Role of Cognitive Technology for Improving Human Resource Management Experience: A Multi-Dimensional Perspective

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Human cognition has been considered unique as it can recognize and can attach significance and interpret images, emotion, text, A wide variety of tools like ML, Natural language processing, neural networks and deep learning are strong facilitating tools for classifying, interpreting, and generating outcomes and even can analyze images. There are several applications based on the mass images when interpreted whether used for psychological testing for hiring or for technical assessment, aspects may include – thinking like human application, sensing language and interpreting. The present conceptual paper based on previous studies aimed at understanding conceptual underpinnings of cognitive technology and its application for effective employee experience with respect to different HR functions. Today's technological advancement in cognitive skill-based tech tools have automated and empowered the organization working by reinventing system, policies, and process. It explains the essential aspects while implementing the new system with a Cognitive and psychosocial perspective and emerging tools used across organization to suffice multi stakeholders' perspective. The role of smart machines and cognitive architecture in ensuring effective employee performance.

Keywords: Cognitive technology, Cognitive theories and architecture, Cognition and Employee experience, Cognition and Human resource management

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1. Introduction-The buzz around Cognitive aspect

In the era of technology and advancement every task is oriented to outcome centricity facilitated by human and machine interaction. Human mind, which is the most complex system guides thoughts, decision making and thus action based on our knowledge which further depends on the process of acquiring the knowledge and acting through senses and affected by our experience. In the context of psychology, the above refers to what is called as cognition.

Cognitive theories received attention replacing behaviorism right from 1960s.Cognitive theories suggests that the behavior which is observed is not sufficient to express learning as internal thoughts also play a pivitol role in explicit behavior. This cognitive perspective is strongly impacted by technological development especially computer technology and using computer as an aid to understand what's going on in the mind of human as this affects learning. Learning is thus affected by our experience, learning which is understood a storing and organizing information in mind Atkinson ,1968[1] which believes human mind to be consisting of three different buckets as stores which activates from three senses hearing, smelling, and seeing. Human mind is consistently strike by sensory information but depending on requirement it treats as short-term memory which may last for 30 seconds to long term memory.[37] (Thomson. 2022)

According to a report by PWC Leaders in different sectors ranging from Financial, manufacturing, technology, media, health think that the role of technology has facilitated to get work done from employees based on a global survey of more than 12000 workers the results indicated that at C -suite level technology helps in effective cognitive outcome and experience and at employees with respect to ensuring their engagement and enthusiasm.

The major factors that cognitive technology had with administrative perspective included better control, effective delegation, timely outcome, follow up and communication. With employee's perspective upgrading digital skills, training and continual learning with user's experience were factors that were rated high by employees. The factor of concern included missing Human Touch whether in performance reviews, working environment feedback and reviews along with support of bots and sometimes a feeling of isolation. Thus, the challenge remains bringing human touch at work going parallel with cognitive technologies.[8]. Thus, with an employee's perspective the study indicated major reasons being curiosity, efficiency, teamwork, major interest in HR sub areas like promotions, recognition, individual achievement and remaining upskilled in their core area.

The present paper aims to understand through secondary literature review role of cognitive based technology in effective employee experience. It also aims to understand the impact of these tools on employee's experience and outcome.

Research Questions

1. Are Cognitive based tools significant for improving work process?
2. Does cognitive tool-based technology renovate HR functions?

1.1 Integrating basics of Cognitive theories and application

To explain the first research question let us explore theories of cognition, Cognitive theories play a significant role in effectual Human resource Management in different areas with focus on learning and development which can be of great use while designing learning modules and making it personalized and user friendly based on Human computer interaction. Cognitive load theory states that the instructors or designers should try to keep minimum the additional cognitive pressure to keep learner free mentally and to enhance the capacity of learner to effectively manage intrinsic and extrinsic expectations and outcome.[35].

The power of human machine collaboration based on application for big companies like Accenture, PwC, BBC, CellstraT, Squiz indicated that Artificial Intelligence impacts largely the industry growth with estimates from 2017-2037 and how by adoption of AI global companies will take leading advantage in human resource management, skill development and economic growth. [4]

Organizations are consistently adopting new practices based on cognitive technology right from hiring to retention to ensure outcome. Cognitive tools like algorithm-based hiring, digital labor market intermediation and contribution of Gig economy and expected changes in employment and employer relationship indicated how predictions can suitably help in right hiring using contingent workers rightly and changes that employers should bring frequently and not marketplaces as employees see this largely [19].

Cognitive based tools ease the experience that employees hold towards their task irrespective of the sector or service it offers, whether it is a shift from paperwork documentation to E-HR -commercial electronic health record, transition that was found to reduce the cognitive workload, measured with validated instruments of NASA Tl-X task load index suggested that it is important to customize when the training programs based on the cognitive skills of people as employees as one size cannot fit all , effective usage of cognitive based technology will help in making work more meaningful resulting in effective work performance.[5].

Strong evidence supporting the role of cognitive based technology can be witnessed by the recent pandemic that the globe had faced and the role of personalized tools to ensure enthusiasm with productivity. Remote working was the only option which even led to emergence of a new trend of working from home as anew normal post pandemic. It is a topic of strong debate whether e-working based on designed cognitive tools is a benefit or disadvantage for the organization and its role in ensuring positive employee outcome as it affects the overall wellbeing both mental and physical of employees, thus the way in which the cognitive based technological application tools should be implemented should include affective, cognitive, social, psychosomatic and professional outcome in mind to ensure its sustainable outcomes. [23].

Smart machines are not an option but a means for a positive and expected outcome, these cutting-edge technologies based on cognitive design are creating an advanced approach of working and replacing human effort but while suiting to organization requirement their capabilities must be doubly checked. The role of cognitive technology should be to augment and bot end work of humans, it should be assessed based on intelligence which is their core function whether for responding to human queries and the instruction, designing own objectives, to shifting from convention numerical analysis to performing it on physical task based on real world task and thus working smartly.

It helps in facilitating decision making ranging from data that is highly structured to capable of deciphering more complex aspects and automating the whole system. It thus helps largely in automation and awareness thus ensuring sensing data in real time, and self-awareness. It thus customizes effective number analysis. With advent of cognitive based technologies whether it is in employee hiring or retention no pure human decision making with hypothesis, problem framing, back-end interpretation is needed with more visual analytics displays and advancement in predictive analytics it is embedded in operational system automating the decisions through embedded models through machine learning.

Organization today use Digital Reasoning system uses cognitive computing software or iSOFT processed spoken words with the help of intelligent customer agent to interpret customers want as and desires. Similarly machine vision based on geometric pattern recognition technology is also used since decades to manufacturing, facial recognition, classification helps to analyze based on patterns of machine learning to take better decisions.

Smart machines based on cognitive technology can analyze numbers and thus support human beings in business intelligence, data visualization, analytics has wide application in operational and model management but cannot work for self-awareness. They can smartly support human effort for speech recognition, image and machine vision supported by tools like NLP can perform digital task like BPM

(Business process management), robotic process automation, can perform physical task like remote operation of equipment, industrial robotics, collaborative robotics, but based on aspects of self-awareness it still needs to be developed.

1.2 Cognitive architecture and Employee management

It is thus obvious that there is a growing convergence between artificial intelligence abd robots and that give as challenging perspective to cognitive technologies and the future is full of robotic working that can sense, learn matched with digital task tools and provide better cognitive solutions based on Application program interfaces.

It has been widely used in all big companies both with external and internal customer perspective whether in service or in manufacturing. The application of the program interfaces whether used in hiring, performance review, contrasting during election, identifying appropriate retention strategy or other have wide implications. Functionally it is a modular approach wherein one API is effective in processing the language other in Q&A other in numerical reasoning. This provides a complete cognitive platform for effective employee experience and management. This similar approach applies for effective external customer interface too.

A cognitive architecture should comprise of wide variety of data whether handling text images, speech, or genomic data. It should have the ability to learn like robotic automation that can provide choice to learners and can be an effective tool for learning and development function so that transparency can also be maintained and a wide variety of roles whether used in industrial robots, self-driven vehicles, surgical handling, medical applications can be effectively implemented. Example in banking system to the combination of expert system with cognitive decision making is widely applicable owing its reason of being flexible. It also has wide reporting capabilities making it more convenient to use, this will require a state-of-the-art designed infrastructure what is also popularly known as having IT hygiene.

For cognitive architecture to work well the focus and orientation should be on augmentation and not solely on automation, matching and fitting human capabilities with machine/technology based on requirements is a must to do exercise. Cognitively designed methods offer more innovation, robustness scalability, customization and personalized effects which are important to remain competitive and utilize the capability of smart machines matched with cognitive capability.

Cognitive framing plays a significant role whenever it's about bringing digitally sound and user-friendly tools based on cognition. With an employee perspective matched with organization vision of digital transformation which comes as a result of adoption of smart IT practices depends on right balance between employees beliefs about the technological changes based on their cognition and availability of situational resources which decides whether new technologies will provide opportunity for professional growth or not. [34]

Human and Cognitive based technology can work great with respect to decision making perspective as they can smartly manage analytical approaches. Humans can effectively focus on uncertainity aspect and can use creativity and intuitiveness effectively and even in the most complex decisions human involvement is a competitive edge. Leadership involves developing and envisioning outcome driven perspective with stakeholders both inside and outside this requires not only technical but also social, emotional, and psychological intelligence thus making the role of interpersonal skills to be important in decision making whether it's for inflow or deciding the stay or reward mechanism for workforce to be driven strategically keeping experience and outcome in mind. Thus, an integrated role of cognitive based technology helps in building a social fabric in an organization setting also defeating informal leadership which creates conflicts, inequality, distorted perceptions, and judging attitude leading to biased outcomes and short visioned approached affecting all stakeholders.[18]

Thus, based on research Question 1, it is quite evident that cognitive based tools plays a significant role in improving task performance

2. Revisiting through Literature Review the Cognitive technology aspect for Human Resource

Based on research Question 2 which aimed at measuring the impact of cognitive based tools on improving HR perspective thus leading to effective employee experience the following literature review provided support.

In everyday life everyone in some form or other is using cognitive based intelligence whether in smart phones, cars, drones or in games this makes the application of cognitive based technology wider whether for Human resource management, financial advising, scheduling logistics, patient diagnosis, estimating /forecasting economic growth etc. The growth of cognitive science is as old as conference that was organized on human computer interaction way back in 1950's after which topics like cybernetics, psychology, gained attention especially in fields of problem solving decision making and many organization have made such technologies available under open license as well which increases their usage and adoption like Alexa, Google Tensor flow.[20]

Studies in the area of psychology, behavioral management, Information technology which aim at coordinating between the design thought and fitting it with the culture of organization also study other intelligence like culture intelligence, the same stands true when cognitive technology is discussed on which is supported by studies that found cultural intelligence of the managers in the mechanism of conventional reversal knowledge transfer and reversal knowledge transfer play a significant role in learning. All four dimensions like metacognitive, cognitive, behavioral, and motivational play as important factors of knowledge de-codification and codification as well codification filter which helps in knowledge transfer process.[9]

It stands important with another reason that cognitive ability and emotional trait goes hand in hand and are strong predictors of performance as they help in strengthening the emotional strength too and emotionally intelligent employees are high on citizenship behavior too, thus cognitive intelligence and ability when matched with task tools helps in improving performance

Cognitive based tools and their further application like Artificial Intelligence works well when matched with capabilities and uses of the stakeholder, when used wisely it can create a strong socio technical system and combine novelty and scope for matched capabilities. The role of cognitive, relational and structural factors plays a strong position in integrating technology based on cognitive skills and employee experience.[22]

Irrespective of sector and nature of the organization public or private developing a customized perspective of cognitive based tools is necessary, while implementing or other platform based projects it is important that four important perspectives should be considered-Data based , technology utility based, organizational based and environmental based Cognitive computing systems whether supervised or unsupervised works in terms of attributes defined and is tagged with its correct classification. For example, when it is implemented in case of detecting any fraud, it distinguishes in two groups fraudulent and non-fraudulent. In case of performance reviews based on rating it similarly classifies as Performing or Nonperforming, ethical, or non-ethical, committed, or non-committed etc.

Thus, the application of Cognitive computing system in managing human resource may work well in making outcome effective as they learn both from human and machine, they are context sensitive, they can remember past data, can interact well with information requests, and interact with natural language processing and above all their outcome can be acted upon by humans. For example, implementation of chatbot app by US government to ensure whether a refugee is appropriate for protection or not, similarly are not well driven apps like Police department based on an AI tool for face recognition based on pattern matching did not gave desired results.

2.1 Cognitive Technology and HR

Cognitive computing and HRM for ensuring employee experience goes hand in hand, as it empowers machines to think like human brain and give faster outcomes, it is a collection of varied algorithmic

capabilities that help in empowering employee performance, automate the task load and build cognitive representation based on human thought process. It has advanced the way in which HRIS functions right from speeding up self-service portals or hiring decisions, workforce management, administering benefits and engaging talent of organization. Since cognitive technology works on analyzing the process it provides benefit strategically even to identify business advantages by working in real time, for Watson as a tool can make the task simpler and reduces the chances of deviation from results and changes as per situations. This makes tradeoff between speed, cost, and quality.

Cognitive technologies are widely applicable and the area of application includes-product, process, and insights. Product with employee skill and organization vision perspective may include for example Netflix online movie rental service which utilizes machine learning to predict which movie the customers like, or e bay which utilizes machine translation to see language priority, or GM using cognitive vision technique to see if the driver is attentive and safely driving or not. In medical field it assists radiologists to assess through mammogram images and suspicious areas of cancer or dominos using in its mobile app enabling customer to order by voice. Cognitive technologies being a product in the field of AI includes number of applications driven techniques ranging from speech recognition, language processing, computer vision, Machine learning. With a Human resource perspective, they eliminate job by taking responsibilities like automated voice response system example Hong Kong subway system which carries 5 million passengers with 99.9 %-time record using cognitive technology, using genetic algorithms.[26]

The State of Georgia Government also using cognitive technology was able to process 40000 pages of financial disclosure that were handwritten using automated handwriting recognition tool. Similar such application even in clinical trials wherein using natural language processing the clinical notes are prepared. [33]

Applicant tracking and ways to assess has found strongly benefitting applicant hiring in large volumes, With the help of Machine learning, the complete journey of interview of the candidate can be tracked and streamlined even to give feedback to the applicants. Similarly, Peoplise is another popular solution that helps to calculate fitness score of candidates with the help of interview result and screening them digitally to take appropriate decision, to attract talent, the job findings sites like Glassdoor, LinkedIn, seek also use similar algorithms by using previous data, searches, clicks of candidates. JP Morgan amongst the big financial institutions uses algorithm to assess employee behavior and to track rogue employees to avoid any discrepancy and criminal activity.

In the area of Learning and development too cognitive technology-based software like Workday helps inbuilding customized training and recommendation to employees based on industry and market requirements. For example, KPMG promotes Intelligent enterprise approach with the help if predictive analytics and that facilitates in decision making. Similarly, Google People analytics is also one of the most competitive tools for building performance engines at enterprise level and to solve business problems. These ideas find space right from optimal manpower management to creating first onboarding experiences better and for assessing post hire outcome.

Another innovative cognitive tool is Smart Badges which are though little tougher when talked in terms of privacy but are excellent tools to know what affects internal effectiveness, based on sensor it even tracks employees' interactions and within workplaces. As a part of IoT wearable data helps in pushing business decisions faster by mapping even type of interaction within organization.

Supported by Job demand resource model and interviews of more than 11,140 physicians it was found that there is a strong role of Information technology in work life balance along with all other studied factors like work life balance, work environment, type of peers and colleagues, knowledge environment, type of task tools technology based plays a pivitol role in ensuring effectual performance.[11].

The increased use and application of social media platform also has transformed in best ways. Accessibility to social media to promote employees voice in organization is also found to be working and useful tool for knowing the real time experience of employees. It is though found that it works

well for Generation Y as compared to other generation nut needs to expand the potential as employees use it less to voice their concerns and still is a untapped source to assess job satisfaction and to provide real time experience of workplace.[29]

There is a need of integration while conceptualizing or institutionalizing role of technology aiming at HR excellence. Harvard HRM model which provides a very expansive model for stakeholder defines intersection between these two important aspects of HRM and technology, by introducing technology advanced task tools new smarter and quantifiable digitally effective context can be set when it comes to HR practices. It requires Human actors to avoid inertia based HRM. It thus needs to be matched with behavioral, economic, interactional, and cultural eye to make it useful for target user based on characteristic of technology and organization support. Thus, considering both procedural and strategic dimension [36]

2.2 Cognitive technology and Employee Experience

Faith is amongst a factor that should be understood and functionally developed before any other which supports both cognitive and affective aspect of workforce. [38].

Overruling by technology should not give a message that it is not for empowering but for replacing human cognition to make it function sustainably. [3]

Sustained use of cognitive based tools help getting a competitive advantage especially in compensation, employee tracking and mental wellbeing [32]

While operationalizing cognitive tools irrespective of its category analytical, human, humanized tools it should be consistent with cognitive intelligence which can ideate cognitive representation of the world based on past and present learning. Human inspired intelligence is what is also called as Emotional Intelligence which facilitates decision making and includes all aspects of self-consciousness to Self-awareness. The tools may vary ranging from chatbots to social media e.g., Mya, recruiting assistant, that helps in interacting with aspirant to fit with the job requirements. Interpretation further, this is a highly contemporary and popular area which is useful for hiring managers wherein games are based on neurosciences whether assessing ability to read, focus and thus assess generic abilities.

With changing technologies new cognitive tools are coming based on algorithms eg Hire Vue that even analyzes the body language, tone, state of mind, attitude and conversation whether it is related to previous organization, bosses or other relationship. [3]

2.2.1 Cognitive based Applicant tracking system

Hiring right candidate is the first step towards success but still many organizations are dependable on ATS which is time consuming, and less outcome driven. TCS Neural Ent is a Machine learning based tool for effective recruiting which harasses time series forecasting method to assess skills, work experience and qualification.

Benefits of such software includes using correct job element for candidate search, effective role prediction, NLP can be used for creating job description and Natural language query can be sued for viewing kind of queries on the job roles thus ensuring accuracy, agility and effective integration.

Accenture has smart career tracker which serves as an assistant for talent tracking system. Similarly, **Arya** another recruiting tool that matches candidate skill set with the proposed job, Hiretual is another tool that serves as a talent tracking system based on tracking algorithm that matches skills, experience. It helps in sourcing qualified candidates from diverse background.

Turbo hire is another most rated tool that integrates well with current CRM software of an organization using AI reducing time spent per candidate using intelligent algorithm, so is for Humanly a conversational AI for automation and identifying applicants.

2.2.2 Onboarding Automation system

It is a complex system involving many departments, procedures and system but serves as first experience for employees. Which if done manually can create and has scope for mistakes automating onboarding helps attracting best candidates for example with Natural Language Processing generating offer letters, contracts is possible, initial common task like account generation, chatbots for small tasks like generating companies email, using Wi-Fi of office to any other thus an AI based FAQ powered chatbots helps in saving time by avoiding repetition of such task. Similarly Networking to build relationship with team members is equally looked upon, Organization network analysis helps in introducing newly joined employees with entire organization, similarly for benefits information like retirement, health plans there are devoted distinct portals that are interconnected with automated onboarding for quick work.

Another important area where it works is feedback analysis from fresh hires. As nearly 20% of newly hired employees leave in 1.5 months, thus knowing their experience is a must, thus automated onboarding helps n enhancing performance and boosting employee experience. Some most popular ones include Fresh teams, Remote, Ciepal, Deal etc. [28]

2.2.3 Learning and development

Today's learnings are live conversational environments which serve as collaborative and productive tools with user friendliness and individualized approach. Whether based on mindtools or cognitive reasoning assuring technical, behavioral, or interpersonal skills, matching with organization goals. Training reflects approach of both employee and employer, as per Nielsen survey HUL was named as dream company y more than 64% of management graduates, reason of them allowing creativity, making mistakes as normal, commitment to organization by innovative ideas and year-round leadership program for mapping employee potential and estimating retention. Their automated Business leadership program had made them to rank fourth in Hewitt Global Leadership survey [13]

Oracle study talks about 27% of HR leaders think AI and cognitive based learning is significantly important and it is critical for developing potential, generic and non-customized solutions only can create problems in users experience, linked with LMS it provides effective content and expert analysis thus leveraging Learning experience platform, pairing employees with chatbots, freeing from biasness, and providing sustainable learning. Thus based on cognitive tools augmented intelligence, autonomous intelligence m and assisted intelligence works hand in hand with reliability, personalization and accuracy, works on the concept of Applied Intelligence wherein they believe Cloud is an enabler and training people based on stakeholders interest for cross functional skills to deliver both business outcomes and cultural changes thus training workforce.[27]

In services or in manufacturing training people with respect to their functional skills eg in hospitality offering AI Concierges as in Radisson Blu London, hyperdynamic pricing, for adjusting prices during high fill ups or scanning reviews for consumer sentiment for choosing hotel reviews based on Instagram photos, save the environment initiative with energy, water and waste management, to reduce carbon emissions as done in Hilton properties. Thus training employees based on AI collaborative tools hotel brands like Dorchester Collection uses these tools right from boarding to dining using chatbot translators like Bebot or event diagramming, robotic check in as developed by IBM Watson.

2.2.4 Employee retention

The most challenging and significant task for any strategic outcome is employee retention. Right from employee wellness to customized learning tools to equity-based compensation, encouraging heart based management strategies everything should be well thought of.[15]

Oracle launched Oracle Me an employee experience platform as a part of employee engagement strategy, it helps in improving communication , talent retention by supportive environment, it helps to work on real time employee sentiment, Oracle touchpoints developed within Oracle cloud HCM,

provides empowering and self-assessing opportunity, Oracle HCM communicate allows HR teams to measure the outcome of communications, similarly Oracle Journey and connections helps foster collaboration and sharing feedback.[7]

Netflix uses predictive analytics to build on their Talent analytics based on machine learning, also which becomes employer branding strategy, right from dashboard, matrices to using Spotify playlist to check fitness of candidate. The use of blockchain for selection and also evaluation of candidates [39]

2.2.5 Employee Performance

Managing performance of employees is another area which needs attention and decides the future outcome of any organization, with automation in this HR function also right from automated performance reviews, learning, consistent real time assessment managing and developing performance has drawn closer attention since adoption of such tools provides quick, accurate and continuous feedback.

The tools based on cognitive concept align planning, organizing, actuating, and controlling the features and integrating with AI tools for effectual outcome.[14]

Employees performance management is not limited to any duration or interval today but focuses on consistency and regular review, as per Global Human Capital trends 2015 believe s that more than 45% of employees are not much motivated by PMS and there is a need to assign goals, provide real time and continuous feedback, keep coaching consistently and to be multi-perspective in nature. Companies like Google, GM, Cisco have done rigorous work to understand how technology adoption in this area will lead to better outcome both for measurement and management. Most organization thus look ahead to revamp their PMS for supporting career development, introducing Talent analytics, providing consistent information, and deploying software like Slack, Conversational reviews, 9 box matrix based on algorithm, performance dashboards and heatmaps using Oracle HCM, Performance Pro, Track star, Synergita, GO co to name a few.[24]

From above discussion it is thus clear that cognitive based tools play a significant role in improvising and giving an entirely new direction to effectual employee experience. Thus, with the secondary literature review it indicates that effectively planned and applied technological based tools in context to cognitive orientation can lead to effective employee experience.

3 Discussion

Focus on educational campaigns to know the preparedness of workforce to understand the cognitive based tools and its expected outcomes. Organization should have fair understanding on people centric outlook, expert knowledge on data science, design part and how to assess user's experience along with core knowledge. If these are missing it may lead to failing in making system automated and people empowered

Cognitive based tools are this facilitator to ensure speed, accuracy, adequacy, and outcome. It is important to identify the needs of stakeholders, organization requirement and task structure with expected outcome along with looking at internal requirement. The task tools based on technology are mathematical model based which requires deep understanding of the expert like drift diffusion model of binary decision-making Gaussian, Binomial distribution for accuracy or whether assessing mental test score.[12]

There has been progress and few challenges in cognitive architecture as well that requires sound knowledge representation and reasoning, application of cognitive robotics and understanding of cognitive sciences to make it a well-accepted practice.[21]

The success of application of cognitive tools for effective employee performance depends on effective data retrieval and its usage for managing employee performance. There can be different application in managing performance using Mobile robots, Natural language processing, target tracking, data mining, video sequences, using cognitive radio, Robot sensing etc. [31]

There is thus a strong role of combination of cognitive, emotional, and technical intelligence when it comes to real effectiveness of such concepts. Employees experience is affected strongly when right from emotional stimuli in task(for tools based on cognitive aspects) provide desired outcome and there is perception-expression of emotion which leads to self-awareness, creates expertise in emotions and followed by transcendence to accept strongly as a shift to cognitive based technologically driven tools may include resistance to change as well.[10]

Brain computer interface thus can strengthen Human resource management strongly. Artificial intelligence which can simulate and replace human imagination, emotion, potential as well as skills is helping through algorithms advanced developments consistently. It should thus be utilized as a tool for empowering task not replacing as AI can well classify, retrieve information, and can complete task of decision making and controlling using artificial neural networks, deep learning, prediction, optimization, fuzzy interface system, support vector machines etc[40]

Thus with responsible managerial position it is important to administer that irrespective of multiple benefits of scholarship between AI and HR it has some negative side also like low job satisfaction high turnover, poor customer relation and affecting brand image. [16]

4. Implications for organization and managers

Cognitive skills are basic for ensuring employee performance and supervisors ability and training outcome is dependent on what kind of cognitive skills an employee possess and thus identify the improvement area**. [17]**

HR system and sub system can witness an exponential growth ensuring multi stakeholders' interest, Employees have good performance when there is great employee experience, AI in HR, from searching applicants to recognizing best performers and predicting retention and attrition based on algorithms is made easier. The same applies for learning and development wherein global learning is more than 200billion $ sector it is important to know what employees need. With ability of algorithm to extract data based on culture, background, performance, and different activities done it is imperative to note that predicting performance for desired outcome will be easier. Cognitive tools matched with analytical insights helps in saving time for both routine and strategic activities ranging from leave application management to matching skill requirements like self-services by virtual assistants.

A popular term called **"**Organic engagement" makes sense when application of Cognitive based tools in effective employee experience is talked about eg using employee data to interpret emotional state through sentiment analysis, deeper analysis of email and even behavioral stimuli through monitoring social media activities like kind of views, likes and what kind of comments they give.

Similarly, time trackers, productivity monitoring software create real time reports helps in improving work environment and outcome. This all helps in building an unprejudiced workplace[2].

Creating customizable learning courses to computer driven learning programs, building team collaboration efforts through predictive modelling data. Assisted by these tools and systems corporate executives will be able to even predict which set of employees will be more creative and are expected to take more initiatives using anticipatory knowledge.

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