

HR Analytics
Prof. Santosh Rangnekar
Department of Management Studies
Indian Institute of Technology, Roorkee
Dr. Abhishek Singh, Assistant Professor, OB&HR
Indian Institute of Management, Rohtak
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Lecture 23: Selection Analytics – 1

Good morning participant. Till now you had learned about the recruitment analytics. In today's session we will start about the selection analytics. So in recruitment analytics if you remember we had taken the example of Air India. Imagine the situation you are the manager and you have to take a decision how many candidates should be selected right. Because here you can see ample pool is there highly qualified number of people that you were expecting who will apply for a job, that is as compared to number of people who have applied for the job is very high, right.

So, now being a HR manager or being a head of the department in the HR, now you have to take a decision how to select this candidate because application to requirement ratio is very, very high. Because huge number of people had applied, right, I hope you people would be aware, few flights, few airlines had to be stopped, because cabin crew were not available, because most of them had taken a leave to appear in an interview for the Air India. So, that's the impact of the leadership that you can say, the moment that leaders, Air India leadership got changed, Tata Group acquired, so number of people had applied to the various jobs in the Air India that was very, very high, right. So, that thing that we had already discussed in the beginning session of the recruitment analytics.

So, the same thing that I am saying, if you are the HR manager, so that recruitment analytics indicate that your recruitment activity was successful because you have received huge number of application that is the aim of the recruitment activity. You need to receive huge number of application so that you will be able to select the right candidate for your organizations which positions are available. So, now questions comes like if you are a HR manager in the organization. So, what kind of questions that you might be facing? You might be facing which selection method you should apply because number of people are very high. How you will screen these number of applications.

If you will screen manually, it is going to take number of days. If you are going to use the technology, then also you have to assess the technology readiness. So, if you remember in the last session of the recruitment, we had discussed how to develop the index. So, you can develop the index related to technology readiness, whether your organization is ready to

use the technology in your organization or not. If your organization is ready to use the technology, if a mean value is so high, people are willing to use this technology to screen the huge number of candidate, then you can go ahead and use the technology to screen.

But question comes again, how to decide this screening criteria, what should be the screening criteria so that you will get the good number of people or right candidate quality. So, here if you can see what is the based on what we used to develop the index for this quality, quantity and cost. These are the three important parameter that you need to consider when, how many candidate that you should be there after the screening process and what is the quality, whether they are heavy, they are the right candidate for taking the position and how much cost it will take and obvious time also, right. So, these are the four parameters that you can include to decide your screening criteria, right. So, that is how you can decide your screening criteria.

Next question, being a HR manager, how much time should be given in an interview, right. If you are, you have to assess one candidate, then how much time is sufficient, right, how you will decide that how much time should be given. So, that is what we will discuss. Should we conduct the interview, should we conduct the interview for all jobs? So, for each position should be conduct the interview. So, how you will take this decision? Should we conduct the ability test for all employees.

Similarly, the way you cannot conduct the interview for all employees, similarly you being a HR manager you have to take a decisions should we conduct the ability test for all employees. If ability test then what kind of ability test that you should design for each type of employee. So, what is my objective is in this session the way I had objective in a recruitment analytics the same objective that I am having in selection analytics also whatever challenges a manager is facing at a workplace, how this analytics can solve those challenges, right. So, what kind of data that you should collect, which type of resource that you should develop, which type of percentage that you should calculate, right. So, these all things that we will discuss in the context of the selection analytics in this session, right.

So, such kind of questions that each HR manager would be facing at this workplace, right. So, again I am saying these are just simple questions, you might be facing more problems related to the selection, which selection method should be taken, how many rounds of interviews should be there. So, I can add n number of question related to your day-to-day problem. So my request to all managers who are working in the selection department to make a list of all those questions that you have to answer on day-to-day basis or in long run. Or you have to prepare a report in which you have to answer all those questions.

So, make a list of all those questions before applying any kind of analytics, right. So,

because the moment you have prepared the list of these questions, then only you will be able to get the answer for these questions, right. So because these questions will guide you which type of data that you have to collect from the organization within the organization, right. So first step is to make a list of questions. The moment you have made a list of questions then based on the questions you can make a list of variables.

So the moment you have made a list of variables and then you can collect the data from the organization and you can perform various types of test, you can perform, calculate various types of percentage, you can calculate various type of ratios, right? But you need to identify the variable. So, to identifying the variable sources the questions. So, first you make a list of questions that you need to answer at your workplace. So, I hope you would have understood you have to first step is to identify the questions. Similarly, I had discussed in the recruitment analytics also and selection analytics also.

So, these questions that you have identified. Now, let us move to the variables and calculations that we can do related to the selection. So, first decision that you might have to take whether you should use this e-selection techniques or not, right. Some of the organizations what they are doing, they are asking us to do some MOOC test, MOOC courses are available. So, you complete X, Y, Z MOOC course and your score should be above this, right.

Let us suggest 70 percent, you should score 70 percent in HR analytics. Let us take the example of this course only. So, let us assume your manager said you complete NPTEL HR analytics course and your score should be above 70 percent. If you are scoring above 70 percent in this course and then we will give you the interview call, right. So, would you like to set up such kind of criteria? Or you have developed some artificial intelligence games, you have allowed participant to participate into it and based on that you have judged the personality.

So, personality job fit. Right, you have decide, you have decided this is the benchmark, this type of job we need, this type of personality. So through the games you have assessed the various types of personality. So big five factor model or MBTI, any method that you can use to assess the personality and which type of personality is useful for which type of job that is what you can identify and whatever outcome that comes in the game right And then you can select the candidate based on that or you can apply the computer based interview right few questions are being asked right wether the candidate is able to give the answer of these questions or not. So, now you have to take a decision whether you should apply this test or not or you should conduct the physical mode test for the employee selection.

So, again two things that I have already said, first you need to check the technology readiness, if you are feeling that your organization is ready to test this candidate through online you have all infrastructure everything is there then you can go ahead. Four parameter that I already said one is the quality that you are expecting quantity cost and time these are the four parameter that I already said based on these four parameter you can compare whether you should go for E selection or you should go for physical mode selection, right. That is the one thing that you can do. One more thing that you can do, you can select 50 percent of the candidate through e-selection and 50 percent candidate through physical selection and then you can compare their performance. I will tell you how to compare their performance, right.

So, then you can compare the performance and then you can see which method is more effective, whether e-selection one is the more effective or a physical selection is the more effective. So, in a future you can select that method only. So, these are the decisions such kind of decisions that you have to make at your workplace in day to day work life. So, that is how you can do it. So, first ratio that I will ask you to calculate right, in order to understand the number related to the selection.

So, first there are three numbers that I have written here that you can see on a screen. First number, the number of candidate who received the interview call. So, after this recruitment process, you will give certain number of interview call, right, interview call that you will give. So, for example, you have given 100 interview call. Out of 100, how many people appeared in the interview? So, let us assume 75 people have appeared in a interview.

Number is number of candidate who were given the job offer. So, let us assume 25 people have received the job offer. So, what would be the ratio now? Anyone of you can calculate? So, ratio that you can see 100, 75 and 25. So, what will be the ratio? So, here you can say 1, is to 3 is to 4 right. So, now you can see here number of candidate who received the interview call.

So, now you can understand if you have to select the one candidate then you have to release the 4 interview offer letter. So, and then you know one more thing that you know if you will release the 4 of a letter then only 3 candidates will appear in an interview and out of 3 we will select 1 candidate. So, this is the conversion ratio that is how you can see. Now you think what are the decisions that you can make based on this ratio. So, if you know this ratio then you are not supposed to ask from your manager how many job offer that you should be given.

So, you can calculate this, you can do the analysis of this ratio, in 2024 what is, what was this ratio, 2023 what was the ratio, 2022 what was the ratio, how this ratio is changing. So,

accordingly you can take a decision if you are a new manager also, but you have done this past analysis of this ratio then based on that you can take a decision right how many offer letter that you need to release in order to ensure. If you want to add one more thing right here you can add job acceptance rate also right that also you can seek like if you are releasing two letters for a job offer then how many people will be joining right. So, that also you can write. So, if you have this four ratios along with you then you will understand how many interview call that you should give, right.

If you are a recruitment manager that I already discussed in the recruitment, how many application that you need to attract that also you can understand and how many interview call that you need to give, how many people will appear in an interview and after the interview how many people will be selected. So, this ratio will give you the idea, fair enough idea to make a decision. Next, next important ratio that you can discuss here the number of like for any employee selection any employee selection how many round of selection process is how many rounds one selection process is having right. So, let us assume first round is a test physical test is there right second round that is what you can say that interview is there ability in that you are checking, person job fit that you are checking. Third round is there let us assume HR round is there.

And then so these are the three rounds are there for any for example, just I have taken in any organization there may be more rounds of interviews also like in a hotel industry you will find four to five round of interviews are there. In IT industry also two to three round of interview that is what you can expect. Same thing happens in some other service industries and some other. So, but minimum you will see 2 to 3 rounds of selection process is there everywhere. So, what you can do? Just you can calculate the simple ratio.

In first round, how many people were there? So let us assume that 200 people were there in the first round. From first round to second round, how many people qualified? Let us assume 150 qualified for the second round. And from second round to third round, how many people have qualified? Let us assume 100 people have qualified. So now you can see what will be the ratio that you can calculate here.

You can calculate here. So, 1, 1.5 and 2. So, 2, 1.5 and 1. So, this is the ratio from one stage to another stage. So, if you know this ratio then also you will understand if number of candidates are decreasing in particular stage.

So, that indicates that your quality of candidate is not good, if let us assume this ratio has reduced. So, it indicates that it let us assume it has gone to 0.5 and it has gone to 1 and 2, 1, 0.5. So, it indicates that the quality of candidate in this particular process is not that good as compared to the last year.

Last year quality was good, so more people were selected and this year less number of people were able to qualify it from one round to another round. So, that is what the quality of candidate that you can predict and accordingly. Again, you can revise the number of job offers that you need to release. So, that is what you can discuss, that is the second ratio that you can calculate here.

Now you can move to the employee measurement. So these are the various example that I have written. So now you have to decide the job category as I already said in one organization one driver also there, one CEO also there, one security guard also there. So for each employee you cannot have the same measurement. Whatever how you are selecting the CEO of the organization through the same process you cannot select the security guard of that organization right through the same process you cannot. So what do you have to do? So here you have to so one side you can write a job category right and here you can write a along with the job category you can write a number of people to whom you have to measure.

And this side you can write the type of test that are available or through which you can measure the employee or you can assess the employee. So, according to the job category you can make a list like one, one round selection process that you need to have, two round of selection process that you need to have or that a number along with the skill set that you need to assess, which type of skills that you need to assess. So, according to that you can make a decision, one round of selection process should be there, second two round of selection process should be there or three round of selection process should be there, right. So, this is the one of the most important decision that you people have to make at your workplace. For a driver how many rounds of selection process should be there, for CEO how many rounds of selection process should be there, right.

So that is how you can decide, right. So first you can write the job category and which skill that need to be assessed and according to that assessment of the skill you can decide which test will be able to assess that particular skill. If single one test is not sufficient to assess that skill then you can go for So, next method of the assessment and then you can decide how many assessment method will be suitable to assess this particular skill, right. And then based on that you can decide for this job position these many number of selection stages should be there, right. So, now you can decide multiple choice of question, structured panel interview, presentation exercise, writing sample, training and experience evaluation exercise. So, any method that you can select, you can add more number of methods here, right.

So, that is the one thing that you can do it here. Rounds for a particular job position right.

So, this decision that you can take here by doing this analysis. In addition to this one more important thing being a selection manager that you have to maintain here time. So, approximate time how much time this entire selection process will take, right? Entire selection process will take. So, through this sheet you can calculate the time also.

You can tell if as per the plan everything goes then within 10 hours, within 15 hours, within 20 hours, we will be able to close this selection process. So, because for each exercise you know how much time it will be taking, right? If structured panel interview is there, so what is the average time for the panel interview, right? How many questions should be asked? 6 questions. So, how you will decide this number of questions, so that fit that I already said fit analysis that you need to do, person organization fit, person job fit, person supervisor fit, person team fit. So, these fit will tell you how many questions that you need to ask and which type of fit that you need to assess more accordingly you can increase the number of questions related to that in the interview. So that is how you can decide for, that is how you can decide how many questions are there and how much time it will take for each job position and then you can calculate the time for the entire selection process, right.

So you can show us to your management, these many job positions are there, for this job positions we will close in 15 hours, this job position we will close in 20 hours. This job position we will close in 25 hours and these many rounds of interview is there. So, rounds of selection process is there. So, selection, number of selection stages that you can say, selection stages along with this time. So, these are the two things that you can calculate and you can present beautifully in front of your manager, right.

I already said such kind of this analysis, just I am making the table format. But In this course, you have learned about this Tableau as well as Power BI and Excel. So, these tools that you can use to visualize your data, right, so how well you can visualize the data, so some of the technique that we will be discussing in the sessions of Tableau, Power BI and Excel. So, here I have presented the all data in the table format objective is only one so that you can understand this data very well. So, that is how this number of selection stages how you can decide and along with this the time.

How much time each step will take. So, these are the two important thing that each manager has to answer at a workplace that is what you can do through this table. Now, next important thing comes what is the selection rate? So, selection rate that is what you can count. So, this will help you again to invite the number of applications. If this year you could not achieve it then for the next year you can set the target. So, in performance management we will discuss about the goal setting.

So, goal setting when we will talk about at that time we will tell you. So, at that time it will help you. So, here you can calculate the selection rate. So, in simple way we can calculate the selection rate. Let us assume we receive the 5000 application and out of 5000, 3000 are male and out of 3000 we have selected 30.

Now you can calculate the selection rate, right. In the same way 2000 female candidates are applied and out of 2000 only 20 are selected. So now you can see this is our selection rate for male and female. So from the diversity point of view you can say like if you have to increase the male more in the organization then you can say this is our current selection rate of the male candidate. So, we need to attract more appropriate male candidate so that we can select the more male candidate. If you have to increase the, similarly if you have to increase the female candidate selection rate, then again you have to do your advertisement, job advertisement or you have to target, you have to select that selection, recruitment method by which more suitable female candidates are applying.

So, through this selection rate, this kind of decision that you can take. Similarly, you can calculate the selection rate department wise also, right. So, in Marketing, in HR, in Finance, in Operations, how many candidates have applied? So, let us assume in each department 1000 candidate have applied and in but hires that final selection is different in every department. So, now here you can calculate the selection rate.

So, 50, 70, 100, 120. So, what we can interpret from this and what is the use of this data? If you are calculating the selection rate here, so various departments are there and number of applications are there. So, if number of applications variation is there, you have put the same effort to attract the candidate, reputation is same, everything is same. So, why there is a variation in term of the applications for the per position in various departments. So, that is the analysis that you can do analyze and for future you can make your strategy.

In the same way selection rate also that is what you can say. So, now I do understand based on the requirement. So, that is why I am saying you can calculate the selection rate. So how many people applied and how many finally are selected. So that is what you can calculate here. So this selection rate will help you to understand your department selection stages, right, how many people are applying, quality of the candidate.

Quantity of the candidate, whether you need to increase quality, quantity, cost, time. So, these are the things that you can make a decision about these all things by calculating this selection rate. If you want to know more then you can just calculate this area by or department wise this selection rate and that will help you to make a decision how many people you need to call for the interview. And how many of will be selected and in which area you are getting the good quality of if selection rate is high then you can say in which

area you are getting the good quality of candidate and in which you are not getting the good quality of candidates.

So, the selection rate will help you to make such kind of decision. In the same way, you can calculate the selection rate position wise, right, for senior manager, right, department wise that we have calculated the senior manager. And so, this also will help us to make a decision for which position you need to attract more job application. If selection rate is low for particular position, then it indicates that you have to attract the more number of applications. Similarly, in the gender that we discussed, similarly we discussed in a department also, similarly we are discussing for the job position, senior manager, general manager, right, executives, right, trainees. So, from trainees, executive, right, and to senior executive, manager, senior manager.

So, various job positions are there in one particular department. So, for how many people have applied and how many we have selected. So, the selection rate will tell us how many application that we need to attract for one a job position that so that this way this is important. How many job applications that we need to collect and we need to attract and what is our selection rate, where is the poor quality, where is the good quality. Because selection rate is high, it indicates that you are getting the good number of candidate for that particular position, right. So, if you need to increase the screening criteria so that more people will not qualify for that particular position.

So, that decision that you can take about the screening criteria for which position you need to make it little bit more difficult screening criteria for which you have to reduce the screening criteria. So, about the screening criteria you can take a decision through this selection rate, that recruitment activity that I already suggested through the selection rate you can make a prediction about your recruitment activity also. So, the selection rate I hope you would have understood the selection rates. So, next that we can understand this candidate fit analysis, right.

So, here during this selection process, during this recruitment and selection. We have to assess this fit candidate whether this candidate is having various types of fit or not. So, one most of important fit that most of important person job fit right, second one is person team fit whichever team that he is going to join, right, and person supervisor fit under whom he is going to work and person organization fit, right. So, what is the percentage of fit found by the panel? If it is an interview, right, so these questions, now question comes how many questions a interviewer should ask, right. So, based on this fit you can decide for which position which type of fit is the most important fit. So, related to that fit more number of questions can be there, more weightage can be given to that particular fit.

So, percentage of fit that you can see let us assume for the person job fit candidate is just given 20 percent. Person team fit is 80 percent, supervisor fit person supervisor fit let us assume that 30 percent and person organization fit let us say 40 percent right. So, this based on this fit percentage you can decide the selection criteria right. You can say for each category all candidates should have at least 50 percent fit recommend 50 percent recommended fit by the panel right for each category this could be one of your selection criteria. So, here as we were discussing each manager has to decide what should be the selection criteria, whether it should be single selection criteria, whether it should be multiple single, multiple selection criteria should be there.

So, as we already discussed according to the scales, number of tests are there. So, for each test you have to finalize the one cut off. So, in the same way you can decide the cut off for after this fit analysis also. So, panel have decided the percentage of fit this candidate is there is having for particular fit like person job fit, person team fit. So, that panel has decided 20 percent, 80 percent, 30 percent, 40 percent. So, should we select this candidate or not? For this we can have a one fixed criteria whether it should be minimum 50 percent should have or that we can decide as per the weightage like what is most important for particular job.

So, according to the weightage also we can have a variation right and one more thing that can help us to decide this percentage that is the ratio. So, ratio from one round to another round to third round, how many people are moving one from one round to another round, that ratio also can give us the idea what should be the percentage or what should be the cut off because in a selection you have to decide the cut off. But there has to be some base on what basis you will decide, so that ratio that you can use it. If people are, more and more people are qualifying, then you can increase that cut off for this selection. So, the 50 as I said, for example, then you can have a 60, 70, 80 and then you can reduce the number of, you can increase the number of people who are rejected.

Because you do not need, you need only 4 people, then you 1000 people have applied, then 996 people you have to reject. Because your organization is needed only 4 people, but you have to ensure that 4 people to whom you are going to select this should be base, this should be best among all these 1000, right. So, for that, in the case of interview, you need to assess this various types of the, a fit but few fit already that you try to assess during the recruitment process also. But final adjustment about the fit will be made during the interview or when candidate is appearing in the selection process.

So, that process will judge various types of the fit. So, if it is an interview, so in an interview these types of fit can be judged and it can be given into the percentage form or in marks, right, out of 10 for example, 10 marks are the highest for the each category. So,

out of 10 how many marks that each interviewer is giving. So, those marks also you can use a base to decide how many candidates should be selected. So, how you can arrive which percentage, which ratio that you need to calculate to arrive this number that is what you can see here.

And this impact of fit also it is we should calculate. So how you can see this impact of fit? If impact of fit is very high, let us assume somebody is having 95 percent of the fit in all category, then we should see the performance rating for the next year, whether that person is retained in the organization, what is his attendance and what is his satisfaction. If performance rating is poor in person leave left the organization after one year and attendance also very poor and person is not satisfied. It indicates that there are some flaws in our selection process because the selection process says this candidate is 90 percent fit for the organization. But once we check this impact of this candidate fit on various dimensions of the candidate like performance rating, if this person is having 99 percent job fit then his performance rating should be very high.

If it is not very high it means some problem is there. So, that that is what we need to assess and that person left the organization all type of fit is there 95 percent, but still that person left the organization right it is very rare. In the case of attendance also that is what we can see. So, if that person is not coming then also there is some serious problem is there and satisfaction is also very rare.

So, it indicates. So, such kind of analysis that is what we can do. So, I hope you would have understood some of the matrix related to the selection. So, thank you for this session.