HR Analytics Prof. Santosh Rangnekar, Professor Department of Management Studies Indian Institute of Technology, Roorkee Dr. Abhishek Singh, Assistant Professor, OB & HR Indian Institute of Management, Rohtak Week: 3 Lecture 17: Recruitment Analytics – 2

Good moming participants. So, in previous session we had learned what HR manager need to answer at a workplace, right. So, in this session we will learn about some recruitment matrics that will help you to find out the right answer for your questions that you are facing at a workplace. In a previous session we had discussed about the Air India, if you are a manager of Air India, if you have used these matrics which we are going to discuss now, then you will be able to better plan your recruitment activity in your organization. So, now let us start with this recruitment matrics. What are the matrics that will help you to make a decision? So, first, so before starting this matrics, I would like to tell you about this data collection.

If you are collecting the data, perception based data, right, always think who will give you the unbiased response or unbiased data. If you are collecting the perception based data, right, especially for example candidate experience in the interview process. So, if you will take the responses from the selected candidate, possibility is very high that data may be biased. In the case of rejected candidate also data may be biased, but it is okay.

Why? You need to improve your interview process. So, rejected candidate may be more critical about your recruitment process or interview process, right. So, it is better to take the response from the rejected candidate. So that is why I always suggest when you are collecting perception based data always take the data from those people who will give you the unbiased data. So think about respondent, who are the respondent? Are they able to give you unbiased data or not? If not then you have to tell the limitation of your matrics and then you have to tell the limitation of your data analysis, right? So my, so this is the example that I have taken.

So let us discuss with the first thing that you need to do attrition analysis. So I always suggest that you can do this attrition analysis for your organizations so that you can understand how many people may leave from your organizations. So in attrition analysis you need to understand the two things. First thing that you need to understand whether this employees are leaving because of employee this is leaving from the organization it is

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So let us discuss with the first thing that you need to do attrition analysis. So I always suggest that you can do this attrition analysis for your organizations so that you can understand how many people may leave from your organizations. So in attrition analysis you need to understand the two things. First thing that you need to understand whether this employees are leaving because of employee this is leaving from the organization it is the employee initiative or it is the organization initiative. Because in all organization people leave because of both reasons sometime because of the people leave because of their own decisions and sometimes they leave because of the organization decision, right.

So organization decision could be downsizing or discharge. Simply they may ask you to leave the organization or they may depromote if you are not performing well. You can put this into the number.So what you can do? Right, what is the percent, like total people and how many are leaving because of the discharge. Let us assume 100 employees are leaving,

## right.

You have done this attrition analysis, 100 people have left the organization last year. So, out of 100, 50 left because of the people and 50 left because of the organization. And out of 50, 10 percent left because organization has asked them. And remaining 40 people left because organization have downsized them and it depromoted them, right. So you can write in term of the numbers and you can write in term of the percentage.

It is your choice. Visualization whichever thing that you like or it suits to you, you can take a number or percentage, it is up to you, right. So, but my suggestion is try to go with percentage, it gives you the better understanding, how many, what is the percentage, 25 percent, 10 percent, 20, 30 percent. So, it gives you an idea what is the percentage of the people who are about to leave, right. So, I suggest percentage but you can keep in percentage in number in both also.

So, in previous session you might have learned this data visualization, right, so how to prepare the charts, how to go through the Excel, Power BI and Tableau. So, you can prepare the chart for the attrition analysis by using these tools. So, that I have already discussed in my earlier session. So, here I will be discussing only matrics, which data that you need to collect it and how you have to present in a table format. It is not mandatory that you have to prepare the table always.

You can prepare a bar chart. You can prepare the pie chart. You can prepare a bar graph. You can prepare histogram. So, according to the nature of the data, you need to identify which visualization tool that you are going to use.

But in order to make you understand these all matrics, I have put it here in table format only, right. So, in the case of employee initiated, 50 people that we have taken, so let us assume 25 are leaving due to avoidable reason, they are dissatisfied with the organization. So, due to X, Y, Z reason, they may be dissatisfied with the organization. So, 25 people are leaving just because of their dissatisfaction and remaining 25 people are leaving because of unavoidable like maternity leave, there are female employees are there who want to go on maternity leave and some employees are there due to their poor health in the organization, they want to leave the organization. So, organization can take a decision, how many, so can you think which type of employee can be retained inside the organization.

So, if you will see only these 25 employees who are dissatisfied with the organization can be retained or may be retained if organization changes their policy or promise them identify the reasons for dissatisfaction, right, and then they can sort it out, right. But remaining 75 employee cannot be stopped because of the reasons that you can see. So, unavoidable health reasons are there. So, how you can leave a person, you can ask a person to stay back in the organization if that person is suffering from XYZ disease, not able to do the job. Right, you do not want that person to stay and that person also does not want to stay in the organization.

So, you here you have to make a policy only for 25 people. So, how did you get this number? You have to make a policy for this 25 people in the organization. You got the number because you did the attrition analysis. So, this matrics that you can prepare for in your organization and based on that you can make a retention policy for your organization. So, next thing that you can calculate you can calculate the attrition rate.

So, that is how you can calculate the attrition rate. So, for example, number of employees leaving the organizations is 25, right, and average number of employees who are present in the organization 100 right and then multiply by 100. So 25 is the attrition, 25 percent is a attrition rate. So now first thing that you can do with this attrition rate is you can compare this attrition rate with the industry rate, with the industry rate. I am not saying this 25 percent is a better, poor, good, bad, what it is I do not know.

What you can do? You can compare your organization attrition rate with the industry average. If industry is having 50 percent attrition rate, then your organization is doing well. If your industry is having only 10 percent attrition rate, then you need to think about your organization attrition, right. So, that is how you can make a decision whether your policies are working or not working. If your organization attrition rate is 25 and industry average is 10 it means it is giving a signal you need to think about the attrition in your organization because it is a problem.

That is what it indicates. Now question comes here how to calculate this average number of employees. So few people are joining the organization, few people are leaving the organization but you need to understand. One number that you will find that was always there in the organization. Let us say in a organization 100 people were there, sometime 90 people were there, 91 was there, 111 was there, right.

So, if you will see the average of these number comes the 100. For example, I am just taking the example. So, the average comes 100. So, how it will come? So, you can divide these all numbers divided by 365 or monthly if you are calculating then month divided by 30, 31 right? And then you can see the average number of employees.

So that is how you can calculate the industry attrition rate and then you can compare with the industry. Next thing that you can prepare one So, the same thing that you can see in a first that we had done the attrition analysis. So, here we had discussed what are the reasons for the employee leaving from the organization. So, here you can see that attrition rate that we are discussing about and attrition index that. So, here we have added one more column that is the hires.

So, new hires. How many new employees are joining your organization and how many are leaving the organization, right? And how many layoffs are there, right? And how other forms

of the separation. So, if you want to prepare only in one, new hires and quit, all type of quit, right? layoff, discharge, other form, health, any kind of quit that is there. So, two things that you want to prepare, you can do that. Second thing, if you want to make little bit more, develop this attrition index. So, what you can do, you can prepare according to the department wise, right, you can add here departments, HR, marketing, operations, finance, and then you can prepare this list.

If you want to go a little bit more depth, then you can add one more level. That is the job position, right? So at which job position there is a new hire or there how many people are leaving. So that is how you can prepare the index and little bit more detailed one, right.. So, it is up to you as per your organization need, how detailed attrition index that you have to prepare.

So, accordingly you can add some of the parameters in this index. Now, one of the most important thing that you have to think about, whoever is leaving your organization, whether you should make an effort to retain them or not. That is the important question whether you should make an effort to retain them or not or how much effort that you should make in order to retain these people. So, for that you need to do the cost benefit analysis of attrition. So, first thing that you need to understand the various types of the cost which is involved associated with this attrition.

First is the financial cost. So, let us assume that your organization is vague and every day 1000 employees are leaving and let us assume in your organization 10 lakh people are working across the world. Across the world 10 lakh people are working and out of 10 lakh 1000 people are leaving every day. I am talking about every day, 1000 people are leaving. So, now you can understand to deal with this 1000 people, right? So, dealing means what? You need to give them experience certificate, right? You have to take their exit interview, right? So, you need to involve your employees in this process, right, and you need to pay the salary to them, you need to give a time to them, right, you have to do this, all these processes. So, in department also, it will impact the focus time of other employee as well as in our HR department, you need to hire additional people in order to deal with these people who are leaving.

So, it involves the financial cost. So, for dealing with this people, thousand people every day, how many people you have hired, right, that is the cost to the organization. It can be reduced. How it can be reduced? By reducing the attrition rate in your organization. Second thing that you need, second cost that you need to analyze that is the replacement cost. So, how much is the replacement cost? If one person is leaving, another person is coming, then what is the cost per hire? If you are selecting the per candidate, what is the cost? Because you need to give an advertisement, you need to conduct an interview, you need to set up interview panel, people will come.

So, these all things involved a cost. So, you need to calculate this cost per hire, in detail we

will discuss how to calculate this cost per hire and based on that you need to identify the replacement cost for that particular person. Third thing, training cost. So, if that person is not having the desired skills, whichever is required in order to do the job then you have to train that person also. So that training cost also that you need to include. And the next very, very important thing that you need to think about is the percentage of the hike that you have to give to the new employee, right? If he is coming from external source then what is the percentage, right.

If you take the IT industry, right, for the same position, sometimes you have to increase the salary by 20 to 25 per cent. Right for the same candidate. So, 20 to 25 percent or in the case of internal candidate also maybe 10 to 15 percentage that you have to hike. So, if 1000 people are leaving every day and you are replacing them with an increase of 20 to 25 per cent of salary or 10 to 15 per cent of salary for the internal candidate, now you can understand, over a period of time, the structure of salary will get change in the organisation. And that may impact the employees behavior inside the organization.

So that is what you need to understand these various types of costs which is associated with attrition, do the analysis and then make a decision on whether you should retain the person or you should allow that person to leave the organization. So that is what you can do it. Next thing that you can go to the HR planning matrix. So, HR planning matrix that you can develop in this way. So, the first thing that you can do, you can have this job level, job category and job level.

Right? And then you can identify the current workforce according to the job level. So, you can say that manager level 1, M1, M2, M3, right? Then manager in various department like purchase, sales, finance, operations, HR. So, what are the numbers? What is the inflow in the each department? Promotion, how many people you are promoting? Because every year after the performance appraisal, you will promote some people, you will transfer some people, you will demote some, some people will be demoted. And what is the outflow of the department? How many people are leaving? Because of the promotions, because of the transfer, because of the demotion, right? So, inflow and outflow. So, here you will write in a number how many people are currently there, how many will come and how many will go and then forecasted staffing as per your development plan.

So, that is what you can see how what is the forecasted staffing. So, let us assume that you need 200 people in your organization. This is the forecasted staff and currently you have just 100 employees and 10 are coming and 20 are going right 200 you are needed. So, you can see what will happen. So, total is 110, minus 20 are leaving, so you can see 90.

90 is the current staff and how many you are required? You required 200. So 200 minus 90 answer would be 110. So 110 employee you have to hire. So that is the hiring plan. So recruitment you need to hire 110 employees and department wise and that is how you can calculate the all vacancies.

The question comes to hire 100 employee, how many number of candidate need to be attracted per vacancy? So, for just to, for one vacancy, how many people, how many applications should come? That is what. So, you need to analyze the source of recruitment. Now, source of recruitment, that is what you need to identify. So, employee referral, how many applications had come last year, right, from the agencies, how many have come through direct, right, how many have come through the direct websites by visiting it, campus recruitment, how many through walk-in and how many through the newspaper. So, the moment you do this analysis, you can do the analysis of cost per application and cost per application right, and accordingly, you can decide which source of recruitment you have to focus more on.

So, cost per application could be one of the criteria two. I am not saying it is the only criteria; I am saying it could be one of the criteria to decide which source of recruitment you have to select, right? So cost that you can say and second one that I can say person environment fit, person environment fit right. So, whether the employee that is coming from the various sources. So, which one gives the most suitable in detail we will discuss in upcoming slides right. And second important criteria that you can say that is the expected lead time.

It means how much time it takes when a department receive the vacancy, HR department receive the vacant position information and to fill that, right, through various sources, right. So, which source gives the process first, direct, right, newspaper, walk-in, employee referral agency. So, what is the time, how much time it takes to process the candidate. So that is the another could be the, so cost and time, these two on the basis of these two criteria you can decide basically three criteria, person environment fit, cost per application and time. These three things that you can make a combination based on that you can decide which source is important for your organization, how you should recruit the.

Next important question that each HR manager has to answer, what is the recruitment philosophy? What kind of people that you want to hire and retain right so how you will understand this for that you need to do the application analysis applicant analysis. So, whoever is applying to your organization does the analysis to identify their age, gender, and work experience. Education, city, reference, expected salary, so few variables that I have written, so based on the application form, you can take out some of the information variables like this and then you can do the analysis of what kind of people are applying to your organization. And then you can say, currently this is my recruitment philosophy, in future I would like to go or I would like to hire such kind of people, right, who are young, who are having more experience, more male, more female. So, based on this application, applicants analysis, you can decide which type of candidate would be more suitable for your organization and based on that you can do the analysis for you can develop your recruitment philosophy.

Next important thing is in the recruitment is success and planning. So, how many people, how many positions are there, right. So, for success and planning, you need to understand the potential level of your employees inside the organization, right? So potential level of your employees in each department that is what you need to understand, right. So what you can do along with this performance appraisal you can have a data related to these all key employees inside your organization, related to that. So, they belong to which category? They belong to A, they belong to B, they belong to C, they belong to D, they belong to E, and they belong to which category, right? So, here you can say, let us assume that your key employees, whoever is the key employee that you believe, they come in the E category, in the wrong area.

It means what you have to do, immediately you have to hire some of the good people in your department, right. If your most of the employees come in A category, what it indicates? You have to give your best, you need to develop the best retention policy for them. Best retention because you know very well they have potential and then they can become the key leader in the industry after a certain period of time. So, when you know they are going to become a key leader. After some period of time then what do you have to do you have to retain them because if they are the key leader then they will drive the industry and your organization.

Also will grow if you employ most of the employee come in this category c category they have reached to the already highest level of potential, then your plan is going to be different. So, along with the performance appraisal, whoever, if your organization is big, you can identify the key people in your organization. About them you can get this perception, current perception of potential, right. So every year you can calculate the current perception of potential department wise so that you will understand where your department is stand, right. If you want to give a number to it, right, 2, 3, 4, 5 and then you can take a average for all employees that also you can do it.

If you do not want to give a number just you want to give a category A, B, C, D, E for the presentation purpose you can give a category also. So, it is up to you how you want to present it right. And along with the succession planning few percentages that you can maintain in your organization that will help you to make a more better plan. So, the percentage of posts without a designated successor, like how many posts are there in your organization without a successor, and the percentage of posts with no successor either now or in the long term.

There is no success. So percentage of post on the plan becoming the vacant, how many people are going to leave and marginal cost associated to fill senior position externally or rather than internally. So this is talking about the percentage of hike, like expected percentage of hike for the internal candidate. If you have to promote internally, then what are the, what is the percentage of hike? So, if you are maintaining this percentage, then you will be able to design or make a decision related to the succession planning better. So, in

this session we have discussed few recruitment matrix.

In next session also we will continue with the recruitment matrix. I hope you would have understood few recruitment and matrixes. So, next session also we will continue with the matrix. Thank you.