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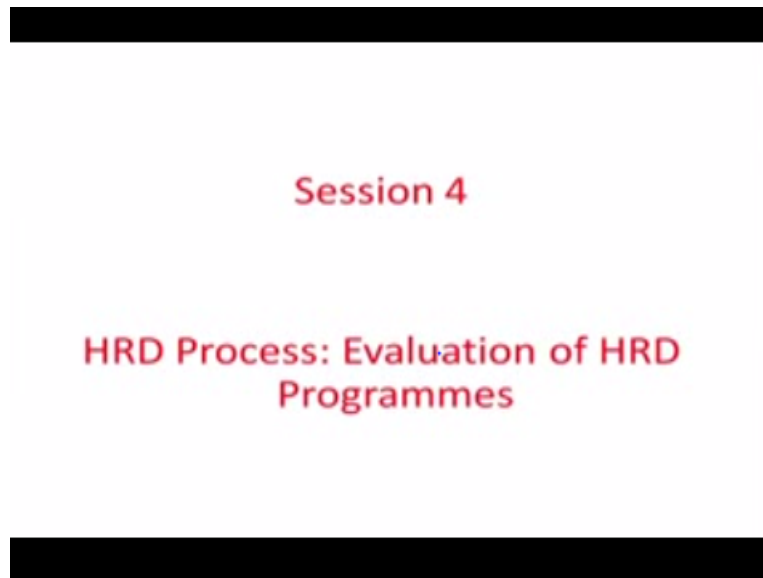
Course
On
Human Resource Development
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Lecture 19: HRD Process- 11 (Contd.)

Welcome to the fourth session of fourth week.

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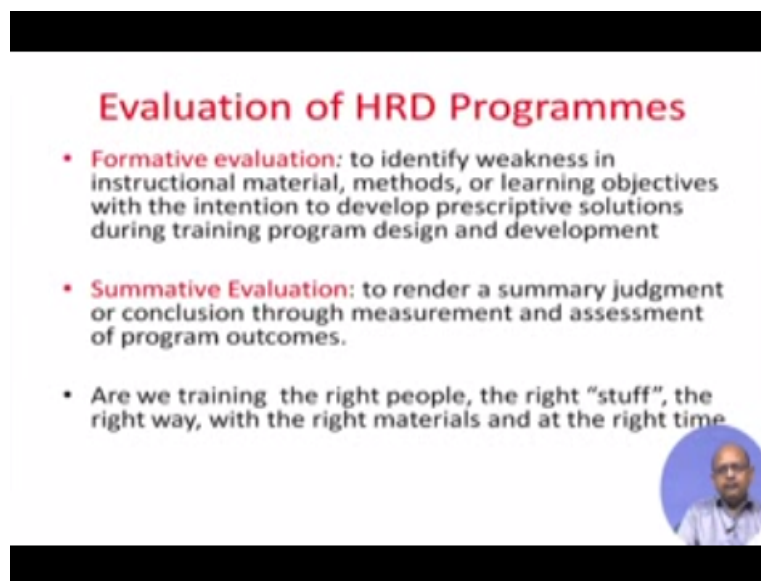


And now we have discussed about the methods of learning that the various methods on the job training lecture of class room presentations experiential learning, or relearning. So there are various methods that could be applied in a training context to deliver, so once you have been able to select the methods the next task that you are going to do it, you are going to implement that. It means that you are going to deliver the training, using an appropriate method. So what is the training is delivered the next stage is or the fourth stage in the process is that you are going to evaluate the training. So when it comes to evaluating a training program you have to know that how well the training program has performed and what is the process of evaluation. So in this session, we are going to discuss about how to evaluate a

training program that has been conducted now you have been done effectively at first three stages in terms of assessment design, development and delivery.


Then you expect better reason from the training it means that people are able to learn effectively and then they will be able to apply it on the job to perform better and it that happens it means your training program is effective. So what you are going to discuss now here is that how we go about evaluating the training program or any kind of HRD program. So when it comes to evaluation of the HRD program.

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Evaluation of HRD Programmes

- **Formative evaluation:** to identify weakness in instructional material, methods, or learning objectives with the intention to develop prescriptive solutions during training program design and development
- **Summative Evaluation:** to render a summary judgment or conclusion through measurement and assessment of program outcomes.
- Are we training the right people, the right "stuff", the right way, with the right materials and at the right time



You have to say that what kind of evaluation you are going to have. They have basically two kind of evaluation that takes place one is known as formative evaluation and the other one is known as summative evaluation. So what formative evaluation is? It means that since you have gone through the different processes starting with identifying the needs designing and develops a training program, delivery. So you have to see that whether each of these steps have been effective one their own or not.

That is what we call formative evaluation, so you are going to see whether the instructional methods materials, objectives which have been there to develop certain solutions for the employs so that the needs are satisfied have been met or not.

It means whether you have been able to meet the objective for the training in terms of whether it has fulfilled the needs on expectation of the people. Whether the quality of the instructional material, method of the delivery is proper or not whether you have been able to properly designed and develop a training program or not. So if that happens it means that

you have atleast make sure that your training program is good. But whether the transfer takes place is not or not that is more important.

So that is what you know as summative evaluation. So in summative evaluation you want to see the impact of the training on the performance at the formative evaluation basically what you are going to test or check is whether the training program was good or not, in terms of its design, delivery and other things. In summative evaluation you want to see the impact on the performance, so if any kind of HRD activities that takes less, if it is not going to translate into the performance then there is not point doing it. So the idea is that whether you are training in the right people.

That you come to know through need identification right stuff means what is your design and development program in the right way and the right material that is your methodology and development part and at the right time. So this is related to what you call formative evolution and summative evaluation you basically are interested to see the impact of the HRD program on the performance of that people and that happens only.

When whatever people have learnt in a training program or any kind of HRD intervention, whether they are able to transfer it on the job or not successfully. So the evaluation is done at different levels at formative level and also at summative level. Now after understand this that is can be done at the formative and summative level.

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Need for HRD Evaluation

- Is HRD a revenue contributor or a revenue user?
- Is HRD credible to line and upper-level managers?
- Are benefits of HRD readily evident to all?
- Shows the value of HRD
- Provides metrics for HRD efficiency
- Demonstrates value-added approach for HRD
- Demonstrates accountability for HRD activities
- Everyone else has it... why not HRD?



We have to see that why we need to evaluate and if you look at many organizations though they do conduct training, but they do not go for evaluation of training programs. The thing that it is the responsibility to train the people, now it is the responsibility of that people to ensure that they are going to transfer their learning on the job. So if you have conducted these three stages earlier in a proper way, it is very important that you also evaluate to see the impact on in terms of formative evaluation or also but you call summative evaluation.

The idea for HRD evaluation is that since it is we are going to invest lot of money and resources. It is not only a money as resources, but you are going to spend time and other things, while going to conduct a training program you need to see that in what way it is going to translate into better performance resulting in better revenue for the organization. So any HRD activity should not be considered as a cost centre or revenue user.

But it must be treated as a profit centre or what you call revenue contributory. If HRD activities are not able to improve the performance of the people with the resulting better improvement in the performance of the organization it become a cost centre. So the idea is that you have to move from cost centre to a profit centre and if you are not able to move then what happens that some commitment then support from the top management may not be there for you for this kind of program next time and as a HRD professional you also lose your credibility and you will not be able to conveyance.

The top management and able to justify the cost of conducting any training program in the future. So the idea is that you make sure that it has impact on the bottom line on the performance of the organization and that is how you become a profit centre not a cost centre. That is what I have been talking about that is you need to be credible to line managers and top management to ensure for the commitment. So that they are convince the use HRD activities. And then you need to make devisable to everybody.

This is how the HRD department has train people of met incompetent to take of different activities to take up with different challenges of the organization and if it is visible and line managers are senior manager as a concern probably they would understand the benefit of the HRD in real terms. And that is how you are going to show the value of human resource development activity to the organization.

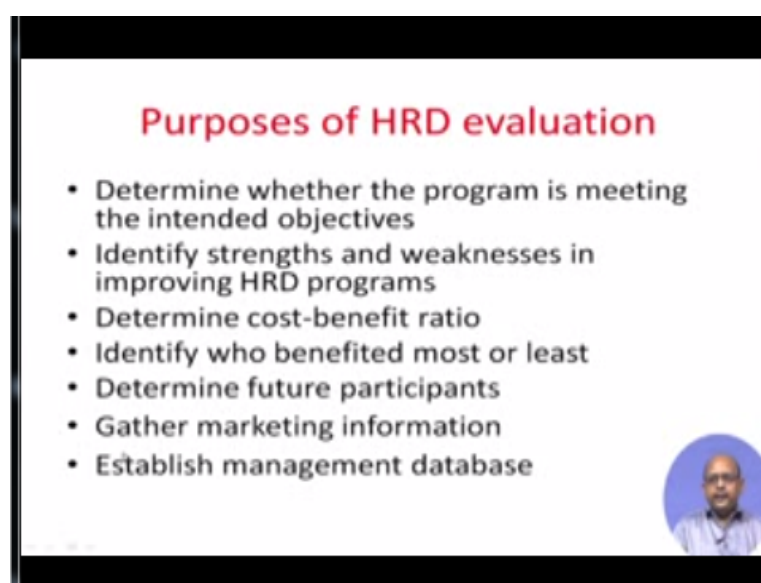
And that is why you need to examine of major impact of HRD activity in monitory terms and some time when it non monitory terms also. And in order to evaluate you can use certain

matrix in terms of efficiency HRD if it is with the result of the HRD training what kind of changes has taken place in the attitude behaviour performance and these kind of things. So use a number of matrix for example, with their attendance see has gone down whether the quality improvement has been there. Whether the cost reduction has been there or not.

So these are the different major who you can directly related with HRD activities or training activities. So the number of matrix that could be used to major the efficiency of HRD activities. And if you are using these major showing to the top management you would be able to convince them about its credibility and it would be evident to them that is it is something that has been done by the HRD and which adds value to your profession. So the idea is that you have to evaluated you are able to show them that is this is how HRD has impacted the bottom line of performance of the organization.


And then in that way you also become accountable for what you do because you are spending lot of money on these activities and then you can compare yourself with other departments like marketing, production, finance. Because these are the value added activities, this considered in the organization, because there are doing something which helps in the early generation, so if you want to be at for with these departments then you also need to show the impact of the HRD activity and performance. That how HRD activities is going to help the organization to improve its behaviour and performance. And that is why you need to go for evaluation.

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Purposes of HRD evaluation

- Determine whether the program is meeting the intended objectives
- Identify strengths and weaknesses in improving HRD programs
- Determine cost-benefit ratio
- Identify who benefited most or least
- Determine future participants
- Gather marketing information
- Establish management database



So the basic purpose is as I told you in terms of formative one whether the program is meeting in the intended objective or not. If it is not it means the program is not good. Second with the help of this, you can also identify the strength and weakness of the program. You look at each of these stages and see what we are trying at which stage. So that when you are going to offer this kind of program next time, you are going to offer it in a better way and that is the objective of the evaluation.

So you can identify this strength and weaknesses of the HRD program. You are going to analyse all these stages of the training program and see where you went wrong whether you are not able to identify the objectives whether you are not able to identify the right kind of adopted people, whether you are delivery method was not appropriate. So you can examine all these things and look at your strength and weakness to see that how you are going to improve it next time, if you are going to offer the same way in the program. You can also examine it in terms of cost benefit.

What is the cost of that training program and what is the benefit and that is where you are going to quantitatively so to the management, so look at the cost that we have incurred on conducting a training program on any HRD activity and this is the benefit that you are going to arrive at it. And then who is going to benefit from it whether the individuals or the organization. Then moving to the next stage that based on this you can also identify who is going to participate in future HRD activities, since HRD activities at cyclical process where you are going to continuously update and the knowledge and the skill base of the people you need to identify who is going to be next in the cycle who is to be trained depending upon.

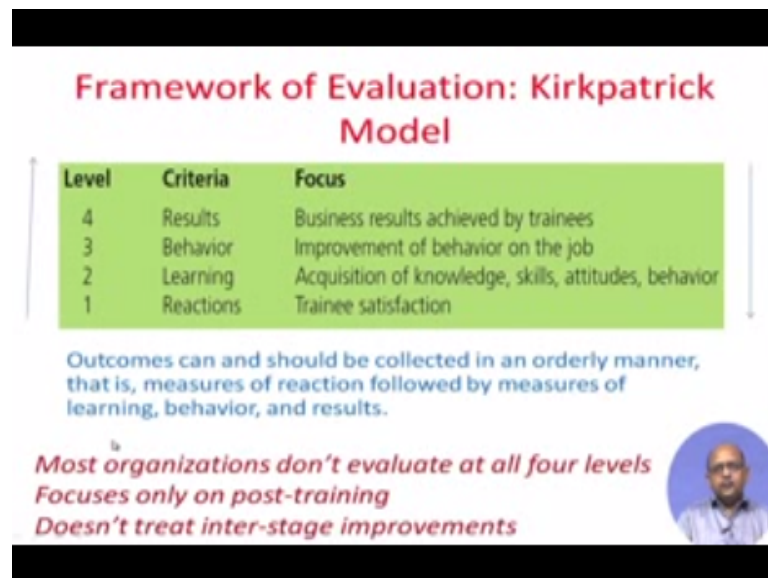
The requirement of the people and this requirement of the people in terms of the knowledge and skill base changes because of the environment in which you are going to operate. So depending upon the requirement of the environment people need to update the knowledge and skill base and that is where on a regular basis you are going to identify in the cyclical process who is going to be your future participants that need to be trained for future programs.

And then you also get data from market from the other organizations and then that also helps you to establish a data base about your training the number of days that is train how much money you have spent, how many people have been trained. So all kind of information could be put into the data base to showcase to the people. These people have been trained, these are

the area that we have trained, and these are the benefit that we have arrived. That is how much we have spent. These are the benefits are these are the profits that we have met.

So this kind of information really helps to see that HRD come to the forefront and people are the top management is convinced about its credibility and you can act as business partners to the top management into starting about various other activities.

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Now we will discuss about the model that is used evaluation and the most popular model that is being used in evaluation is known as Kirkpatrick model. And here he says that this evaluation takes place at four different levels.

The first level is reactions the second level is learning, the third level is behaviour and the fourth level is results. The first two levels it is more qualitative evaluation is more qualitative. But at the third and fourth level it is going to be more and more quantitative. If you look at these two arrows one goes up and one goes down. What does it mean? If you look at the arrow at the left side, it goes up what does it mean. It means you are increasing the level of difficulty in the measurement process and you are moving from a qualitative to more quantitative approach to evaluation.

Similarly you also tell that the first two levels it is a short term measure, you are going to do it immediately after the training program is over. But the third and fourth takes place only after sometime, because once a person learn certain things he goes back to the up, he applies that and then only the results come out, whether it is improving the behaviour of the performance. So the measurement level three and four takes place at later level. So if you look at the arrow on the right side you can see that reaction is the first that you are going to measure, second you are going to measure the learning, third the behaviour and the fourth is performance.

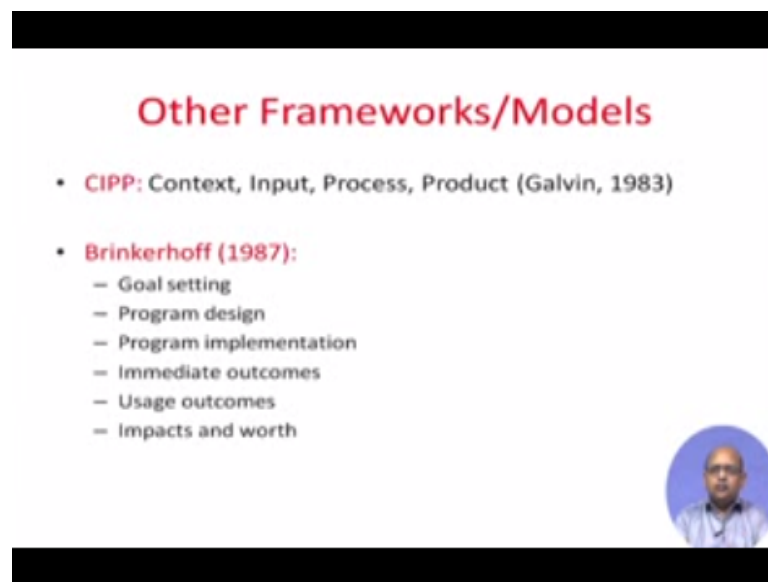
So this takes about the immediate of the measure which takes place and learning and reaction takes place immediately behaviour and performance measure takes place after a gap of six month or one year. So you give enough time to apply the knowledge on the job and the same time you also facilitate the process by providing them support resources. So that they are able to apply their knowledge on the job. For example say one person has learnt something in a given program, but it does not get any opportunity on the job to use that particular knowledge and the job.

He is continually do to the same thing. Then the entire things goes waste, when at the program is very good, the program got good feed base, he has able to learn certain knowledge, but the organization does not provide any opportunity are allow these things to apply on the job. Then what will happen. It means that is not going his behaviour and performance. And will continue to do the same thing again, time and again. So it is very important stage at the third and fourth stage you are going to do it at let us states not immediately and then you also facilitate this process by creating an environment resource and support.

That is very important. So outcomes should be collected in a orderly manner that is measured of reaction forward by measure so learning then behaviour and that is how it happen. Now you will find and some trains which is very disturbing in a sense, that most organization do not evaluate at all four levels. You will find that sometimes immediately of the training program is over they would take the feedback and that is enough. But after that you don't do anything. Some organizations move to the second level you go for assessment, you go for attest that whether you have leant something or not, but you are not interested to see whether they have applied these kind of knowledge and skill on the job or not.

So the idea is that you have to design a method of evaluation where you are going to see his performance before the training , pre training and then also at the post training after sometime and then you see whether there is a improvement in the performance or not. So 3 and 4 basically focus on post training after sometime and it won't expect that first is good than second is going to be good. May be the feedback is good you have earned something but it does not mean that it is going to be translated into performance and behaviour. So it is very, very important to ensure that a third and fourth stage you allow them to use these kinds of things learning and you also facilitate it through environment resource and support only then you can expect some kind of progress or improvement at level 3 and level 4. So this Kirkpatrick model is quite often used for evaluation.

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The slide is titled "Other Frameworks/Models" in red text. It contains two bullet points. The first is "CIPP: Context, Input, Process, Product (Galvin, 1983)". The second is "Brinkerhoff (1987):" followed by a list of five sub-points: "Goal setting", "Program design", "Program implementation", "Immediate outcomes", and "Usage outcomes". A small circular portrait of a man is in the bottom right corner of the slide.

- **CIPP: Context, Input, Process, Product (Galvin, 1983)**
- **Brinkerhoff (1987):**
 - Goal setting
 - Program design
 - Program implementation
 - Immediate outcomes
 - Usage outcomes
 - Impacts and worth

The only problem is that not all the extensors are take enough by the management and the organization and they are certain other frameworks or models that is available what training for example, is a CIPP model, which is propose by Galvin in 1983 and he is suggested four different things that is to be looked into that is context, the input, the process and the product. The context is why this training is being given, input is what it is being delivered in terms of content, process is how it has been delivered and the product is the outcome.

What is the outcome of this training program? You will find that it is slightly different from the Kirkpatrick, because Kirkpatrick models start evaluation only after training has been important at given. Then only you go to get feedback from the employs about the training. Here you also evaluate the context, because evaluation of the context helps you to identify the

right kind of you, for training. And then you see who is being trained, what kind of method is being used and then what the outcome is.

So these four things are actually related to the CIPP model then we have another model that from bring half model this more as bring half model and he has six stages in the process. The first stage is known as goal setting, where you are going to set the goals and objectives of a training program then base on that logically you need to connect with design and program, design and development part it means that once you have set the goals you are going to see that it is incongruence with the content.


It means the content is going to meet the goals and objectives of the training program. Third stage what you are going to do is they are going evaluate the outcome whether the training program is effective or not. In terms of immediate outcome that could be in terms of reaction and learning. So you have to get their feedback you will also go for assessment of the knowledge and skill base, so you conducted a test to see whether they have learnt something or not. Then use these outcomes, use this outcome is that whether they are able to translate that on the job and improve the behaviour and performance or not.

And finally you are going to look at the worth, impacts on worth. Impact on worth in terms of cost benefit, suppose you have spent lot of money but the benefits are not inconsonance with the cost then it is not worth going for these kind of program, because the benefit is not as per expectations. So you need to look at worth also, but this again is considered as because he has overlooked certain formative evolution process which was there in the CIPP model. Now if you look at these two frame works.

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Other Frameworks/Models – 2

- Kraiger, Ford, & Salas (1993):
 - Cognitive outcomes
 - Skill-based outcomes
 - Affective outcomes
- Holton (1996): Five Categories:
 - Secondary Influences
 - Motivation Elements
 - Environmental Elements
 - Outcomes
 - Ability/Enabling Elements



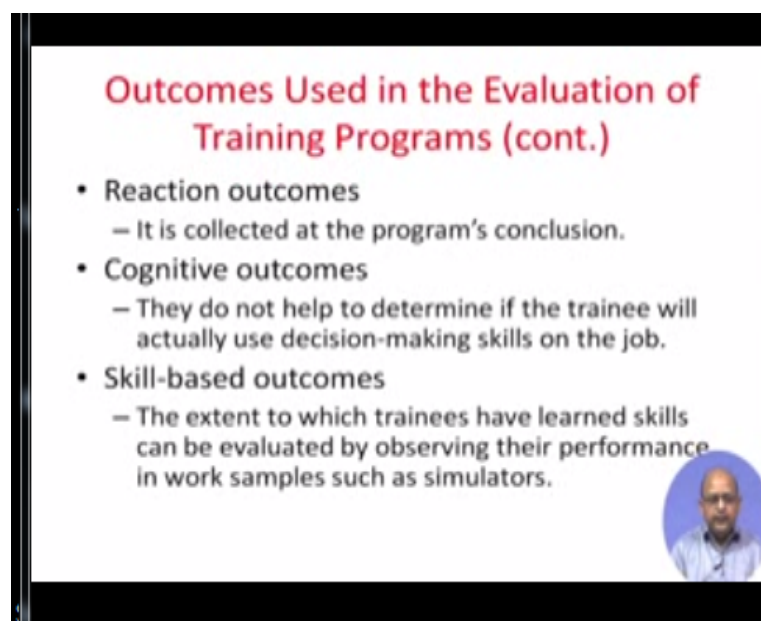
We provide further with other frame work or models like Kraiger, Ford, & Sales. He talked about only an outcome that is cognitive outcomes. Cognitive outcome is his knowledge his skill whether he has learnt how to use that knowledge and effective whether he is going to apply to improve his performance or not. So these models we will find is close the related to what you call the Kirkpatrick model. Because he also talks about reaction feedback learning assessment that is knowledge part then behaviour whether he is able to apply to improve his behaviour and performance and ultimately whether there is a change in the behaviour of performance or not, so if you look at

These models that we have been talking about the most popular one are related to Kirkpatrick model, because it talks about a measurement at different stages. Similarly if you look at Holton model it also talks about different categories of evaluation. What are the secondary influences? Not necessary related we will measure the direct outcomes. But it talks about whether this training has achieving certain other outcomes in terms of relationship, in terms of networking, in terms of forming associations. Because may be indirectly these kind of things are going to help to the particpance in the long run.

Similarly you also have motivational elements whether people are really motivated and this comes from only when you are able to identify the right kind of people for the training than the environment. Environment of training is very important whether training is taking place in a continuously environment whether all the enablers at as a facilitator in terms of support culture, leadership. These are the internal environment and that is going to facilitate effective training.


And then outcomes, what is the outcomes of the training, in terms of improving the behaviour and the performance, and then at the end you also identify the enabling elements. What are the factors which helped these people to improve their behaviour and performance. That is post training, so post training whether there is source environment support is available which enable people to apply their knowledge and skill on the job and translate into performance or not. So now if you look at these models you can see that most of these models more or less talk about evaluation at different levels.

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Outcomes Used in the Evaluation of Training Programs (cont.)

- **Reaction outcomes**
 - It is collected at the program's conclusion.
- **Cognitive outcomes**
 - They do not help to determine if the trainee will actually use decision-making skills on the job.
- **Skill-based outcomes**
 - The extent to which trainees have learned skills can be evaluated by observing their performance in work samples such as simulators.



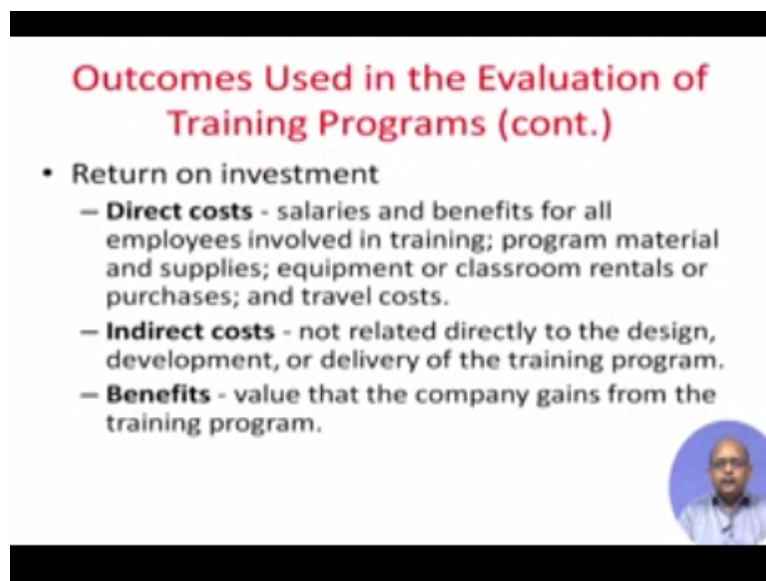
Now apart from these models what are the outcomes that are used in an evaluation? Evaluation of a training program. The 3 type of evaluation that is used reaction outcome, and this reaction actually is collected image at training program concludes you know that when you are going to attend a training program. Then you give your feedback even as a student you give your feedback of the industry participant when you go to attend a training program you give feedback of what training program, about the different aspects of the training relate to delivery, relate to the trainer, relate to this communication, relate to content, relate to the design of the program.

So you give your reaction about various aspects of the training program. Then the second outcome that is related to learning or knowledge is cognitive outcomes. So then you ask whether you have learnt something or not, whether It is going to really help you to take

Certain decision on the job. Whether it is really help to you to perform job in a better way or not. So this is what in cognitive outcomes and finally you have skill based outcomes. Whether you have really learnt certain skills in a training program which is going to help you to perform or improve your perform in a better way.


So you can use different kind of outcomes, and this is based on the analysis of what you can say different kind of training programs the models that we have for evaluation starting with Kirkpatrick, Holton and Krieger of CIPP models so if you look at these models most of these models you will find that ultimately they have fall in these three category of evaluations.

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Outcomes Used in the Evaluation of Training Programs (cont.)

- Return on investment
 - **Direct costs** - salaries and benefits for all employees involved in training; program material and supplies; equipment or classroom rentals or purchases; and travel costs.
 - **Indirect costs** - not related directly to the design, development, or delivery of the training program.
 - **Benefits** - value that the company gains from the training program.



Moving further now a days you go for evaluating in a more quantitative and the most important where to do it is that you are going to evaluate based on how much your invested and what is the benefit. This is what we know as return on investment model. In a return on investment model basically you calculate the various cost of conducting a training program or HRD activity and then you also try to identify what are the likely benefits of the training program in the beginning and then you match these cost and benefit and see whether the benefit exceeds cost or not.

And that basically tells you whether It is worth for doing this program and in that way even you will be able to convince your management about the credibility of the program. So when you are talking about return on investment model, it is based on cost benefit analysis. So you calculate different kind of cost. Some of them a direct cost, some of them a indirect cost, and you also the calculate the benefits.

So if you look at direct cost, what are the direct cost that include in a training program, because cost is the first part that you have to calculate and then you also calculate the benefits, the cost you can calculate while conducting a training program and the benefits could be calculated only when there is change in the behaviour in the performance of the people. So when I am talking about the direct cost it means the salaries and other benefits of the employs that are involved a training program.

The investment that you have made designing and developing a program materials, it could obtains a classrooms, or travels so all cost that is associated and where it was really spent money it is coming under direct cost. Now when we are talking about indirect cost though it may not be directly related to spending certain times. You are discussing some people or Other things which cannot be quantified directly come under indirect cost. And the benefits is the value that the company against from the training program.

So if you calculate the cost and benefit probably you would be a position to find out involuntary terms how much benefit you have made by conducting this program and that is what we are going to convince your credibility to the top management.

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Determining Whether Outcomes are Appropriate

Criteria Relevance	The extent to which training outcomes are related to the learned capabilities emphasized in the training program. Criterion contamination - the extent that training outcomes measure inappropriate capabilities or are affected by extraneous conditions. Criterion deficiency - the failure to measure training outcomes that were emphasized in the training objectives.
Reliability	The degree to which outcomes can be measured consistently over time.
Discrimination	The degree to which trainees' performance on the outcome actually reflects true differences in performance.
Practicality	The ease with which the outcome measures can be collected.

Now you have to see whether outcomes are appropriate or not. So you need to identify certain criteria in terms of reliability discrimination practice ability, so first a criterion is relevance. Relevance in the sense whether training outcomes are the capabilities are really required by the people to perform well or not. So you have to see that the kind of capability this is developed by the people what is really relevant and test into which is effected for other

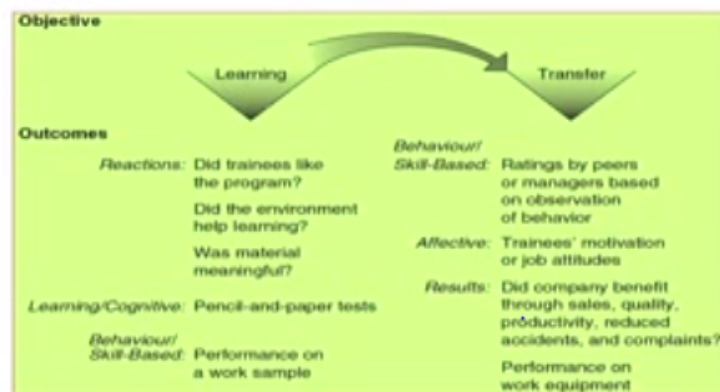
external variables. Then you have deficiency. What is the deficiency, of the fellow to major training outcomes which were emphasized in the training program? So that is come under relevant now reliability. When you are going to measure something you need to ensure that the major is reliable. So reliability basically talks about consistency, whether you relating similar or period of time or not, then you can say that yes, the measure is reliable and when you are going to apply contest of training. So whether the measure that you have taken in terms of looking at the cost and benefit. Whether they are correct or not and if you are using these measures whether you are getting the same results are a period of time or not. And third one is discrimination, whether you will be able to discriminate between those who had performed well after the training and those have not been able to perform well.

So you need to discriminate the extent to which training has been able to make a difference in the knowledge and skill base and also the performance. And finally practicality. Practicality in the sense it is very important because whether the person is able to apply that in order to perform well that is one thing, but whether it is possible to measure it in a proper way or not. For example if you are using a return on investment method which is possible to collect data related to the benefits, because improvement in the performance could be attributed to a number of other factors other than training.

So how do you know that this improvement in the performance is related to the training of the people? And that is where it creates problem of practicality so far as measurement of this is concerned.

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Training Program Objectives and Their Implications for Evaluation



Now if you look at this program any training program objectives are impact on evaluation, so basically you are going to measure it reactions learning behaviour and performance, but the objective is to ensure that the learning is translated into job. So its transfer of training does not happen it means you cannot expect behaviour base or effective learning.


Learning happens that you can measure through reactions in the learning. You can get feedback whether they like the program with the environment was good whether the material was good, the trainer was good or not. And you can ask them take their feedback ,but whether they are really able to transfer it or not that can be measured only through when you are going to use effective measures or behaviour related measures.

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Data Collection for HRD Evaluation

Possible methods:

- Interviews
- Questionnaires
- Direct observation
- Written tests
- Simulation/Performance tests
- Archival performance information



Then you need to collect data for evaluations of data comes from different methods interviews questionnaires you can directly observe the change in the behaviour you can contact us are you can go for performance test.

So there are number of variety methods or you can use even a combination of these methods depending upon your requirement and objective to get data for evaluating performance. For example suppose you are measuring reactions so you can use questionnaire suppose you want to see whether the change in the behaviour you can go for observations,

Whether they have learnt something or not, then you can go for written test, whether you really want to see whether there is a change in the performance or not, when you go simulations of other performance and test. And you can even take help of assessment centres to do this kind of job to see whether there is change in the performance or not. Or you can look at the performance information data that is related to the people and.

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Choosing Data Collection Methods

- **Reliability**
 - Consistency of results, and freedom from collection method bias and error
- **Validity**
 - Does the device measure what we want to measure?
- **Practicality**
 - Does it make sense in terms of the resources used to get the data?



You can go for pre post differences to see that. So you need to make sure that the data is reliable free from collection method bias and error, you also make sure that data is valid, it means that you are measured what you supposed measure elatedly evaluation and finally you make sure that it is practicality in terms of resource that you use to get the data.

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Type of Data Used/Needed

- **Individual performance:** Knowledge and behaviours such as Test scores, Performance quantity, quality, and timeliness, Attendance records, Attitudes
- **Systemwide Performance Data:** Productivity Scrap/rework rates, Customer satisfaction levels, On-time performance levels, Quality rates and improvement rates
- **Economic Data:** Profits, Product liability claims, Avoidance of penalties, Market share, Competitive position, Return on investment (ROI), Financial utility calculations



And finally we are going to see that different data type of data type that we are going to use. We are going to use individual performance related data, we are going to use system wide performance data and also economic data. economic data in terms of profits markets here positions ROI and these kind of things individual performance we see his knowledge and skill base which performance in terms of quality and quantity attendance regards attitude system wide data change in the process quality efficiency increases or not. Whether customer satisfaction level has gone upper or not.

So there could be a number of varieties of measure that could be used to collect data and then you can use a combination of methodologies are data collections to get the data to see whether the pre post difference is there in the training program or not.

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Comparison of Evaluation Designs

Design	Groups	Measures				
		Pretraining	Posttraining	Cost	Time	Strength
Posttest only	Trainees	No	Yes	Low	Low	Low
Pretest/posttest	Trainees	Yes	Yes	Low	Low	Med.
Posttest only with comparison group	Trainees and comparison group	No	Yes	Med.	Med.	Med.
Pretest/posttest with comparison group	Trainees and comparison group	Yes	Yes	Med.	Med.	High
Time series	Trainees	Yes	Yes, several	Med.	Med.	Med.
Time series with comparison group and reversal	Trainees and comparison group	Yes	Yes, several	High	Med.	High
Solomon Four-Group	Trainees A	Yes	Yes	High	High	
	Trainees B	No	Yes			
	Comparison A	Yes	Yes			
	Comparison B	No	Yes			



So these are the different kind of measures like posts only can be for the trainees and then if you look at the cost time is extend it is low if you go for protest and post test definitely.

It is possible you have to look at the performance both pre test and post test then if you are going for post test only with comparison group which means you are going to trainees and comparison group is there, then you will only go for post training the cost time and strength is moderate, similarly if you are going for time series data.

You want to see that gradually how the performance has gone up a down, so you are going to collect data at different point of time. So post training at several point of time you are going to collect data which is moderate, but if you are going for collecting data at different point of time with different groups probably the cost time and strength is going to be different. Thank you very much.