

RETHINKING OF PERFORMANCE MANAGEMENT: SEARCHING THE SIGNIFICANCE OF AN AI DRIVEN TECHNIQUE FOR SMOOTH PERFORMANCE ASSESSMENT

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ABSTRACT

There is a substantial gap between the promise and the reality of the assessment methods of performance management (PM) in the organization. Traditional performance management techniques turned as ineffective and costly for the business. The dissatisfaction of the people with the traditional PM is mounted in the business world that need to be agile with rapid innovation to remain competitive. Moreover, the face of corporate performance management is changing as new technologies, specifically the scope of artificial intelligence (AI) is untapping the future -oriented performance Management approaches. This article has an attempt to identify the consequence of replacing traditional performance assessment technique with Machine Learning (ML) and artificial Intelligence for creating an unbiased work environment. The common human errors create the PM system into a costly, time consuming and unhappy employee feedback mechanism. The employees of the selected banks agreed on the AI implementation that enables a transition to their traditional performance Management system. Due to relatively small sample size the validity of this research could be questioned. The investigation explored an encouraging opportunity for using Machine -driven performance with AI in PM system. The paper review different articles and online news to identify the scope of ML application in the core function of PM within Bangladesh context.

Key Words: Performance Management (PM), Artificial Intelligence (AI), Machine Learning (ML), Performance Assessment, Rethinking.

1. INTRODUCTION

Despite the ever-increasing practice of performance assessment in the workplace, most of the techniques results in poorly output. Most workplace performance management (PM) tools fail to assess the proper performance of the employees and ultimately unable to serve the organization's quest for success. To solve this problem, we need to examine what organizational performance managing method requires and how new system should be developed in line with those requirements.

People are becoming more technological savvy and managements are looking at implementing new software systems for performance assessment. We

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observed the critics by identifying performance assessing techniques with the complain of biasedness, traditional ineffective learning and training process, discontinued feedback mechanism, incapable performance assessing and lack of smooth communication (Peoplehum.com, 2021).

It is true that companies are able to establish remarkable progress in the design of performance measurement frameworks, but still most of the companies mainly focus the traditional measures (Tangen, S. (2004). Key performance indicators are usually utilized to clarify organizational goals, make sense of work contexts and help employees to set up rational performance target. To achieve such performance management process, an Artificial Intelligence based performance assessing mechanism is proposed in this study. Banking business is a strong economic indicator in the overall GDP in Bangladesh (Worldbank, 2010). But these contributions are in stake due to turbulent economic crisis since last year and World bank (2020) already forecast for the heightened financial sector weaknesses (worldbank.org, 2020). Thus, facing the challenges and recovering from them is a big task for the industry people. The whole job includes every aspect including managing and assessment of the performance of the individuals. Since pandemic issue created the new business concepts in job as 'social distance' and 'discontinued attendance' the performance assessment channels are also in an intricate stage and in unfavorable situation for the evaluator. Though, before now, the PM practices have a general criticism for its lack of transparency and accuracy parameters. As such finding a suitable and acceptable PM procedure is a long-expected desire for the people in finance sector. It is time to look more precisely at the predictive people analytics through the PM.

2. BACKGROUND OF THE STUDY

Employees are different in nature; their performance need to be assessed with a genuine judgement. A good Performance management technique has become very crucial now a days. The complex nature of the organization covers changing organizational role, the power of information technology and changing external demands creating pressure for a smooth performance management mechanism (Neely, A., 1999). Therefore, Progressive performance management approaches no longer encourage the traditional process of measurement techniques like poor goal setting and unclear expectation, below standard feedback, inconsistent performance measurement indicators and career development focus etc. (McNamara, C., 2021, Managementhelp.org).

It is the time for introducing a performance management process which is

collaborative in nature and less time consuming with effective outcomes. Wilkinson, S. (2021) mentioned performance management mechanism as a 'new lease of life' while researching the importance of PM in a new format to remain competitive industry wise. For instance, Machine learning has the capacity of collecting information effortlessly from multiple sources (Pawar., Y., 2019). Addressing the behavioral issues of the employees becoming more important before they perform on departmental tasks, if the assessment can be replaced by machine language. Considering the eminent future of AI driven PM system, the author intends to explore the AI application in PM.

Thus, the main aim of this research is to explore the design of a PM method by replacing the traditional parameters with AI parameters for an accurate result and collaborative recognition.

3. LITERATURE REVIEW

With the technological advancement, artificial intelligence has become the key factor for the business world to be transformed in a new style (Jia., et al , 2018). AI has already been gradually applied to business management for taking decisions, supporting managers in speeding up their job and daily works with powerful database and analytical support (Partidge & Hjussain, 1992).

Enterprises are familiarized with HRIS (Human Resource Information system) application for strategic planning, recruitment process developing information on training and evaluating performance. However, the application in the information system with assistance function from intelligence viewpoint is still limited (Lippert & Michael Swiercz, 2005).

AI can be used in different functions of HRM with suitable capacity. Garg et al, (2021) found in their study that ML application has strong impact on performance management and use of decision trees. For example, the performance appraisal model can be embedded into the system with collecting and analyzing the hidden information about people's work performance, skill and competency (Partidge & Hjussain, 1992). The AI driven intelligent decision support mechanism like 360- degree performance evaluation methods can be used for automation for having an even more effective employee appraisal result (Otley, 1999).

Performance management process can be identified in different ways. Traditional performance measurement systems are designed to measure performance and accountability to confirm that people follow orders (Almomani. A.M., 2016). But now, Organizations across the world are replacing annual reviews with

frequent informal check-ins between managers and employees. Because the tension between the traditional and new approach of performance management stems from a long wanting dispute on a better outcome of performance management (Cappelli & Tavis, 2016).

Before the era of modern technology, managers usually rely on manager's self-assessment (Mallick, B., 2019). But a "human" manager is not always sufficiently able to foresight for synchronizing performance feedback based on unorganized historical data to future pathways. Therefore, AI intervention is so necessary – AI's predictive capabilities can take data collected from various stakeholders to predict an employee's probable career trajectory and determine appraisal figures.

Performance metrics can be calculated for some jobs on an ongoing basis through management information systems with reliable data (CIPD., 2021). As such it is important to get the relevant data from valuable source to review the performance. Now, for this it is important to have a smart workforce report system. For instance, AI usually goes through a central repository of data from multiple sources which has the capacity of eliminating the errors in judgement and makes the performance review more meaningful (profit.co., 2021).

PM system becomes more cost effective when the organizations are able to manage the employee's performance without long-lasting meetings and continuous workshops with the employees that is usually associated with big budget (pwc,2021). But when the different performance assessment stages are aligned with machine learning, the extra cost will be reduced with modern technology (hrfuture.net,2020). The admin of Upraise (2019) identified ML driven performance management process with different benefits like:

- Information collection seamlessly from various sources
- Manager can extract insights from collated information in real-time
- Possibility of removal of common psychological biases associated with performance reviews.

The findings of researches on AI in different HRM systems are identified in table 1:

Table -1: Different research on HRM system with AI technology

Topics:	Sources:
A Conceptual Artificial Intelligence Application Framework in Human Resource Management Author: <u>Q Jia</u> , Y Guo, R Li, Y Li, Y Chen (2018)	https://aisel.aisnet.org/cgi/viewcontent.cgi?article=1011&context=iceb2018 . Google Scholar
Issues and Challenges in the Practice of Performance Appraisal Activities, Rusli Ahmad & Sopian Bujang (2013)	https://d1wqtxts1xzle7.cloudfront.net/33106205/45 . Google Scholar
A Study of Artificial Intelligence and its role in Human Resource Management, Mr. Vivek V. Yawalkar (2019)	www.ijrar.org (E-ISSN 2348-1269, P- ISSN2349-5138) IJRAR19UP004. Google Scholar
Topics:	Sources:
Performance Predicting in Hiring Process and Performance Appraisals Using Machine Learning Mahmood, A., Shawabkeh, T. & Walid, A. (2019)	DOI: 10.1109/IACS.2019.8809154
Issues and Challenges in the Practice of Performance Appraisal Activities (Ahmed and Bujang., 2013)	International Journal of Education and Research. ISSN: 2201-6333 (Print) ISSN: 2201-6740, (Online) www.ijern.com
The Effect of Using Artificial Intelligence on Performance of Appraisal System: A Case Study for University of Jeddah Staff in Saudi Arabia (Alrashedi & Abbod, 2020)	Part of the Advances in Intelligent Systems and Computing book series (AISC, volume 1250)

4. OBJECTIVE OF THE STUDY

- Finding the scope of Artificial intelligence (AI) connection for better performance management process in banking industry.
- Exploring the application of AI through Machine Learning for reducing error rate for decision making in performance management process
- Replacing traditional managerial parameters in PM (Communication report and job target and completion) with AI for eliminating common psychological biases associated with performance reviews.

4.1 Research Question

- I. Why the performance assessment ends with a dissatisfactory result?
- II. Does Artificial intelligence have any impact on performance assessment?

4.2 Rational of the Study

The recent pandemic situation simplifies the importance of quick decision taking problem due to the social distances. The business world will face new challenges in future. It is important to study the prevailing organizational practice in new dimension. For example, banking sector in Bangladesh is one of the most crucial sectors and the employees of this business are continuously dispersed with the uncertain risk factors associated with their every performance. Managing performance of the employees in such a turbulent condition is a real challenge for the managers. The accuracy of the performance appraisal is chronic debating dialogue between the performer and the assessor. New managers love data-driven performance management options. Because they can easily focus on factual information and carry out employer performance reviews.

The banks can restructure their performance database and allow the employees personally to update their daily, weekly performance which allows them for having a transparent platform. The mechanism will ensure a collaborative target-oriented pathway for better performance with an acceptable appraisal.

The job is not easy. This paper intends to explore the application of AI for updating the PM system within the banking industry in Bangladesh. Main target is to follow the machine learning application within exiting PM to reduce complexities, error rates and also to ensure a collaborative PM practice.

5. METHODOLOGY

The author in this paper used a descriptive style to get the information and extensively reviewed scholarly articles, reports and newspaper articles to explore the application of AI in performance management mechanism in the organization globally. Research materials were sourced from Google scholars, JSTOR, web portal and different bank officials' opinions.

The research has been done by qualitative survey by interviewing 20 mid-level & top-level officials of two commercial banks in Bangladesh. The survey was conducted within Dhaka district only. A pre-meeting has been conducted to give an overview about the research objective and to know their interest in participation for the research. Data was collected mostly from the officials who are involved in organizational IT system and departmental heads who are directly responsible for performance assessment of the employees. Interview was designed by providing them 10 closed ended and semi structured questions. The interview conducted via zoom platform and all the officials are contacted by e-mail for the meeting date and time. The feedback on the survey-maintained reliability and confidentiality for the authenticity of the survey (J. Whelan., T. et al 2015).

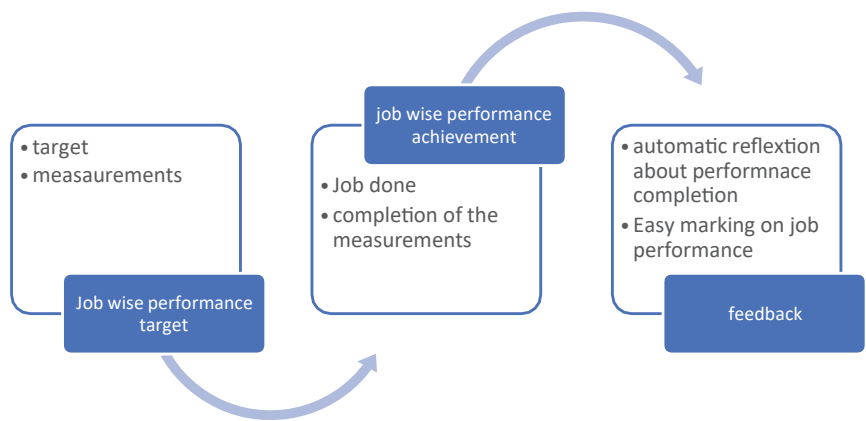
6. DATA ANALYSIS AND DISCUSSION

The main purpose of the research was to understand the application of AI in existing PM system to make the PM system more appropriate. The details of information that has been gathered from high level bankers, newspaper and article has reflected the idea about modern practice of AI in Bangladesh in a latent stage. The startup of AI for PM in Bangladesh is limited with the attendance practice through face recognition only. Some companies like 'Onspotbiometrics' are helping banks with face recognition mechanism (Tracxn, 2021). The officials responded that they are not yet familiarized with other application of PM introduced by AI. But they agreed upon the effectiveness and cost-effective use of AI to do the PM easily. Few executives were not ready to admit the true benefit from AI adoption in their assessment procedure as it required heavy investment and that could be a reason for losing ultimate benefit. The result was different for the officers with IT background. According to them there are scope for restricting the system by identifying person wise abilities to re-imagine when they become outdated with AI application. Furthermore, they also allow the managers to avoid tedious responses by replacing quick solutions as AI will make an automatic platform for the responses (Soni., H, 2022).

Enterprises worldwide have already adopted the AI driven business strategies in many ways. Banking sector is no exception. Vedapradhda & Ravi (2018) explored the practices of investment banks those are embraced AI based anti-money-laundering, anti-fraud, compliance and smart contracts technologies. Artificial intelligence focused on cognitive application in functional areas of business, where performance assessment and reviews are also considered for a collaborative result. The world bank group have settled down a mechanism through AI and Machine learning in banking practice to reduce incidence of false patterns and behaviors (world bank., 2021). The author observed the concept of Goal-setting theory developed by Edwin (Locke & Latham., 2006) in analyzing the AI in the bank's performance management system. The theory stated that specific goal setting with appropriate feedback have a direct relation towards better job performance (Chetty. P., 2019). And in this research the author used the Machine learning parameters to identify the performance assessment which has good impact indirectly on employee's performance. Machine learning could be wonderful tool that we can utilize to answer questions with different data available. Data is the key to machine learning. The automated process helps identify data and then supports to make our task easy than before. The bank officials positively appreciated the AI algorithm application for making their performance assessment smooth. They agreed on the use of AI for monitoring the goal setting progress in real time and rapid feedback facilities (Upraise, 2019).

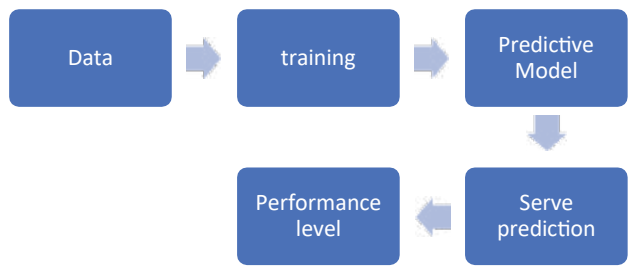
The researcher developed the hypothetical idea of generating ML concept within the PM process through a loop and target to feedback (figure 1).

Figure-1: Hypothetical Performance assessment outcome with AI:



When the organization is able to answer about performance related data, then the assessment becomes easier and more reliable. For this we need to collect data on performance metrics, train up people about how they will collect data and interpret those data. Training is referred to the process that how we will use the data and by answering question is basically referring to get prediction. The author plans to develop AI model that involves the data from performance parameters, using the organizational performance assessment training to interpret those data for a better performance outcome (figure-2).

Figure-2: Hypothetical Performance assessment process with AI:



The Automated process helps the management in getting a reliable, transparent result to predict about the employee's performance without spending hour to hour for assessment and wastages of manpower in the assessment pool.

AI and ML technologies enable HR teams to make better use of the performance related data that is being collected by the managers and combine this with employee data sources. Using the technology in this way would enable them to perform reliable predictions based on the past. For example, AI is capable of analyzing data in software solutions to determine if there are any errors. This will help the HR team to predict performance outcome, such as which employee should or should not have a skill to perform (Saeij., 2020).

Research Gap

The author conducted the survey on the banking sector within Dhaka division. The other sectors could have different feedback on the adoption of AI in their performance Management practice which could be applicable in banking sector.

Policy Implication

Performance management is influenced by AI usage in a way that it becomes more accurate using more current and accurately collected data, performance data is gathered more easily, is done more continuous, is less biased and done with a more proactive attitude than before AI was implemented in the process. AI allows performance assessments to take place in real time on a consistent basis (Pawan., 2019). Artificial Intelligence can help the system of identify which employees need to reinvent their skills much before they become obsolete or get replaced with better technologies by to personalize the employee's learning experience (Tabassum & Ghosh., 2018).

But, in each dimension of human resource management, there are worthy researching questions to be answered. For example, the process design for the matching between job seekers and providers based on HR model and AI. As such when the organization is planning to use AI driven methods in their performance Management, they need to adopt the application from the experts.

The future trend of the AI for HRM is still the collaboration of human and machine with the existence of confliction. How to collaborate the human and machine with using the developing technologies is also an important question. Finally, whereas AI will free up time for line managers to spend more time on uniquely human activities, HR managers will also be freed up in time from answering basic requests by employees. HR managers having more time, combined with the devolution of responsibilities, enables HR managers to focus more on strategic

HR activities such as data-driven workforce management. Top Management must understand the requirement of the necessity first otherwise the whole structure will not be under single roof to be transformed with AI technology.

7. CONCLUSION

AI is getting increasingly popularity across multiple industry verticals. It has transformed the way we conduct everyday tasks by providing platforms that are much faster, smarter and better than ever. AI's ability to process enormous volumes of information with lightning-fast speeds, interpreting them accurately and eliminating human biases has made unprecedented improvements. Although it may still be in its nascent stage but when it comes to analyzing and interpreting data, it can be a powerful tool. AI-driven activities and automation will totally transform the way managers usually conduct the performance assessments process. That time is not very far when it will be observed about self-service kiosks for employees where system will be processed like self-generating pay slip, attendance slip and many more. The ML mechanism acts like a helping hand for HR managers to focus on what's more important and value generating. The researcher here tries to reuse the data for performance assessment through AI that saves time, resources and cost. Because it automatically fuels a busy work environment with a real change (people.hum., 2021).

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