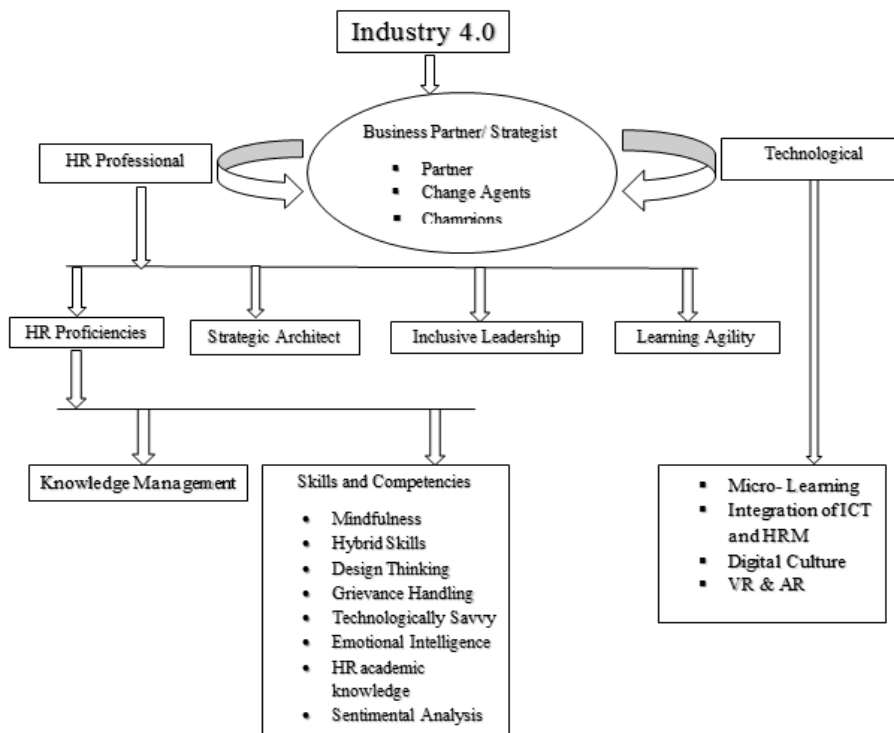
Fig 1.3 Framework for Future Hr Professionals

Figure 1.3 Framework for future HR Professionals states that HR professional and employees need to have certain skills and expertise such as-

1. HR Proficiencies

HR needs to possess an understanding and knowledge of various HR activities such as the working pattern of the labor market as the future workforce is the millennial. The role of the external environment in terms of human resource policies. An understanding of the labor market law and the application of the same in the organization. They need to understand the strategic planning, marketing, finance, and production and provide HR activities in financial terms such as return on investment.

1.1 Knowledge Based Management

Advancement in digital technology is catering towards a more knowledge-based workforce who is more driven towards innovation and creation. KM and AI at its core are about knowledge. They are two sides of the same coin. The connection of KM and AI has led the way for cognitive computing Earlier knowledge sharing was done in organization through yellow pages followed by collaboration with technologies, for example, google docs IBM lotus notes, wiki pages, TWiki, were semantic search help in finding new old stuff, for example, Hakia's technology, cognition technology (power search engine), powerset technology (question answering engine) true knowledge, Wolfram Alpha (computational Knowledge Engine).

1.2 Skills and Competencies

Due to the constantly changing business environment and digitalization have placed a demand on HR Professional to develop certain competencies and skills.

   a. **Hybrid Skills:** The future jobs are going to be multi-disciplinary and complex in nature which will lead to hybrid job blending left-brain (logical, organized) and right brain (creative, artistic). The future employees will need to merge traditional soft skills for example communication and hard-technical skills that use to belong to a specific tech-savvy

group. For example, a marketing manager needs to have analytical skills and need to know SQL or SAP.

b. **HR Analytics:** AI assesses the HR professional with various data analytics such as Descriptive analytics that help in revealing the key metrics and measures within the business. Forex: IBM's Watson natural language interface. Diagnostic analytics aid an analyst to dig deeper into an issue at hand so that they can arrive at the source of a problem Ex: Crunchr this software helps to realize where there are gaps incompetency. This serves as a foundation for HR action plans to source the right candidates and develop the employee's Prescriptive analytics explains the step-by-step process in a situation. For instance, it comes into play when your Uber driver gets the easier route from Gmaps. The appropriate route was selected by analyzing the distance of every available route from the pick-up route to the destination and the available traffic constraints on each road. Example: BOARD software that provides All-in-One Platform and Predictive analytics help businesses to forecast trends based on the current events. Example: BambooHR software is designed for future workforce planning and organizational network analysis tools.

c. **Mindfulness:** With increasing digitalization employee need to do multitasking, which requires a high level of mindfulness, or it might affect the performance of the employee. It can be achieved by focusing on 5 major aspects such as Identify choice points, Awareness breaks, reducing multitasking, Conquer your inbox, Daily mindfulness training.

d. **Design Thinking:** It refers to a creative approach to problem-solving. It focuses on developing a human-centric mindset that focuses on designing programs or processes to create meaningful experiences. It will be transforming the HR role from a "process developer" into an "experience architect." The design starts with Empathizing with customers/employees understanding their needs and frustrations, defining the

problem and then brainstorming to identify the best ideas and solutions, and building prototypes to test what works and what doesn't.

e. **Grievance Handling:** The technological advancement led to an increase amalgamation of man and machine giving rise to various disputes that need to be resolved. The HR professional needs to develop those skills and competencies set of grievance handling.

f. **Technologically Savvy:** The future HR professionals need to be tech savvy they need to use technologies to improve the process, engage talent across the organization and drive new and value generating the business model.

g. **Emotional Quotient:** As emotions are highly personal, and people have concerns about their privacy invasion and manipulation the hurdle arises in not finding the right emotional AI, but having humans with a high emotional Intelligence level. It's the need of the hour that HR Professional and employees develop a high level of Emotional Quotient

h. **Human Resources Academic Education:** The education system should be such that it should not include only theoretical concepts but practical hands-on knowledge about various HR activities.

i. **Sentimental Analysis:** It is of the most important tool HR professionals should use such as employee sentiment software as it may be able to flag a problem by knowing the emotional tone of the employee so that necessary actions can be taken to resolve the situation and it helps the organization to analyze a particular risk before the employee leaves the organization.

2. **Strategic Architect**

HR professionals need to act as a strategist and initiate various HR strategies in alignment with organizational goals and objectives. They need to act as a value adding partner by fulfilling various businesses need such as minimizing cost and maximizing profit. They need to design various HR strategies for future organizational goals. They need to study the monetary impact of HR activities and various business issues.

3. **Inclusive Leadership**

HR professionals should have the knowledge of leadership and should initiate changes in organizations for better productivity of the Workforce. The six-signature trait of an inclusive leader in terms of diversity in customer, market, ideas, and talent are:

- Curiosity
- Cultural Intelligence
- Courage
- Cognizance of Bias
- Collaborative
- Commitment

4. **Learning Agility**

It plays an important role in the HR profession was in they constantly need to adapt to new technology and their implementation in the organization. Learning agility locate and use new and existing knowledge and fosters a spirit of curiosity and inquiry.

TECHNOLOGICAL ASPECTS

1. **Micro Learning:** It provides more than a bit size of training asset it focused and offers the right amount of information which is required to help a learner achieve a specific and actionable objective. Businesses are embracing micro learning as it is cheaper to build, quicker to deploy, and can be updated fairly easily.it provides ease in various aspects such as Personalization and

autonomy, just in time learning. It provides different modality which provides a rich experience for the employees.

2. **Virtual Reality & Augmented Reality:** VR is the usage of technology to create a simulated environment within a 360-degree video experience. VR plays an important role during employee recruitment and onboarding process, for example, The General Mills recruiting team used VR and Oculus Rift when reaching to students both in and outside the classroom. Using GoPros, General Mills's IT team created a virtual tour of their headquarters in Minnesota to provide a 360-degree view of the space for students. So just having a VR technology at their booth at career fairs brought people in. Another example is Gamification.

3. **Digital Culture:** Digital culture needs to be inculcated in the organization since the major concern is not the lack of the right technologies but the lack of digital vision. Companies need to make a robust digital culture they need to train and retain employees in the tech-savvy environment. They need to focus on culture and people to drive transformation. Reskilling and upgrading of employees need to be done in order to develop smooth functioning in the organization.

4. **Integration of ICT and HRM:** Integration of information and communication technologies is the must in human resource management.as it provides the organization with various benefits. Such as enabling online staff recruitment process, easy accessing of employee information when needed, enables HR department to collect and assess employees work information, enables monitoring of employees to work attendance and enable the employee to apply for leave attendance

FUTURE SCOPE

1. **Knowledge Management:** Advancement in digital technology is catering towards more knowledge-based workforce who is more

driven towards innovation and creation. KM and AI at its core is about knowledge. They are two sides of the same coin. So, more studies can be done pertinent to knowledge management in HR domain.

2. **Cognitive Skills:** Cognitive skills are the mental capabilities, such as perception and reasoning, that are critical to process information and gain knowledge. Intuition another cognitive skill which is important for HR. It is a cognitive skill that determines the potential and quality of interpersonal relationships. This skill helps HR to recognize attributes, traits and characteristics in applicants, candidates and employees that create a philosophical fit within the organization. So a more futuristic study on the importance of cognitive skills for HR professionals can be done.

CONCLUSION

Industry 4.0 is creating new work since the replacement of manual sewing machine with advent machine created more work and leverage productivity rather than taking away jobs. The HR professional job won't be taken away rather their roles will be changed inclining more towards strategic management/ Change agent/mediator/counselor in the organization. The educational institutions and organizations should work together in providing technical training in HRM and the HR professional should keep themselves upgraded with the latest technologies.HR professionals need to upgrade their expertise in order to make a fair contribution and to create shared value for employee's organization and society as a whole by focusing on transformational innovation and specialized knowledge. They need to develop HR proficiencies and act as strategist architects by providing a guiding framing by focusing on inclusive leadership and by adopting the latest technology. They should have a broad knowledge base management while dealing with the generation z workforce who are highly technology driven for encouraging creativity and strategic changes and leverage themselves with certain skills and competencies such as Hybrid skills, design thinking (creative approach to problem solving) grievance handling in terms of man and machine, mindfulness, emotional intelligence, and use tools such as

sentimental analysis. And educational institutions should think creatively outside existing program boundaries. Emphasizes should be given on micro learning as it provides different modality followed by virtual and augmented reality as it helps in various HR functions. It is the need of the hour that organizations focus on a high level of digital culture to sustain in the dynamic and competitive environment.

REFERENCES

- (2016, May 02). The Business Times
- 2016: The year of the 'hybrid job'. (2015, Nov 19).30-33,36,38
- AI and the future of HR. Workforce Management (Time and Attendance) Excellence Essentials, *Bhattacharya*, S. (2018, Mar 11). How technology, millennials and gig economy will make HR obsolete
  - analysis of future competences in industry 4.0. Paper presented at the 163-174.
- Andors, Alice, (2016). Tech Smarter HRMagazine; Alexandria Vol. 50, Iss. 10, (Oct 2005): 66Zeidner, R. (2009). The tech effect on human resources. HRMagazine, 49-50,52.
- Babbie, E. (2010), the Practice of Social Research, 12th Ed, Wadsworth: Cengage Learning.
- Bhattacharya, S. (2018, Mar 11). HR, meet AI spotlight]. The Economic Times (Online)
- Brady, S. (2018). Preparing for the future of work. Accountancy Ireland, *50*(3), 84-97.
- Brijesh, S., & Rajasshrie, P. (2018). Smart HR 4.0 – how industry 4.0 is disrupting HR.
- Daud, S., & Hanafi, W. N. W. (2018). Blue ocean leadership style and strategic decision making Among leaders at government link companies (GLCs): The role of emotional intelligence as moderator. Global Business and Management Research, 10(3), 816.
- Faughnan, L. (2016, Dec 03). Technology in HR: It's about enablement. Sunday Business

- Haijian, L., & Fangfang, Z. (2018). Employee transition and future outlook: Evolution From employee to employee 4.0. China Economist, 13(3), 78-87.
- Hansen, W. L. (2002). Developing new proficiencies for human resource and industrial relations professionals. Human Resource Management Review, 12(4), 513.
- Haribabu, P. (2015). The role of skill and knowledge in augmenting human resource proficiencies - an evaluative study. Gave Sana Journal of Management, 7(2), 82-91.

- Huang, J., & Martin-Taylor, M. (2013). Turnaround user acceptance in the context of HR self-Service technology adoption: An action research approach. The International Journal of Human
- Mcdonnell, L., & Sikander, A. (2017). Skills and competencies for the contemporary human resource practitioner: a synthesis of the academic, industry and employers' perspectives. The Journal of Developing Areas, 51(1), 83-101.
- Meet your friendly neighbourhood robot. (2019, Jan 19)
- Meisinger, S. (2003). Technology provides means to HR's ends. HRMagazine, *48*(4), 8
- Mihalcea, A. D. (2017). Employer branding and talent management in the digital age. Management Dynamics in the Knowledge Economy, *5*(2), 289-306.
- Milligan, S. (2018). HR 2025: reach new heights by becoming a trusted advisor. HR Magazine, *63*(7),
- New version of neocase software's HR power brings greater automation to shared service centres.
- Obeidat, S. M. (2016). The link between e-HRM use and HRM effectiveness: An empirical Study. Personnel Review, *45*(6), 1281-1301.
- Panayotopoulou, L., Vakola, M., & Galanaki, E. (2007). E-HR adoption and the role of HRM: Evidence from Greece. Personnel Review, *36*(2), 277-294.
- Papageorgiou, D. (2018). Transforming the HR function through robotic process Automation. Benefits
- Paterson, K., C.E.C. (2018). THE "OTHER" INTELLIGENCE. Rough Notes, 161(3), 44-44, 46.

- Pepitone, J. (. (2018). HR 'special forces'. Management Services, *62*(1), 35-39
- Poisat, P., & Mey, M. R. (2017). Electronic human resource management: Enhancing or Entrancing? SA Journal of Human Resource Management.
- Schneider, P. (2018). Managerial challenges of industry 4.0: An empirically backed research Agenda for a nascent field. Review of Managerial Science, 12(3), 803-848.
- Score, 2017. The Megaphone of Main Street Small Business Jobs Report, Infographic #2: The Gig Economy, Herndon: Score.
- Sentiment analysis in organizational work: Towards an ontology of people analytics. Expert Systems, 35(5)
- Shirky, Clay. 2012. Cognitive Surplus: Creativity and Generosity in a Connected Age. Translated by Hu Yong. Beijing: China Renmin University Press.
- Smart tech, smart workforce, 60th IC anniversary to highlight SEMICON Taiwan. (2018, Jul 30).
- Stoepfgeshoff, S. (2018). The future of work: Work for the future. The ISM Journal of International Business, 2(2), 25-29.
- Suen, H., & Yang, J. (2013). HR professionalism in the computing environment: Predicting job performance within different HR roles. International Management Review, *9*(1), 19-31,87.
- The 'hybrid' skills that tomorrow's jobs will require -- journal report. (2019, Jan 20).
- Ulrich, D., & Brockbank, W. (2005). The HR value proposition. Cambridge, MA: Harvard school
- Vietnam: Workshop discusses HR skills required for industry 4.0. (2018, Jul 25). Asia News Monitor
- VN prepares for new workforce in industry 4.0. (2018, Dec 10).
- Winsborough, D., & Chamorro-Premuzic, T. (2016). Talent identification in the digital world: New talent signals and the future of HR assessment. People and Strategy, 39(2), 28-31.
- Zheltoukhova, K. (2015). New ways of working: What is the real impact on the HR profession? Strategic HR Review, 14(5), 163-167.