

Course Name: AI in Human Resource Management

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Lecture – 17

Lec 17: Using AI in Workforce Planning

Hello learners, welcome back to the course on AI in Human Resource Management. We move to the next lecture, where we will look into workforce planning. So we are traveling across different domains to see how AI is being utilized or how AI is facilitating different domains of HR. Specifically today, we will look into workforce planning.

I'm Dr. Abraham Cyril Issac. I'm an assistant professor at the School of Business, Indian Institute of Technology, Guwahati. Now, when you look into workforce planning, this is one of the most critical aspects for the sustenance or sustainability of an organization. Many times, we see that individuals do come into the organization. They get some training, develop themselves, become resourceful, and then leave the company. So many times, it happens that the organization invests for nothing.

So this should not happen. Succession planning is vital. Workforce planning is essential. And how is AI enabling that? Let's look into that.

First, we'll understand what workforce planning is all about. When you look into workforce planning, it is a systematic process that organizations use to analyze and forecast. Their workforce needs, ensuring they have the right number of people with the right skills in the right positions at the right time. So, let's see this as an alignment of human resource needs with the strategic business objectives, which can lead to more effective workforce management.

So, workforce planning is a strategic approach that organizations use to ensure they have the right number of people at all times. The integration of AI into workforce planning processes has revolutionized the organization's outcomes or outlook on forecasting staffing needs, managing employee performance, and aligning with talent strategies and business objectives, etc. So, when you look into workforce planning, you must understand the different components of it. We'll start with workforce analysis.

Workforce analysis is a quick check on your current workforce and its segmentation. So, current workforce assessment involves analyzing the existing workforce in terms of skills, demographics, performance, and factors like turnover rates. This is what current workforce assessment would be. When you look into workforce segmentation, you will see that There will be categorization of employees based on function, skill set, or job role to better understand specific needs and gaps.

That could be one way to go ahead. Another could be demand forecasting. Demand forecasting is also one of the significant components of workforce planning. When you look into demand forecasting, you are essentially looking into future needs. So estimating the number of people, the types of employees required to meet future business goals.

Based on strategic plans, available market trends, and projected changes in operations. Because as a prudent, pragmatic organization, every organization will look into the futuristic scenario. Every organization will look into future needs assessment. So based on that, the planning would be done. Succession planning is all about identifying and developing internal personnel to fill key positions in the future. So it ensures a certain level of, if you ask me, leadership continuity. It ensures a certain level of leadership continuity. Another significant component of workforce planning is supply forecasting. What is supply forecasting?

It can be understood with the help of labor market analysis, which evaluates the external labor market conditions to identify potential supply of needed talent, including trends, availability, and competition for talent. Also, we have the skills inventory, compiling a database of employee skills and competencies to assess the current workforce ability and readiness for future demands. So, skills inventory is all about compiling a database of

employee skills and competencies to assess the current workforce abilities and readiness for future demands. Now, when you look into the components of workforce planning, you also have the gap analysis. The gap analysis is significant because it essentially compares the current workforce capabilities against the future workforce needs.

So it identifies, let's say, something like skill gaps. It identifies something like, even sometimes, overstaffing happens. So it typically keeps a check on overstaffing or maybe potential shortages. So all these aspects are critically taken care of. So basically, when you're looking into gap analysis, we have to understand that all these aspects, be it skill gaps, be it overstaffing, be it potential shortages, all are taken care of with respect to gap analysis.

Now, when you're looking into how to overcome this or how to address this, you have the strategic action plans, and strategic action plans can be, you know, executed by recruitment strategies, by training and development, by retention strategies. Quickly, recruitment strategies are all about developing approaches for attracting and hiring talent. So it includes, let's say, job advertisements. It may include outreach initiatives.

It may include training. you know, collaboration with certain educational institutions. So if, let's say, there is an educational institute of greater repute, then organizations will try to have a MOU or some sort of understanding with the particular institution or maybe some sort of outreach activity to showcase their availability, their existence, their visibility, or maybe sometimes to collaborate deliberately or unintentionally. So all these could be some of the recruitment strategies.

Training and development, implementing training programs to upskill existing employees to meet anticipated demands and close the skill gaps that is existing. When you look into retention strategies, definitely you can think about situations where or strategies which are all about creating initiatives aimed at retaining top talent and reducing the turnover. It could be something like employee engagement programs. It could be giving some benefits, additional benefits, or even some of the career development opportunities altogether.

Then there is this possibility of monitoring and evaluation, establishing KPIs, key performance indicators, To measure the effectiveness of workforce planning efforts, monitoring and evaluation is a possibility. So this could include, let's say, attributes like attrition rates or employee satisfaction or success of recruitment strategy. So regularly reviewing and adapting the workforce plan based on changing business needs, market conditions or internal feedback all cater to this particular evaluation.

Now let's look into the process of workforce planning. When you look into the process of workforce planning, you have the strategic alignment point, which I emphasize in most of my modules. It ensures that human resource strategies are typically aligned with the organization's long-term goals and objectives to a great extent. We also have some data collection and analysis possibilities, you know, gathering data from internal and external sources to inform decision-making. So this may include using, let's say, HR analytics or workforce metrics.

We may have scenario planning, which can typically include developing various future scenarios to evaluate how different factors may affect workforce needs and plan accordingly. And even integration with other HR functions. When you talk about integration with other HR functions, it is all about collaborating with talent acquisition, training and development, performance management, and other HR functions to create a cohesive approach to workforce management. So when you look into the entire workforce planning process, Please note, it is an essential strategic process that goes beyond simple staffing.

It encompasses, if you ask me, a broad understanding of talent management in alignment with organizational goals. So by effectively analyzing current workforce capabilities, forecasting future needs, And implementing strategies to bridge the gaps, organizations can typically optimize their human resource capabilities. They can respond to market demands, market dynamics, and they can typically maintain a competitive edge. Now let's look into the key functionalities of AI in workforce planning.

We are coming into the crux of today's discussion. And the first and foremost one is predictive analytics. In AI tools, analyze historical data and current trends to predict

future workforce needs. So by examining factors, be it employee turnover rates or seasonal demand fluctuations, industry trends, AI can provide accurate forecasting of the staffing requirements.

There is possibility of real-time data analysis or AI systems continuously monitor various data sources to provide real-time insights into workforce dynamics. So, this capability allows organizations to adjust to Their workforce plans dynamically based on the current conditions. Then you have scenario planning. Scenario planning as a functionality of AI is interesting because AI can simulate different business scenarios.

Let's say a scenario like market downturn or a scenario like let's say market expansion. So all these typical scenarios can be actually simulated to help HR professionals understand how these situations might impact the staffing needs typically. So this proactive approach actually enables better preparation for potential challenges. Then you have the skill gap analysis. You talk about skill gap analysis.

AI tools can identify existing skill gaps easily. Within the organization by analyzing employee competencies against current and future job requirements. These insights typically help organizations create targeted training and development programs. AI-driven aspects could increase the possibility of skill gap analysis and effectively address them or help to address them. Another significant functionality is automated scheduling.

AI-driven scheduling tools optimize shift planning and resource allocation by considering employee availability, legal regulations, and operational demands. This reduces administrative overhead. It also reduces typical costs associated with that and enhances operational efficiency. Now let's look into the benefits of using AI in workforce planning. When you look into AI in workforce planning, we have seen how effective it can be.

It starts with accuracy. AI enhances the accuracy of workforce forecasts by analyzing vast amounts of data and identifying patterns that may not be evident through traditional methods. Let's take an example. AI-based models can achieve over 90% accuracy in predicting staffing needs for call centers at various intervals. This is proven by research.

When you look into cost efficiency, by optimizing staffing levels and reducing overtime costs, AI tools certainly help organizations save money. Let's take an example again: improved forecasting, which can actually lead to a 15% to 20% reduction in overtime costs by aligning staffing with actual demand. Then there is the possibility of enhanced agility. When you talk about enhanced agility, organizations can quickly adapt to changing circumstances.

They can anticipate unexpected absences or market shifts. Through real-time analytics—and that's the beauty of it—and automated adjustments to workforce plans. This agility ensures that businesses remain responsive to operational needs. Another possible aspect would be data-driven decision-making. You see that with access to comprehensive data analytics.

HR professionals can make informed decisions about hiring, training, and resource allocation. This approach aligns workforce planning with broader business goals. And finally, there is also the possibility of strategic alignment. When you look into AI tools, they certainly help align talent strategies with organizational objectives—there is no doubt about it—by providing insights into how workforce capabilities can support business growth and operational efficiency.

Now, let's look into the challenges in implementing AI for workforce planning. The first and foremost one would be, obviously, the data quality, which we have touched upon in the previous lecture. But that was with respect to training. That was with respect to, you know, all other functions of HR, if you recollect. With respect to workforce planning, we see that the effectiveness of AI tools relies heavily on the quality of data.

So, let's say if it's from HRAS or from CRM. That has a significant impact. So, inconsistent or inaccurate data can lead to misleading insights. Another significant aspect is the resistance to change. When you talk about resistance to change, employees may resist adopting new technologies due to fears of job displacement or skepticism about the accuracy of AI-driven predictions. So, effective change management strategies are essential for overcoming this particular resistance. And you do have a challenge with

respect to AI coming up as an ethical consideration. The use of AI, no doubt, in workforce planning raises ethical concerns regarding privacy and bias.

We have seen this. Organizations must ensure compliance with data protection regulations while maintaining transparency about how employee data is used. And finally, we have some technical limitations. Please note, not all organizations have the infrastructure or resources to implement advanced AI tools effectively.

Technical challenges are there, and that may hinder the successful deployment of this. Now let's look into some of the AI tools for workforce planning. We look into the functionality, we look into the features and benefits, as we have looked previously. Acterys is If that is the pronunciation, we call it Acterys.

The functionality is that it integrates data from multiple sources to provide actionable insights for workforce alignment. Please note, it offers predictive analytics. It offers real-time scenario planning and automated reconciliation tasks for employee records. The benefits are offering real-time scenario planning, and it definitely automates the reconciliation task, as I mentioned. Then we have Quinix.

Quinix is a tool that specializes in workforce management with a focus on shift planning and labor forecasting. It uses AI to analyze peak times and deliver accurate forecasts regarding labor hours needed for each role. Then you have the Ultimate Chronos Group UKG. UKG offers AI-enabled solutions for time and attendance tracking, shift scheduling, and compliance management. It leverages predictive analytics to forecast labor needs based on historical data and business trends. Then you have Motivosity. Motivosity is all about using AI to enhance employee engagement through recognition programs and insights into team dynamics.

By fostering a culture of recognition, Motivosity helps improve overall job satisfaction and retention. Then you have Impulse. Impulse uses an AI-powered engagement bot to interact with employees about their experiences and feedback. It provides continuous engagement, helping HR teams gather valuable insights into employee sentiment, which can inform workforce planning strategies.

Then you have Plannam. Plannam focuses on AI for shift planning, avoiding overlaps and ensuring optimal scheduling. This tool analyzes employee availability and operational demands to create efficient schedules. Then you have HR Signal.

Predicts employee turnover and recommends proactive retention strategies. So basically, the tool analyzes various factors influencing employee satisfaction and engagement. Then you have the most popular Workday. This Workday is being employed everywhere. It's a comprehensive HCM human capital management solution.

That incorporates machine learning into workforce planning. So what it does is that it automates administrative tasks, be it scheduling, time and attendance reporting, or performance management. So essentially, it provides insights into employee performance trends and supports strategic talent management initiatives. Then you have the Retention.ai. It is again a forecasting tool that predicts employee turnover within specific timeframes, be it 30, 60, or 90 days.

So what it does is that it analyzes historical turnover data alongside current employee engagement metrics. So typically, it allows HR teams to proactively address potential retention issues before they actually escalate. And finally, we have the Visio. We have a detailed discussion coming in other modules with respect to Visio. Visio is an analytics platform that actually focuses on workforce planning and talent management specifically.

So it provides insights into employee attrition risk. It provides insights into skill gaps and even future staffing needs through advanced analytics. So it is a greater tool with respect to, you know, data-driven decisions which HR professionals can make. So to conclude, the integration of AI tools into workforce planning represents a very significant advancements into how organizations typically manage their human resources so by you know leveraging the predictive analytics real-time data analysis or scenario planning or skill gap identification or automated scheduling companies can enhance their ability to forecast staffing needs accurately while aligning talent strategies with So despite challenges released or despite challenges related to data quality, resistance to change and ethical considerations and even technical limitations, which we have seen, the benefits of using AI in workforce planning are substantial. This leads to improved accuracy. It leads

to, you know, if you ask me, cost efficiency, agility, what we have seen, data driven decision making we have seen and strategic alignment. So as organizations continue to evolve in a dynamic business landscape, embracing these technologies will be vital for optimizing workforce management practices and to a certain extent, ensuring long term success. So please note, when we are discussing the advent of AI or the use of AI into workforce planning, it has its own benefits, it has its own critical understanding or it has its own level of, you know, enhancing the ability of workforce planning. And please note, workforce planning is one of the most critical aspects when it comes to an organization, and AI typically helps for that. Thank you for listening to me patiently.

See you with more details in the next class. Until then, take care. Bye-bye.