

A comprehensive review of “The Future of Jobs Report 2018 – World Economic Forum”

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Abstract – With the adoption of advanced technology, the HR function is undergoing a major change and the new age HR will be very different from what it appears to be today. Through this review article, the author has tried to analyze the existing challenges faced in the job market with respect to skills and jobs and has suggested possible solutions, by discussing the parameters to be analyzed, keeping technology in context. A comprehensive review of the recent report by World Economic Forum, gives an insight on the future of jobs and how the HR function needs to evolve itself. The article highlights the recent trends in the HR domain and how HR is evolving from a transactional to a strategic role.

Keywords — AI, Artificial Intelligence and HR, Future workforce, Future jobs, HR trends, IT and HR, New age HR

I. INTRODUCTION

Technology has become a key driving force behind revamping almost every segment of life. Organizations are evolving drastically with the adoption of advanced technologies. With active usage of Artificial Intelligence, Machine Learning, Internet of things etc., the workplace and workforce, both, are undergoing a major change.

While it has become a debatable topic these days that whether machines will replace humans or not, yet it is sure that robots/chat bots cannot address all people issues. Dependency and need of human intelligence in decision making and motivating people cannot be negated in any scenario.

Both, the workforce and the workplace, are going a major transformation with the new age technological advancements that every aspiring business is incorporating in order to attain higher levels of efficiency, productivity and ultimately, increased revenues. In such a scenario, there are two likely possibilities: one, if these transformations are managed wisely, it can lead of better quality of work and life, second, it can go completely haywire and increase the skill gaps, inequalities in workforce segments etc.

Hence, it becomes extremely necessary to study the changing shape of the future jobs and take this as a high priority item for every HR team, right now. Today, the HR function has been able to come out of the image of being a mere administrative function, to a strategic partner in the growth of any organization. Now, business leaders look up to their HR function for end to end talent management and advanced workforce analytics. In such a scenario, when HR function is being looked at for providing strategic support with respect to the workplace strategies and workforce

management, it becomes imperative to keep a check on the latest trends and how they are shaping up the future HR

For any organization to be successful, it becomes extremely important to provide due focus on its people strategies. In today’s world when almost every information is available to everyone, the only factor that distinguishes one organization from other is its’ culture and workforce. With the advent of technological advancements, the workplace is going a significant shift and so is the workforce. People today are more aware, more informed, more competent and hence need more liberty, high end roles, enriched work environment, greater flexibilities and an all-inclusive culture. The era of millennials is here to stay, and the generation Z is gradually gearing up to replace them.

With the ever-increasing population, the supply of workforce is going to increase manifolds in the future, however only those job seekers will be absorbed who fit in well in the future job market and who continuously upgrade their skills to match the future jobs. Organizations are finding new and innovative ways to create better employer-employee relationships with the help of social media, innovative and employee friendly policies, enhanced benefits and perks etc. Retention of top talent has become the key focus of competitive organisations. Many organisations are bringing about a complete restructuring in their HR systems to make them more aligned with the overall business goals. Recently we have seen companies doing away with their elaborate performance management systems and adopting simpler methods to evaluate and assess employees, which saved on a lot of time and efforts for HR as well as the employees.[6]. Organisations have now become more receptive of the idea of remote

workplaces and flexi work hours concept. Inclusion of employees in drafting policies and processes has also been applauded by one and all.

Considering these trends, it becomes quite important for businesses to stay relevant and up to date with the market developments, specially in the area of IT advancements.

World Economic Forum (WEF) recently conducted a survey to find out the trends in the job market and how will the future jobs look like. The elaborate report was published as “The Future of Jobs Report – 2018, Centre for the new economy and sight”. In this review article, this crucial survey has been studied and analyzed at length in order to see its impact on the HR function and its evolving role. The findings of this survey pave the way for the Industry to plan various strategies related to its workforce. The article unfolds the recent trends and the future of HR function, by analyzing the current issues and focusing on expected outcomes.

II. RESEARCH DESIGN

A. Research Problem

With the ever changing technology, every organization is trying to keep its pace in order to grab its market share and also for its own growth and advancement. However such a dynamic and ever evolving set up also throws challenges to the HR function on how to keep abreast with these changes and provide meaningful strategic support to organizations. Despite the roadblocks, every organization is embracing technology wholeheartedly to ensure its place in the future.

Also, the changes in the type of jobs and the skills required to do these jobs will have a major impact on various stakeholders like organizations, government and even the individuals. The premise of this World Economic Forum survey was to address the below mentioned questions:

Q. What will the future workplace look like?

Q. What kind of skills will be required for future workforce?

This article not only covers the above-mentioned questions but also gives a detailed overview of the future of HR function.

B. Research Objectives

The WEF report sets the tone to develop a better understanding of the impact of new technologies on the future of jobs and how these technologies will create and disrupt existing job roles.

The primary objective of this survey was to provide a meaningful and reliable information about the future of the job market. It aimed at creating a blueprint of the future jobs, which can help the decisions makers to take better informed decisions about their workforce.

The results will also act as an assurance to many who think that robots will take over all the jobs will leave everyone jobless. Rather, it indicates clearly that jobs which involve repetition, data crunching etc. will be taken over by machines and the workforce will be reskilled and upskilled to take higher order jobs.

C. Research Methodology

The questions hovering over the minds of key strategists across various industries, are related to talent acquisition and management. What kind of skill sets will be required for future jobs? How and from where to find the right talent pool for the emerging roles? What parameters should be kept in mind while taking decisions related to workforce? Such questions need to be answered only after giving due consideration to the recent trends in the job market while keeping a constant check on what the future holds.

The World Economic Forum survey conducted in 2018 has aimed to answer many such questions which are critical from business decision making standpoint. The survey design was spread over three interrelated parts.

Part 1: To highlight the trends that impact the business growth, both positively and negatively.

Part 2: To seek information from the respondents about the jobs that will experience stable, rising and declining demand. It also maps the three key components of the job market viz. occupation, skills and tasks.

Part 3: To provide an opportunity to the respondents to share their current plans up to 2022, with respect to key skill gaps in their respective organizations.

The target respondents of this survey were the CHROs and CEOs of leading global firms. An in-depth survey was conducted in order to capture their workforce planning and projections regarding future jobs and skills. The time period in consideration was from the year 2018 to 2022. The survey was done online over a period of nine months from November 2017 to July 2018.

The survey results were categorized under 12 industry clusters comprising of various industries and covering 20 economies of the world. It collates 313 unique responses

from global companies across various industries, roughly covering 15 million employees. The sample set was selected judiciously by keeping the employee size and revenue numbers as base criteria. The areas which were out of scope for this survey were the small and medium-sized enterprises and informal sectors, particularly of developing economies.

III. DATA ANALYSIS & INTERPRETATION

Technology is changing the way businesses operate. This also implies bringing a shift in the skill set required by changing nature of the jobs. The requirement of highly skilled manpower in order to run these technologies will keep on surging high. This will in turn create specialist job roles and at the same time automate many existing roles.

The figure appended below shows the various technologies which the global organizations are likely to adopt by the year 2020, [1]. The top scorers being the big data analytics, app-based products and services, Internet of things, Machine Learning and cloud computing. Organizations have already started using multiple technologies to enhance their efficiency and productivity.

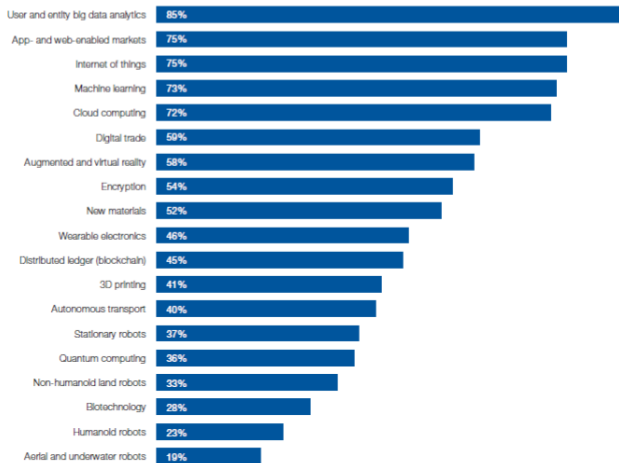


Figure 1 : Technologies by proportion of companies likely to adopt them by 2020(projected)

Image Source: Future of Jobs Survey 2018, World Economic Forum

As per this survey, apart from technological advancements, there are certain other drivers as well which are bringing a transformation in the future workforce, like commercialization, existing labor laws, public adoption of new technologies etc.

Based on the data collected from various industries, the following trends as shown in Figure 2, have emerged as the topmost trends that will impact and accelerate the growth of any business. Many new and specialist job roles will be created primarily because of these top trends.

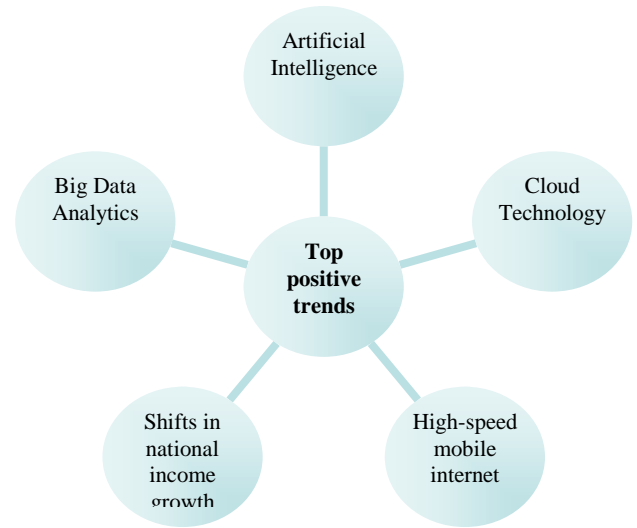


Figure 2 : Top positive influencers for business growth

A key finding of this survey was that the above trends will lead to emergence of approximately 133 million additional new roles, whereas around 75 million jobs may get displaced (non-agricultural sector), [1].

The survey also found out the trends that may negatively impact the business growth up to 2022, as depicted in Figure 3 below. While positive trends will push businesses to move forward, the negative trends will act as roadblocks to apply brakes on the growth engine of an organization.

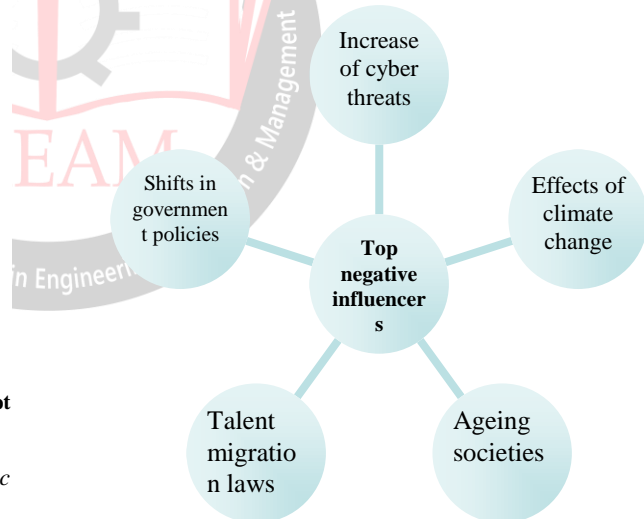


Figure 3 : Top Negative influencers impacting business growth

The fourth industrial revolution will be all governed by technology and hence the future business leaders will have to understand the new labor market in order to develop a comprehensive workforce strategy to meet the future demands.

As per this survey the following key factors need to be considered by the decision makers while drafting the workforce strategy for their organizations:

- Mapping the scale of occupational change underway and documenting emerging and declining job types
- Tracking the emergence of job-relevant skills
- Identifying opportunities to use new technology to replace repetitive human- work and upgrade job quality
- Investing in upskilling, retraining and workforce transformation

Moving on to the next part of the survey that highlights, the kind of roles which grow in demand by the year 2022. The image appended below highlights the job roles that will see an increased demand:

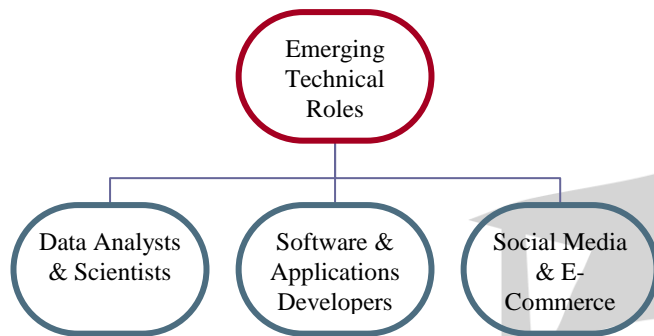


Figure 4 : Technical roles which be in demand by 2022

Apart from these, there are certain jobs in which human skills are predominantly required. Such jobs too will be high in demand. Few of these are illustrated below:

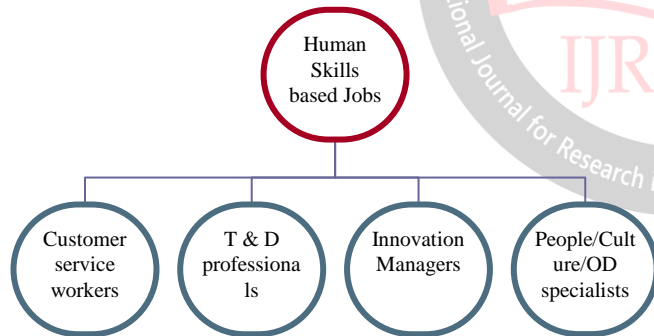


Figure 5 : Human Skills based Jobs to be demanded by 2022

Based on the data analysis done on the findings of the survey, the coming years will open avenues for many new and challenging roles that will take over the existing skill-based job market. Some of these emerging job roles are exhibited in the image below:

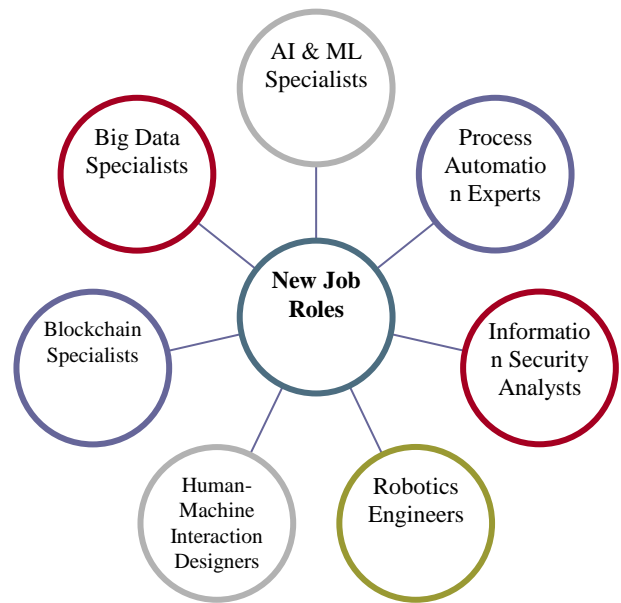


Figure 6 : New Job roles by 2022

With all these new roles coming up and expanding their footprint in the job market, the survey also identified the roles which will be categorized as redundant and will most likely be either automated or get replaced by machines. Few of these are listed below:

- Data entry operators
- Accounting/book-keeping/payroll clerks and accountants
- Executive assistant/secretaries
- Cashiers
- Telemarketers
- Assembly and factory workers
- Mechanics and machinery repairs
- Material recording and stock keeping clerks

Whereas, there are a few roles for which demand may vary from one industry to other.

IV. KEY FINDINGS

Taking into consideration this shift in workforce demand patterns, there are two critical points to be noted from investments perspective in the HR function:

1. whether or not to invest in workforce reskilling/upskilling
2. whether to prioritize automation or augmentation

With the changing technological frontiers, the businesses need to alter and customize their people strategies significantly, in order to stay ahead in the market. The findings of this survey are of immense use to the business

leaders at large and to the HR fraternity in specific, in order to plan their workforce strategies.

Some of the key findings of the survey are listed down as below:

1. More than 25% of the businesses surveyed, expect that automation will create new job roles in their enterprises and over 38% of the businesses surveyed expect to extend their current workforce to various productivity enhancing roles.
2. Most of the companies are planning to invest heavily on robotization. Close to 37%-23% of the companies across various sectors, are planning this investment by 2022.
3. The geography of production, distribution and value chain, will change drastically as around 59% of the respondent businesses will modify the value chain and around 50% will change the geographical base of operations.
4. Around 85 % of the survey respondents will be adopting new technologies like big data analytics, AI, IoT etc. and will be extensively using cloud computing.
5. The employment types of various industries will change significantly, with machines taking over the repetitive jobs and eradicating redundant jobs. At the same time, creating new highly skilled jobs. Around 38% of the businesses surveyed, expect that their workforce will move to newer productivity enhanced roles by 2022.
6. The human-machine interface will see a paradigm shift by the year 2022. In 2018, an average of 79% tasks were done by humans, whereas 29% were executed by machines. By the year 2022, the expected change is 58% by humans and 42% by machines.
7. Jobs with “human-skills” will be on demand along with specialist technical jobs in upcoming areas of technology.
8. The survey also highlights the effort required by the businesses to invest heavily on re-skilling and upskilling the current workforce to make them future ready. As per the survey findings, around 54% of all employees are expected to undergo a focused re-skilling and upskilling training to address the skill gaps that are getting created.

The survey also outlined geography wise industry mapping reports, which are extremely helpful to study. Any business, operating in any part of the globe, can benefit out of this in-depth survey. New ventures, specially startups can use these findings to leverage on their business plan and can

customize their workforce strategies based on the survey findings [1].

The above-mentioned findings clearly indicate the thrust required to reshuffle the HR departments in order to meet the changing requirements of the evolving businesses. If the HR function sticks to the age-old role of administrative and operational tasks, soon it will have to be eliminated as a strategic business partner. However, as the trend shows, the HR function is trying to emerge out of its current form and shape and redefine itself as a strategic partner in the success of the organization.

A lot of focus is being diverted towards how to make it more meaningful and powerful at the same time keeping it as humane as possible. These findings indicate the way forward for a new age HR system which will be minus any operational, redundant or repetitive tasks and will be rather loaded with a lot of decision-making powers to bring about a positive change in the culture and work environment. The single most important factor that differentiates one business from another is its’ people. If HR can bring about that change in perception by creating a positive brand image in the minds of prospective employees, it certainly will be able to contribute towards building a successful employee centric organization.

V. DEFINING THE NEW AGE HR FUNCTION

In a scenario wherein not, much research has been carried out in this area, this survey has tried to bridge the gap between where we are and where we want to be in future, with respect to the workforce. It serves as a ready reference to most of the industries to alter their workforce strategies.

Based on the findings of this survey, the future of HR function will be all about reskilling and upskilling the existing workforce and making them ready to adapt and stay ahead of the technology. This is a challenge as well as opportunity for the HR fraternity. Any form of skill gap either on the employee side or on the leadership side, will act as a constraint for the growth of the business as well as for the individual.

The fear that machines will replace people, is quite evident amongst the workforce. However, adoption of advanced technology will only help and not hurt any organization. The new age HR must be the change agent to bring about this shift in thinking and help the employees to adapt the new technology [22].

It is clear by now that only those jobs which are repetitive in nature or need automation will be replaced by machines. Also, there is rarely any match to human intellect and that’s why the future workforce will have to be smarter than the machines.

While the advantages of embracing new technologies are many, the complications related to this adoption cannot be

negated totally. The challenges involved may be like, how to create robust control mechanisms and systems to manage robots and humans, how to ensure the human essence of HR does not get diluted, how to imbibe human intervention in an algorithm with is running on pure logic etc. [2].

HR executives have increasingly started using technology in order to keep a pulse check on various important functions. For instance, a few startups are providing their services in the area of employee retention with the use of AI in the filed of HR. With the help of bots, these organizations are redefining one of the most important functions of HR, i.e. employee retention. The client organization installs a chatbot on the systems and an employee gets to interact regularly with it. As soon as there is a sign of disengagement, withdrawal, stress, etc., the chatbot sends out early warning signals to the management, who can intervene immediately and help an employee to come out of the situation.

Another important HR function that has undergone a major shift because of technological advancement is the talent acquisition function. These days AI is being used aggressively to streamline the recruitment process which used to consume a major bandwidth of any HR professional.

Various advanced analytics methods are being used by leading organizations in order to screen the right set of resumes from a huge database [21]. The first level screening is done by using AI. Post which, advanced technology is used to assess the fitment of a candidate by using chatbots as interviewers, who can remove all sort of biasness from the selection process. Candidates in the job market are finding it surprising to appear for an interview in front of a robot/machine interviewer [23].

Performance Management System, which is yet another important HR function, has benefitted immensely with the implementation of technology. This HR function is extremely data centric and technology has been a big support to make this smoother for the HR professionals. Gone are the days when PMS was carried out manually or through excel files. The new age HR is using advanced analytics in order to collect, manage, analyze and develop meaningful insights form the huge employee database when it comes to Compensation & Benefits. Many organizations are devising inhouse customized PMS tools in order to manage the large volumes of employee data and churn it to carry out the relevant analysis while taking key decisions.

With all these new developments across various segments within the HR function, technology is certainly redefining the role of HR.

Recently, in various HR conferences and seminars, a very interesting topic is being tabled for discussion: about regaining the “Human” aspect of the HR function. The HR leaders have unanimously agreed to the fact that in the last two decades HR functions has been overburdened with a lot

of transactional, operational and administrative tasks, most of these being repetitive in nature.

Today’s HR function is facing a lot of challenges when it comes to managing the entire employee life cycle. With the changing profile of workforce both in terms of education and knowledge along with the changes in job market, the HR professionals are facing challenges in their key functional areas. For instance, it is no more a cakewalk even for the most reputed firms to hire the best fit candidates on their own and fill all the vacancies on time. Further, retaining, engaging and developing this talent pool.

Some of the recent challenges that HR departments are facing are depicted in Figure 6. The figure shows the top results of various surveys conducted recently in order to find out the challenges faced by HR departments across the globe. Irrespective of the size, type and nature of business of an organization, these challenges remain omnipresent across various industries.

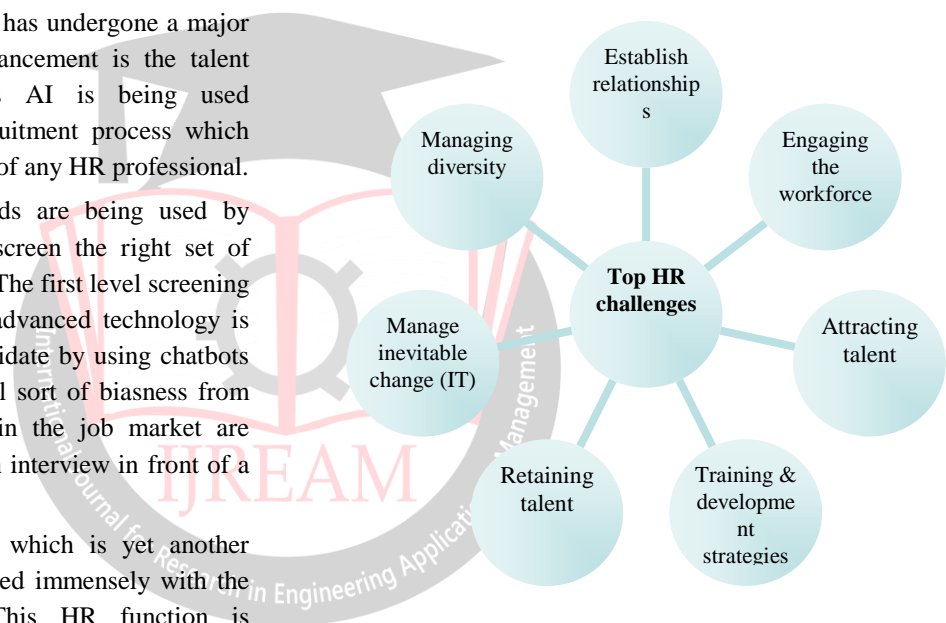


Figure 7: Top HR Challenges in current times

Keeping these challenges in mind, the new age HR must be prompt enough to diagnose the current culture and find out the possible missing links with respect to people in the organization. The transitioning from a support function to a strategic partner will happen when the HR function will be able to command the above listed challenges faced by organizations at present. For this, the HR systems will have to be heavily dependent on the technology, so that these tasks can be performed simultaneously, swiftly and with great precision, minus any stereotyping and human biases.

As the HR function is evolving itself with the technological advancements, there are many new trends that are visible in organizations across the globe. Recent developments, not just in the area of technology, but also in demographics, educations, socio-cultural changes, world

politics and environment, are bringing about many changes in the workforce as well as workplace.

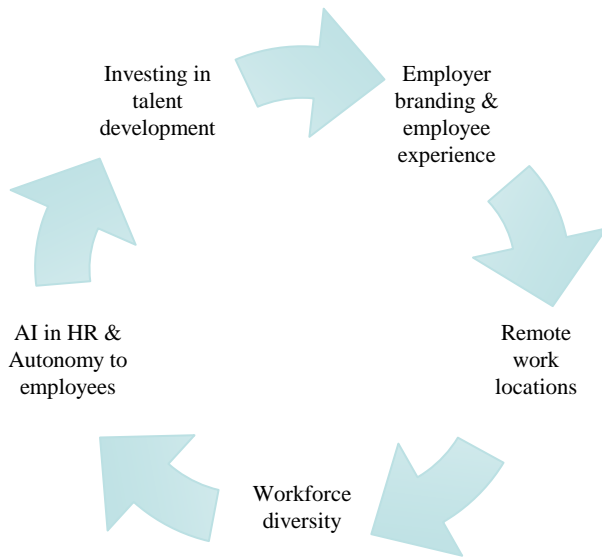


Figure 8 : New trends in HR

It has been accepted in various international conferences and forums that the key focus areas of the new age HR must be talent management and people strategy. There is no other way but to understand the technology and use of big data at work, in order to transform the HR function into a high end analytical and anticipatory function [18].

While the threats are many, however the opportunities are immense for HR function to bring about a revolution in the talent management function using data, analytics and leverage technology to hire, develop and retain talent.

In order to stay relevant and wanted in the business, HR needs to do away with its transactional image very soon, else it will only be removed or outsourced to outside experts. It will have to write its own fate by collaborating and upskilling itself, by embracing new technologies and innovating the existing functions.

VI. CONCLUSION

The main investigation of this review article was to carry out an in-depth analysis of the current challenges faced by the businesses with respect to talent management and future jobs. The findings of the survey give a clear indication that the businesses will be investing heavily on upcoming technologies however they do not have a ready talent pool to staff the new roles/positions that will be created with the adoption of new technology. The skill gap is the biggest emerging challenge for the HR community.

The key findings of the survey clearly indicate that the businesses need to adopt an augmentation policy, in order to enhance the efficiency of its workforce with the adoption of technology. This will not only empower the workforce but will also assist them in achieving their full potential. The article infers that that when employees will be moved away from routinized work and will be staffed at high end,

creative, intelligent and analytical tasks, their productivity will get enhanced. HR needs to play an important role here in order to upskill and train the existing workforce to do these high-end tasks [15].

It is evident that the role of HR function will undergo a drastic shift from the current mandate. The future HR will have to be more robust, more human and more technologically advanced. It must rebuild an entirely new workforce that needs to emerge from the current talent pool and to make them ready for the future jobs [13]. The change management required in this transition is the key to success. How swiftly yet smoothly can the HR leaders re-route the current workforce towards the future trends, will prove the efficiency and relevance of this critical support function.

The fear of getting swiped away by machines must be completely erased and HR must play a crucial role in bringing about this mindset change. By removing redundant tasks, by automating repetitive jobs and by doing intelligent analysis, HR function can certainly set an example in the changing times. This review article has presented the findings of the survey in a simple and concise manner which is easy to refer to and comprehend to get a gist of what the future holds for the workforce [16]. Also, the detailed analysis and interpretation will give a comprehensive understanding on how HR needs to evolve itself in line with the latest trends.

The HR fraternity is going to benefit immensely out of this report to plan their people strategies in order to remain ahead in the competitive market. Every organization that keeps a strong focus on its people strategies along with the overall business goals, is bound to succeed in the market.

The insights brought by this article helps the readers to understand how HR is evolving with changing times. From a reactive support function to a proactive strategic partner, HR is trying to come a long way to become a key factor for the business growth. The key takeaways from this survey and the review article, also gives inputs to various policy makers, regulating authorities, academicians and educators to focus their energies more towards creating a robust, agile and future ready workforce.

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