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 Week: 6 Lecture 31: Training analytics - 1

Good morning participants. So, in today's session we will learn about training analytics, right. So, before this session, you must have learned about the training process and what are the challenges a manager faces at a workplace in terms of designing the training and evaluating the training outcomes. So, these are the things that you would have already understood till now. So, in first two sessions that you might have seen the process of training was explained, after that challenges a manager that face at a workplace related as a training and development manager, what are the challenges that face, those challenges were discussed. In this session, we will discuss how various types of training metrics can help a training and development manager to make a decision about the various challenges that he or she face at the workplace.

So, various metrics that is what we will learn. So, let us start with the questions that every manager at a workplace has to answer. So, how many hours each employee should receive the training? That is the question that each manager might be thinking how to answer this question. So, this is a day to day question.

So, for each employee how you will decide one employee for how many hours a training should be received in one particular year right this could be one of the questions. How training should be designed? What kind of training should be given? When it should be given? Who should be the participant? How participant should be selected? Who should give the training? Internal expert or external expert? Whether this training should be online or offline and, how this training should be given, how this learning environment should be created, how the readiness of the employee should be assessed inside the organization. So, such kind of questions a manager need to answer while working at a workplace. So, such kinds of questions as how a manager can answer effectively at a workplace through the training metrics is what we will understand. So, before going to the training metrics, we should first understand the difference between training and development.

So, that is what we should understand. So, these are the criteria that you can see and focus, use of work experience, goal and participation. So, on these four criteria focus, use of work experience and goal and participation, we can differentiate training from the development,

right. So, training has a current focus. It means immediate requirement inside the organization.

For example, in IT organization one project is going on and one specific coding that has to be learned. So, these IT employees can receive the training on that particular coding and after receiving that training immediately they can work on that particular project. But in the case of development, organization thinks about the future. So, in future, what are the skills is required? In a simple way, I can say that, in development, we talk about keeping the future in mind, what skills an employee is required in the future and how we can give those skills to the employee. In the case of training, our focus is short-term.

Like in short term, what are the skills which is required and how we can give it. Next important parameter is use of work experience. So, in the case of development work experience is required to great extent and in the case of training that work experience is not required. Goal of the training, so preparation for the current job that is what just now we discussed the current and future and preparation for the future. Participation in most of the training program you will see it is mandatory and it is a training program.

Immediately after the training program participants have to work on a particular project or they have to execute particular task. So, that is why it is required. In the case of development, it could be voluntary; people may participate or may not participate because it is future-oriented. So, this is the difference that we should understand before understanding the various training and development metrics at the workplace. So, related to this, my manager might have various questions I have related to training and development and how these questions should be answered at the workplace.

So, that is what we will discuss. So, training metrics. So, first thing that you can do is calculate expenditure per employee. So, for example, in your organization 10,000 employees are there right and how much amount is being spent. So, let us assume 5 rupees are invested on a training program in one particular year.

So, now you can calculate what is the per-employee expenditure, and if it is increasing right, then, you can say yes, it is increasing, and you are focusing more on employee development and this amount that you can use in order to do the employer branding, like how much that we care. So, expenditure per employee that is what you can say. Second thing that you can calculate learning received per employee. So, how many hours, how many hours in a year one employee received the trainings. How many hours one employee received the training was organized.

So, how many hours one employee received the training? What is the learning time? So,

if you divide 500 hours by the number of employees, then you will be able to understand how many hours one employee receives in the training program, because all employees may not participate in all training programs. So, whichever training program he has participated, so you can add, you can add all those hours and then you can calculate learning received per employee for how many hours as a percentage of payrolls right. So, here you can see payrolls that we calculate with the number of hours one employee worked in an organization, and accordingly, his compensation is calculated. So, here we can see from this that we can identify how many hours one employee is working and how much time is spent on training, divided by that then you can calculate for 1 hour how much amount organization is spending So, here is the next amount that you can see the learning received per employee per hour, how many hours that one person is learning in an entire year. In the same way, in order to make him learn for one hour, how much amount is being spent inside the organization and total training expenditure that you can count as a percentage of revenue.

So, whatever is the revenue of your organization and so you can see total training cost divided by total revenue multiply by 100. So, that is how you can calculate the expenditure as a percentage of revenue right. Cost per learning per hour received. So, for how many hours that our training are given. So, total cost divided by number of hours, right.

So, number of hours once you will divide the total cost. So, total cost per hour will come, right. So, if you have to give a 1 hour training to your employee then what will be the cost. So, if you know this amount then you can calculate the budget of training. So, let us assume your organization wants to give a training for 1000 hours training that your organization wants to give a training for give.

So, simply if you know this data you can multiply that particular 1 hour data with 1000 hours. So, let us assume 1 hour cost is 5 rupees and then 1000 hours you have to give. So, how much amount that you have to spend 5000 rupees that you have to spend for one training. So, immediately you can calculate. In order to go in depth what you can do this amount you can divide offline training and online training.

So, in online training, how much per hour do you need to spend, and offline, how much do you need to spend? In the same way, when the instructor is in-house, how much is the cost? If the instructor is an outsider, then what is the cost? Training is taking place inhouse, so what is the cost? If training is taking place outside then what is the cost? So, if you are able to calculate such kind of cost, then you can do the training budgeting, how small amount that you need to spend and various combinations also for the training. So, then you can take a decision on how much training should be given, how many hours the employee should be trained within the organisation, how many hours the employee should

be trained outside the organisation. How many times you should call the external person and, how many times you should call the internal person, how many hours you should conduct the offline training, and how many hours you should conduct the online training? So, according to the budget and these various combinations which are available to you, you can take a decision. But for taking these all decisions, you need to calculate cost per learning per hour right. The next important metric is that you can calculate the percentage of expenditure for external services.

So, if you are taking the external services for training then what is the percentage of cost? So, how you can calculate? So, how you can calculate this one? This you can calculate for total cost divided by cost for external services, external services multiply by 100. So, that is how you can call, that is what you can calculate the cost for external services. So, being a manager, what could be your aim here? Your aim could be to reduce the cost of external services, right. You would like to build in-house training, capacity training capacity for your organization so that the cost of external services can be reduced. Being a manager, this could be your goal.

So, if you know this particular thing, then only you will be able to do better training, planning at your workplace. So, in addition to this metrics, we will learn few more metrics. So, next metrics that you can learn about the learning hour received per training and development staff member. So, learning hour received per training development and staff member. So, that is what you can see like for us.

For example, in your organization, 10 staff members are working, and then you can see the total number of hours for how many hours these employees are trained in your organization. Let us assume 5000 hours and total employees are 10 in the learning and development department. So, how many hours that you can say is the learning received per employee. So, what is the ratio? So, that is how you can calculate the effectiveness of your learning and development staff for how many hours they are able to give a training to your employees inside the organization. So, that is how you can calculate the effectiveness of this training and development staff because this will give an indication of how many able hours they are train the existing staff. to

So, it shows that their efficiency and effectiveness within the organization. So, this metrics will tell about the effectiveness and these all metrics that you can use to to develop the balance score card also. So, some of the metrics may be useful. So as per your input, you can use these metrics to develop the balance scorecard also. And here you can see the average percentage of training activity outsourced.

So, for that cost that we had discussed, how much external cost is there? Here we are

talking about activity outsourced. So let us assume you are conducting 100 trainings in a year. So out of 100, how many trainings are outsourced. So, here let us say 60 are outsourced, so multiply by 100, so 60 percent trainings are outsourced. So, now being a manager, but what could be your goal? Your goal should to reduce the outsourced activity, so how you can design, so that the moment you will reduce the outsourced activity, so by reducing outsourced activity you can reduce the expenditure also on outsourced activity.

So, that is how you can make the and such kinds of metrics that you can use to set the goal. So, the moment these KRAs are identified, it could be one of your KPIs. You have to reduce the outsource activity by this percentage by the next year. So, that is how you can use these metrics as the KPI also for the learning and development department. But you need to calculate it in order to understand and these metrics may help you to do the goal setting for the learning and development department also, effective goal setting for the learning and development department also.

Next metrics that we can calculate here, there is a percentage of learning hour provided via different delivery methods. So, here as we, I was discussing earlier, the cost of delivery method, if you are giving the training through the online mode, offline mode, externally trained instructor, internal instructor, then what will be the cost of the training per person or per employee. But here what you need to do you need to calculate the learning hours provided through the various delivery methods. So, let us assume like online that you are online sessions that you are how many hours training is provided, offline how many hours it is provided. Then through recorded e-material how many hours it is provided, then you can say informal informal knowledge sharing session how many for how many hours it is done.

So, that is how you can calculate the average percentage of learning hours for each session, right? So, how you can calculate the online? Divided by total multiplied by 100, offline divided by total multiplied by 100. So, that is how you can calculate the average percentage of learning provided by various delivery methods. So, the moment you have calculated this then you have to add the all percentage divided by the number of delivery method. And then you can calculate the average percentage for all delivery methods as well as per average a delivery method also you can calculate it. Next, you can calculate the supervisor-to-staff

So, the next metric that you can calculate is the supervisor-to-staff ratio. So, basically, you need to understand the span of control because this data will help you to give an idea of how many people can be trained at a time inside the organization. The span of control is very small, then you cannot call many people simultaneously for training because they have to do the departmental activities also or otherwise what you will have to do is the span

of control is very low then very lower than what do you have to close the office, and then you have to conduct the training for all employees right. So, the decision that you have to take is what most of the organisation does is select some of the employees from each department and then they send them for the training; that is what the employee does, that is what most of the organization does. So, in order to do that, you need to understand the span of control.

So, supervisor to staff ratio, if in any department just two people are working under one supervisor, then it may be difficult for that supervisor to release one person for the training. It could be difficult decision for him because he has to manage the day to day work also. So, if it is a one day training, he may allow that person but in the case of 1 week, 2 week training he may not allow. So, that is why it is important to understand the supervisor to staff ratio and HR to staff ratio that you need to understand in order to calculate how many people are sufficient to give a training.

So, that ratio also need to understand. Next metrics that you can understand the cost of HR. Per employee, cost of HR like so whatever amount is there, total amount is there for this learning and development activities and that you can divide by the total number of the employees. Now you can go in-depth; you can calculate this by the number of departments, number of departments that you can calculate, and you can calculate job category-wise. So, whichever category is required the more attention you can plan the more training and development programs for them. And one more thing that you can decide here in addition to this metrics learning and development hour ratio.

So, in a year, how many hours you want to give a training and for how many hours you want to develop your employee. So, the number of hours for training and the number of hours for development. So, for how many hours do you want to, let us assume you want to develop; you want to give training for 500 hours and development you want to do for 250. So, 2 is to 1 ratio is there. So, most of the time that you will see training is given to more number of hours and less number of hours employees for the less number of hours the employees are developed.

So, now this ratio will help you to understand which type of training that you should give when some different type of when which type of training should be given and which type of development activity should be given. So, there is a good HR manager who can make a combination when somebody is learning online; then, coaching, mentoring, and developmental activity may be given. So, in that case, the training becomes more effective. So, which type of this learning activity should be aligned with the developmental activity that decision can be taken by understanding this ratio for how many hours and this is the one thing that can be done. Second important thing that you need to understand the focus

time	of	an	employee	inside	the	organization.
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This is a very very important statistics. Nowadays what is happening morning to evening employees are attending the meetings, they are attending the training program, they are attending the developmental activities. So they have time to focus on the day-to-day activities that they are supposed to do within the organization. So, if you are giving too much training, if you are giving too much developmental opportunity, that may impact the focus time of the employee. Because of that, the contribution of that employee may not be reflected in the workplace. So, in order to manage that focus time, you need to design a learning and development, you need to give a learning and development activity only at optimum

If you will give more than that, then it is going to impact the focus time. So, now question comes, how you can decide how much learning and developmental opportunity should be given? So, for that you need to understand the goal setting for the each employee. And whatever number of working days there are, then in order to achieve those goals, what effective engagement per employee is required to achieve that? The moment you can calculate that time and whatever time is remaining, whatever number of working days are remaining in those number of days, you can plan the learning and developmental activities. So, if you are managing or designing learning and developmental activities in such a way, then you will not impact the focus time of the employee, then it is going to be a difficult because people may be dissatisfied at a workplace because their contribution will not be reflected.

And that is what we already discussed the learning and development cost per employee. So, whatever is the department budget is there divided by total number of employee. One more thing that you can calculate that absenteeism in the training. So, if absenteeism in a training is there, you need to identify the reason why, what is the reason why trainings, why employees are not joining the training program. So, reason, one of the reason could be the focus time because it is impacting the focus time of the employee, employees are not able to focus on their actual job for which they are being hired.

The second reason could be that the training is not interesting, the training is not able to give any, and the employees are not able to be trained properly. So, that is why people are not motivated to learn. So, right, so that is what you need to understand the reason. So, but this absenteeism, if very high, it is a clear indication some problem is there with the training. If it is not high, then it indicates that yes, trainings are up to the mark, right.

So, absenteeism, so that is what you need to understand. Second thing that you need to understand here, another thing that e-learning. So, how now you can see trained is there for

the e-learning, government also has started so many recorded content which they are using for training the employees. So, in the same way private organization also can develop a certain recorded session and then they can ask employee to attend all those sessions online or recordings can be given and after that they can do their job effectively. So, maybe that is what in upcoming session we will discuss more in detail about this, but as of now you can understand this how much, how many hours this e-training that you are giving, right. So, if this percentage is increasing, then you can reduce the cost of training also or you can increase the number of hours for the employee also. per

You can give a diverse type of a training to your employee because that amount which is saved that you can spend on some other training programs also. In order to attract the contract employees, right, if you can, these are all metrics you can calculate in terms of full-time employees versus contract employees, right, then you can attract this contract employee more also, or you can tell that is what we give you in return. So, this proposition that you can use for your employer branding also. So, that is how you can calculate these some of the important metrics related to the training. So, thank you.