Course on Outcome based Pedagogic Principles for Effective Teaching
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Module 4
Lecture No 18
Lecture 18: Learning Approach

Good Afternoon, today I will tell you the learning approach. Yesterday in my class, I will I explained you the learning styles different types of learners are there from the learning styles point of view and today I will explain learning approach point of view, different types of learners. So what we do mainly we will do the approaches to learning and SOLO taxonomy. Now approaches to learning. What is that?

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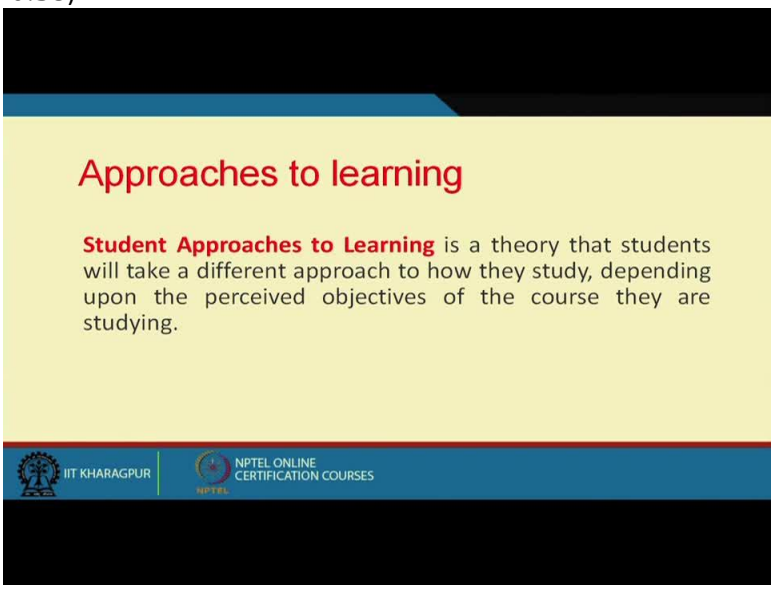

Students' approaches to learning is a theory that students will take or different approach to how they study depending upon the perceived objective of the course they are studying, right? So the approaches the two you know the clinical studies you know two educational psychologist one is Ference Marton and Roger Saljo, both of them they divide there are two distinct group.

One those who took the understanding level of approach, that understanding level of approach. Another who took the reproduction level of approach only the reproduce, right. Understanding level of approach they are known as the Deep Learner and those who are just only reproduce to

pass the exam their motive they are known as the Surface Learner. So two components are there in the learning approaches, one is that the motive and other is the strategy.

Motive is that why I am engaging in learning, that is the motive and the strategy is how in this case will I go about my learning that is the strategy. So keeping this motive and this strategy, the surface learning what is that? This learning tends to be associated with those learners who concentrate on memorizing the wrote learning, ok. So what the author wrote and the lecture said, so and it is a low level of cognitive level activities.

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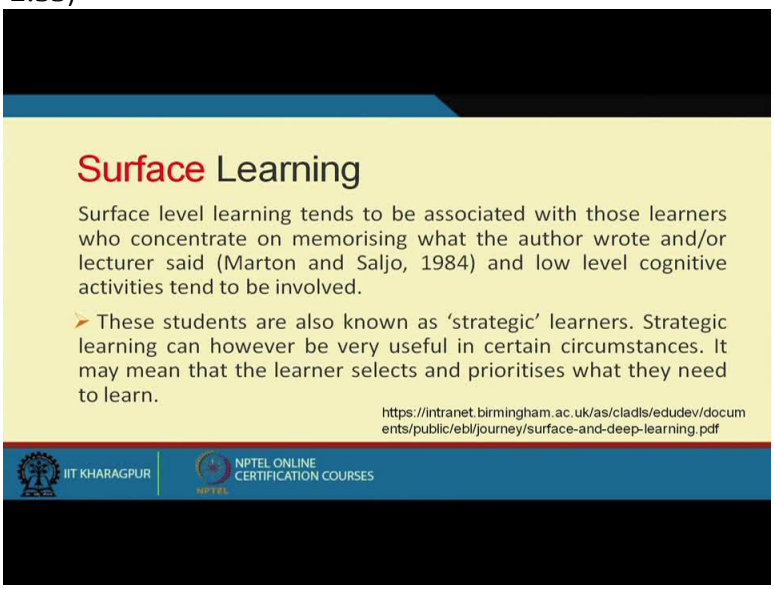

So these students these are the strategic learners. what is the mean of the strategic? Strategic learning can however be useful in certain cases just before the exam to pass one or two points, strategic learners in certain circumstances it is useful. It may mean that the learner selects and prioritize what they needed to learn. So this year they usually in the five years question paper they see and they say this year this is very important.

So we have to pass the exam only this so he prioritized, right. So these are the strategic learner,, right. So what is the definition of the surface learning? Accepting new facts and ideas uncritically and attempting store them as isolated, unconnected items, right?

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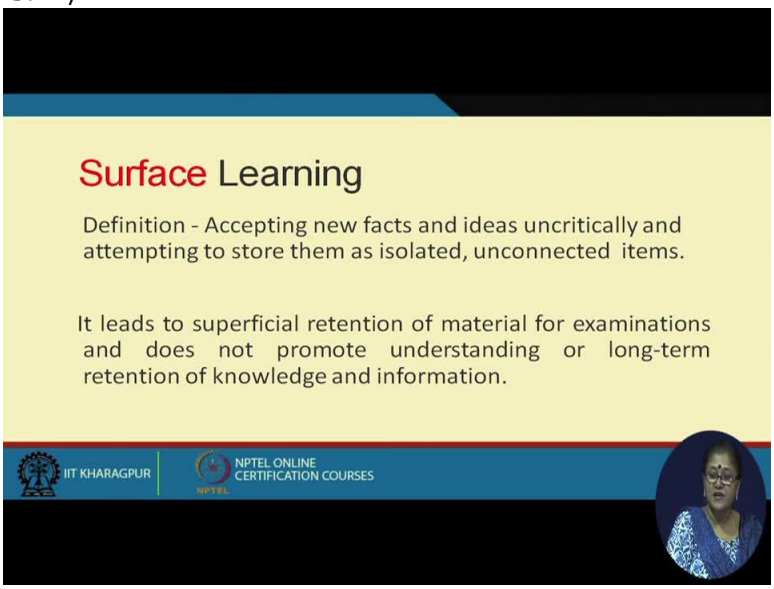

So they just remember it, right? It leads to a superficial retention of material for examinations and does not promote understanding or the long term retention of knowledge and information just to pass the exam. So the characteristics of the surface level of learning one is that try to learn in order to repeat what we have learnt. Memorize information needed for assessment. Third point is make use of wrote learning, had taken a narrow view, they always take a narrow view and concentrate on detail not the total overall view no, only the narrow view and fail to distinguish between principles and examples.

What are the principles are there and the examples are there sometimes they can not relate it, just memorizing to pass the exam. Tend to stick closely to the course requirements. What are the requirements in the course only that thing not extra any other reading materials or any other they do not want, right. So in that case they are motivated by the fear of failure.

So that is their aim to pass, so they are the learning approach is the surface learning those learners are Surface Learners. So what is the motive and strategy of the Surface Learners? Surface Learners instrumental motive is main purpose is to meet requirements minimally and get a degree with pass only aspiration, that is the motive. What is the strategy? Tendency to wrote learn they are essential, so that is the strategy.

So strategy now the this is the you know surface learning. The next type of learning that is the strategic or the achieving approach to learning little difference from the surface to the achieving. Achieving means you know to get the good grade, more or less surface type but to get the good grade that is sometimes some students get very good marks you know we feel that they are very good student but actually they may not. Because only that the grade is very important to them.

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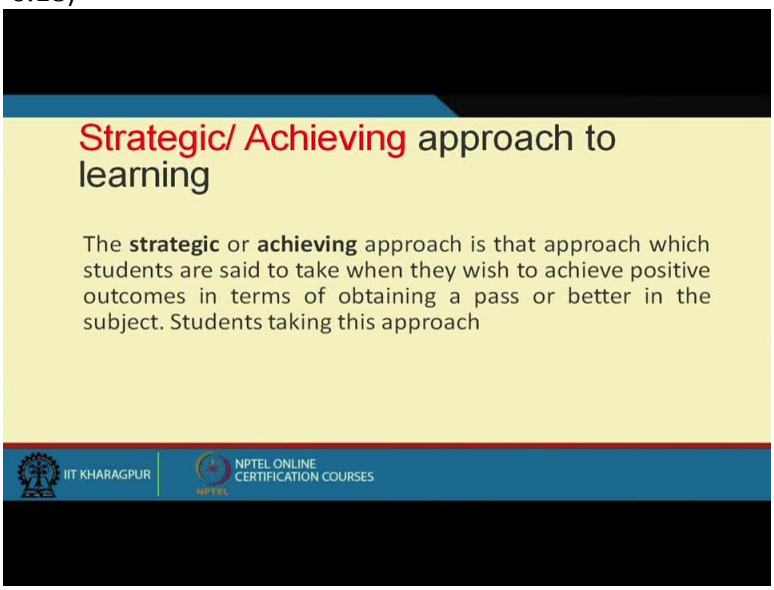

So the strategic or achieving approach is that approach which students are said to take when they wish to achieve positive outcomes in terms of obtaining a pass or better in the subjects. So students they taking this approach, the achieving approach.

So there some characteristic are there. One is intent to obtain high grades, right? Their main is to obtain high grades. Organize their time and distribute their effort to greatest effort, they time they just calculate it and you know. Ensure that the conditions and the materials for studying are for appropriate or not. If it is appropriate they will you know study, but if it is you know any extra thing they will not.

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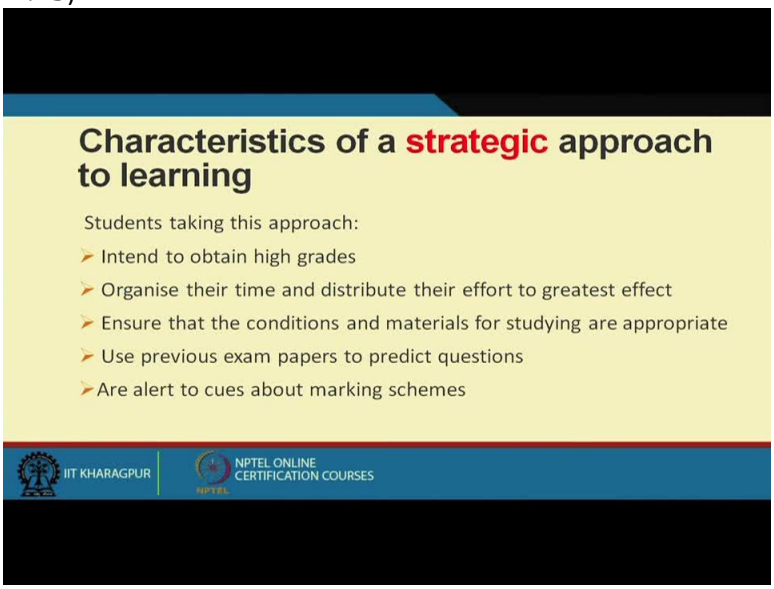

Use previous exam papers to predict questions or alert to cues about marking (systems) schemes rather they are very alert in this.

So that is the difference between the surface and the achieving. So the motive of the achieving approach is based on competition and the ego enhancement. I am you know the first my grade is 9 point something. So that is the ego thing you know. So attainment of highest possible grades, irrespective of that whether the material is interesting or not, it does not matter to them, right to get the good grade and what is the strategy? is based on organizing ones time and contain and behave as a model student.

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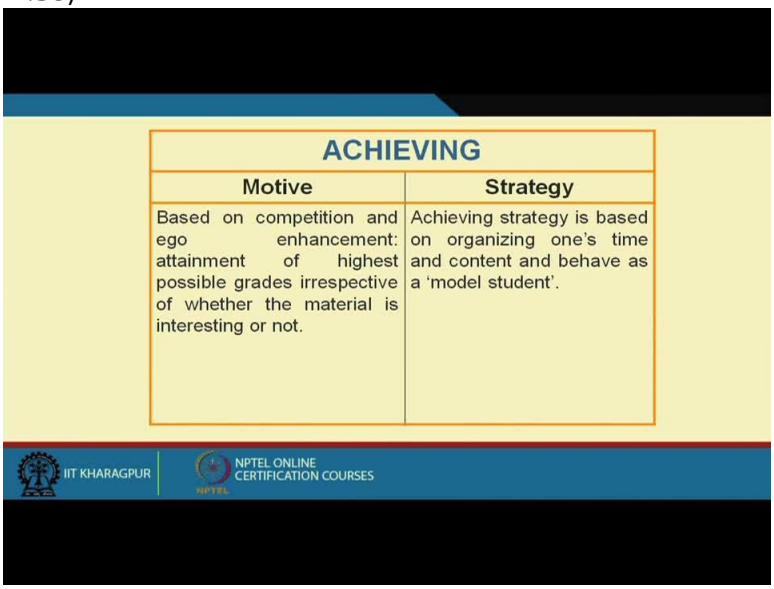

I am a model student in that way to get good marks somehow they have to achieve this. Look at me attitude, always like that. So the deep learning is different. What is that? It is an approach an attitude to learning where the learner uses higher cognitive level. That is analysis the ability to analyze, ability to synthesize, ability to solve problem, case studies you know the meta-cognitively in order to construct a long term understanding. That is very important.

So it involves the critical analysis of ideas, linking them to already known concepts whatever they know concepts in the new idea they just link them and the principles they are using them, right. Because they understand the concept, that is why they are using it right. So understanding can be used where problem solving for problem solving in real life situation unfamiliar context, new context anywhere, right?

So the Deep Learner if you know the principles, theories properly then you can apply it or analyze it. So it is a higher cognitive level of approach. So deep learning entails a sustained, substantial and positive influence on the way students act, think, or feel.

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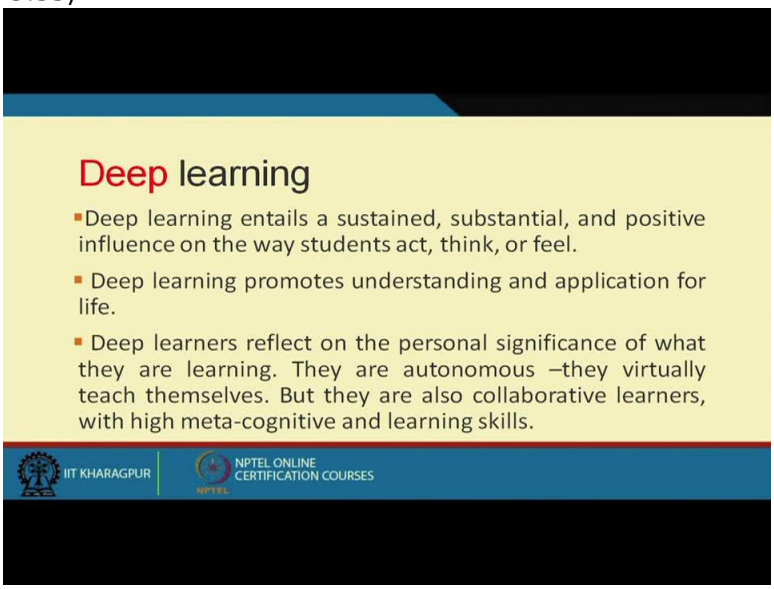

So the thing is that for the Deep Learners the teachers role is very important because the teacher you know teacher have to be is a role model so that if you teach in such a way through that the Deep Learners are motivated and then they will read different books, different materials, different things so that they can apply in a in the they can analyze they can create this right?

So deep learning promotes understanding and application for life, right? So Deep Learners reflect on personal significance of what they are learning. They are autonomous, they virtually teach themselves. The Deep Learners actually what I am learning sometimes is ok so this is this things I learnt. So ok where I can apply that? They are thinking on this the automatically you know they just as if they are virtually they teach themselves, ok.

But they are also collaborative learners, with higher meta-cognitive and learning skills. But usually they are you know very much you know give importance to the understanding level, not the marks but marks they are getting or you know of course marks is there but in that case the understanding approach is very important.

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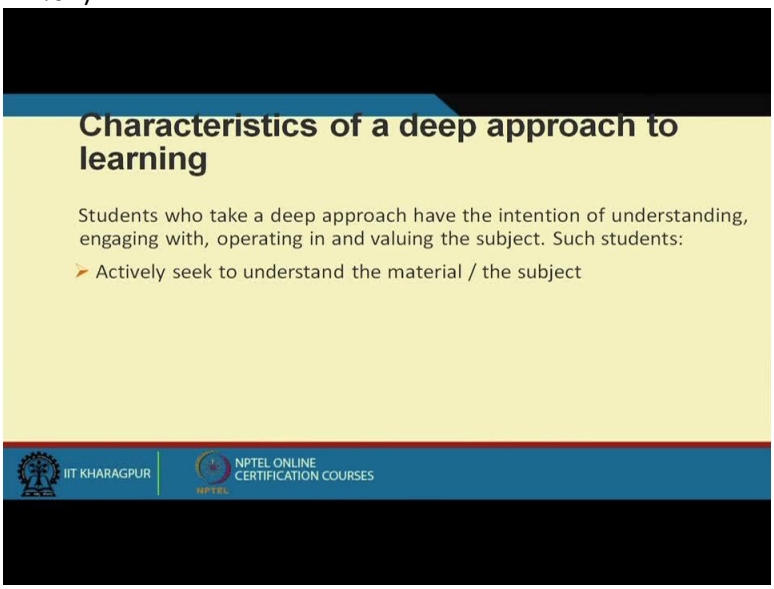

So what are the characteristic student who take a deep approach, have the situation of understanding, engaging with operating and the valuing the subjects? So those students actively seek to understand the material what I am repeatedly telling that actively you know understand the material or the subject. Interact rigorously with the content.

Make use of evidence, enquiry, evaluation. So take a broad view not the narrow view, the broad view and relate to one another the concept they relate to one another this is the Deep Learners approach. They are motivated not by the marks but by the interest, suppose to I will make a something robot how I will make that, right.

So the their interest is like that, in different societies the nowadays the students in a different society is they are doing you know mainly they are deep learning so they want to make you know like that, suppose in automobile I want to make a car to a model car so how you will do that in that case only the (()) (12:20) mechanism or the surface or achieving mechanism it will not work, they have to apply it, right desired to learn.

So relate new ideas to previous knowledge what are the previous knowledge they are using it and relate concepts to everyday experience.

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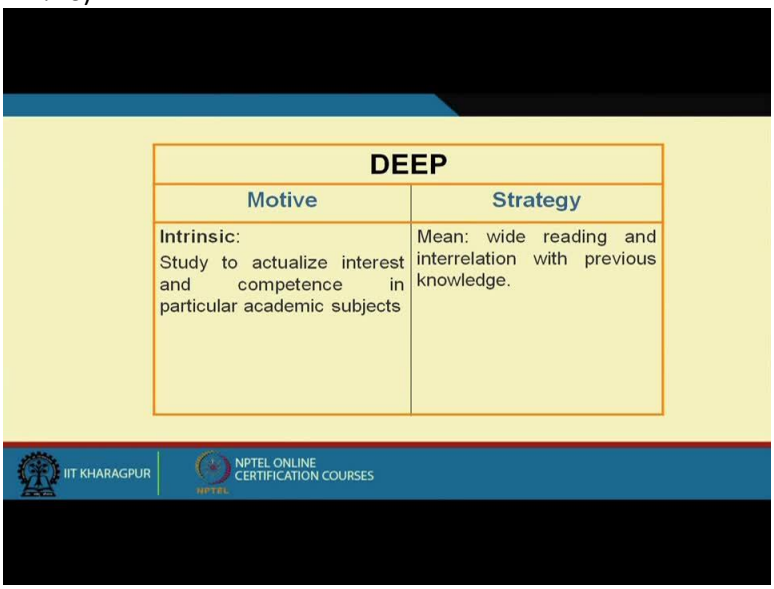

Tend to read and study beyond the course requirement what are the course requirements they always you know read more than that from different nowadays in internet all the materials are there. So they can read from anywhere right. But they just want to do it.

So what is the motive of that? Study to actualize interest and competence in particular academic subjects. And what is the strategy? Wide reading and inter relation with previous knowledge, they are relating it. So inter relation, right? That they can do. So what is the difference between the deep and surface learning? In the deep learning knowledge is constructed, the learners they are constructing the knowledge.

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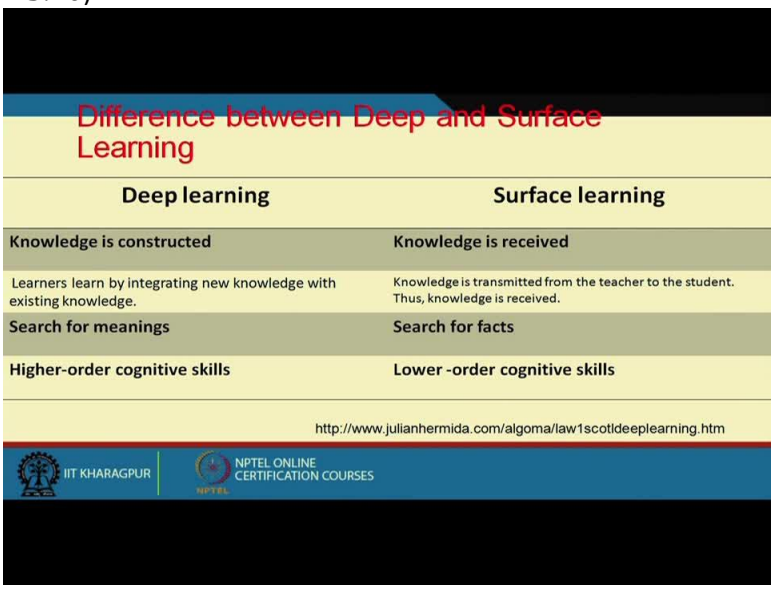

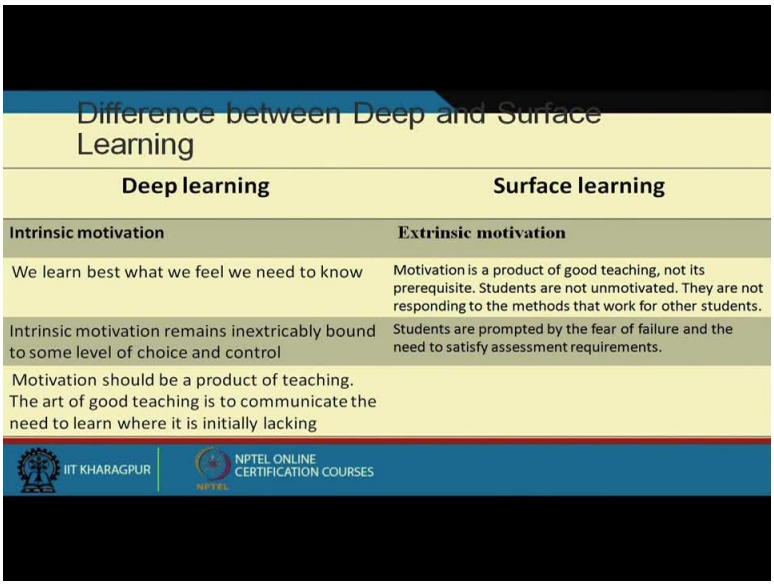

But in the surface learning, knowledge is received. So learners learn by integrating new knowledge with existing knowledge, right in the deep approach but here the surface learning knowledge is transmitted, right from the teacher to the student. So knowledge they are just only receiving it.

So this is the difference from the knowledge point of view for the Deep Learner and the Surface Learner. Deep learning search for meaning but for the Surface Learners search for facts and

Deep Learner this is the higher order cognitive skills. But in the case of the Surface Learner this is the lower order cognitive skills.

So there is another is the Intrinsic Motivation and extreme deep learning is that intrinsic inside the motivation right but the Surface Learner that is the Extrinsic Motivation, what is that in the case in the deep learning we learn based what we feel we need to know, right. So motivation should be a product of the teaching, right. So the art of good teaching is very very important to communicate the need this type of learners.

But in the Surface Learner it is Extrinsic so in that case motivation is the product of good but not (()) (15:10). Here students are not motivated but they are not responding to the methods that work for other students, they just only want to pass the exam, right.

So this is the difference between the so it is clear that the Surface Learner, achiever achieving learning and the deep learning approach. Now levels of thinking. As we know not all thinking or knowing is the same, yet 80 percent of all the question if you go if you check the question most of the question spoken or written anywhere it is the lower order cognitive skills. Mostly in the recall or remembering or by knowledge by sampling handlings so of restricted set of ideas set of knowledge so in data so if we develop students higher order cognitive skills in that case we should enhance the meta-cognitive abilities and their learning.

So we should you know we should give the higher order cognitive level of questions it to analyze something or to apply something. So not that the what this what you know or that is not the important. So there is another taxonomy, we call it SOLO. SOLO is a true hierarchical taxonomy increasing in the quantity and the quality of thought. So it is a powerful tool in differentiating curriculum and providing cognitive challenges for learners.

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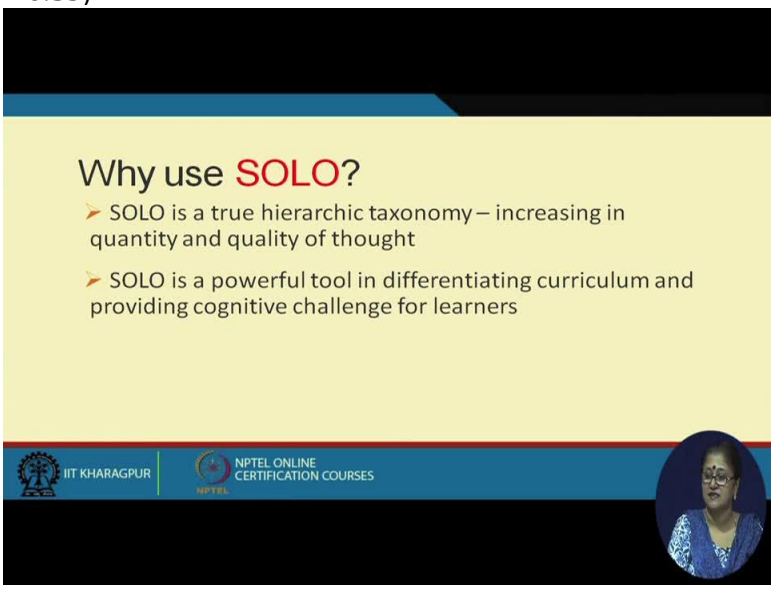

It allows the teachers and learners to ask deeper question without creating new ones and it is a powerful meta-cognitive tool. First I will explain what is that. SOLO is a structure of observed learning outcome. It is developed by Biggs and Collis. So in that case the SOLO is a framework of understanding there are five levels in the SOLO structure taxonomy Prestructural, Unistructural, Multi Structural, Relational and Extended Abstract.

So here what is tha? It is a model of learning that helps to develop a common understanding and language of learning that helps the teachers to understanding the learning process. How to evaluate the question paper or the learning process this taxonomy is very important.

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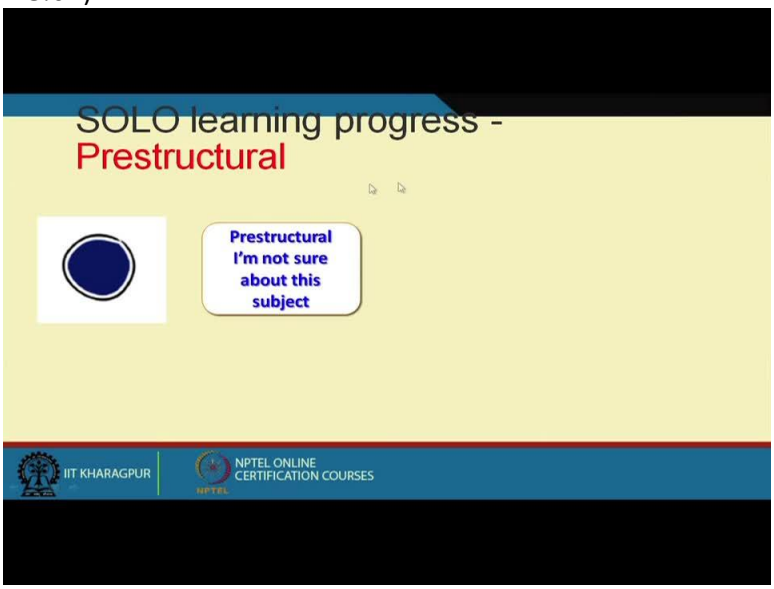

Now the verb SOLO learning process prestructural just here I am not sure about this subject Prestructural. Here it means learning outcomes shows unconnected information, no connection is there unconnected, no organization. So that is the SOLO the first part, Prestructural.

The next part is the Unistructural I have one idea about the subject and I am confident about the subject. So that is the Unistructural level. Learning outcome there shows simple connection but importance not note.

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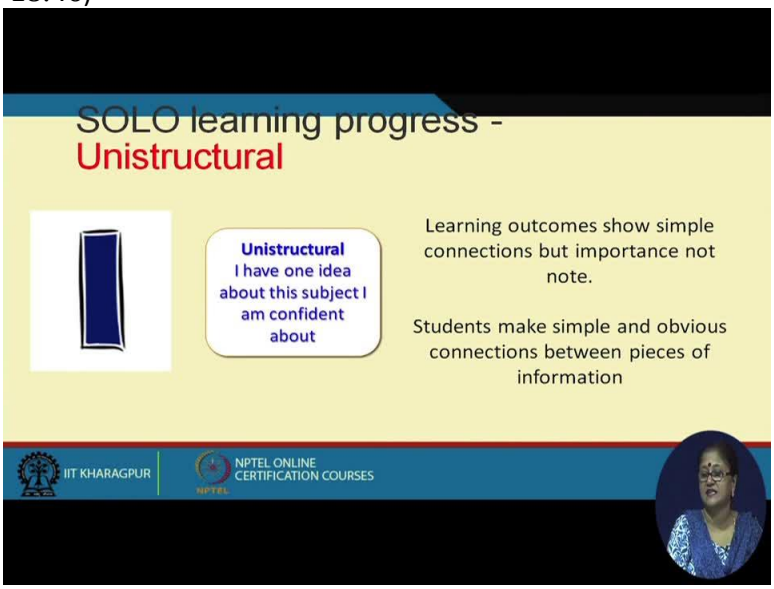

What is that? Students make simple and obvious connection between the pieces of informatio, that only that is the Unistructural.

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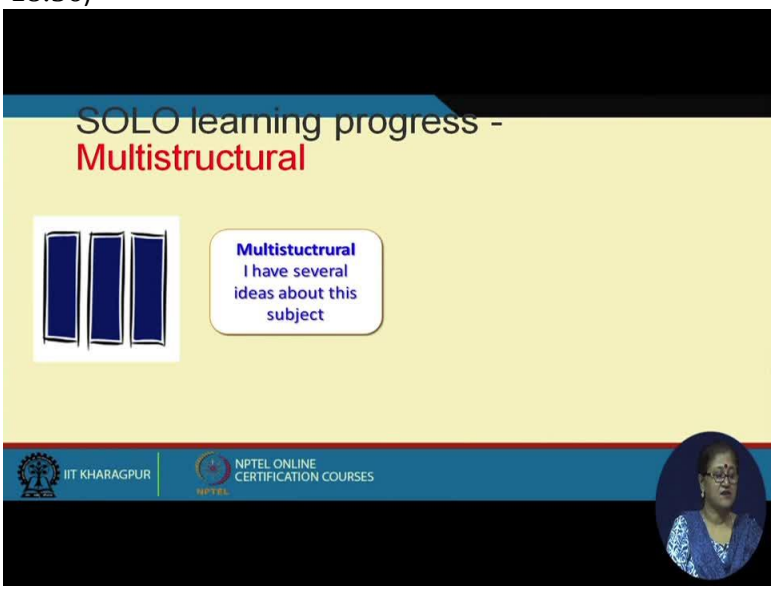

But when it comes to the Multistructural I can see several ideas about the subjects where learning outcomes show connections are made but significance to overall meaning is missing. They cannot you know overall significance of the missing that is missing but there is a connection. So a number of connections are made but not the meta-connection between them. These things are there the meta-connection that is not between them that is the Multistructural level.

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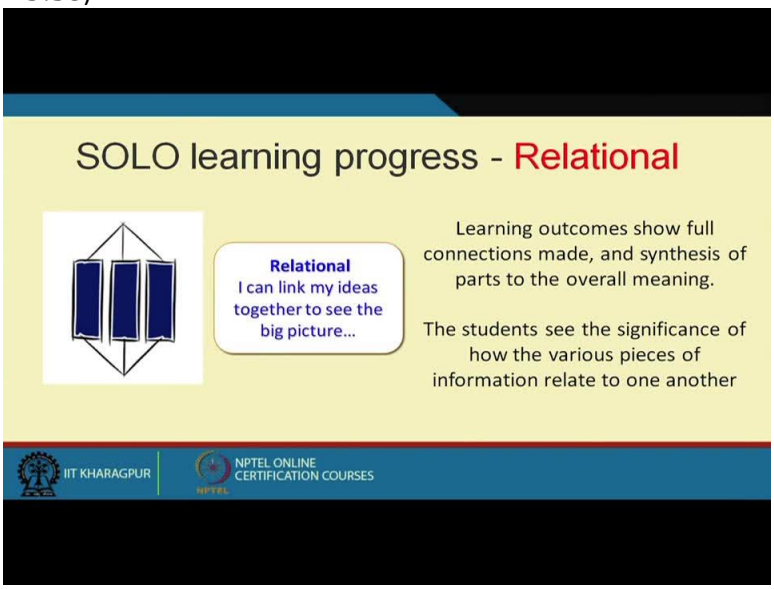

But in the relational level just see there is you know that one relation tree level that one relation, that the students can do. So I can link my ideas together to see a big picture. So you can understand that Unistructural and Multistructural in the relation when they can link the ideas it is in the relational level. So learning outcomes show full connection made and synthesize of the parts of the overall meaning. So the students see the significance of the how various pieces they are informational relate to one another. So this level is higher than the Multistructural level.

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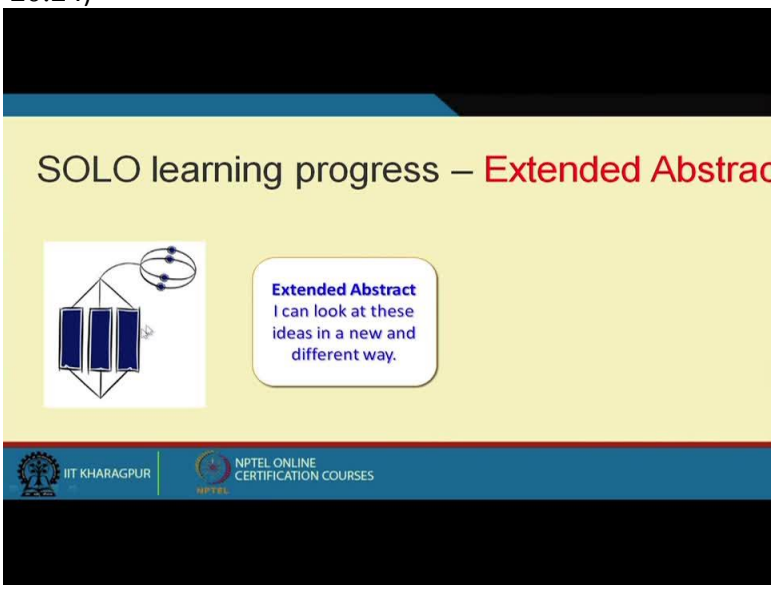

And extended abstract level is that you know here that outside I can look at these ideas in a new and different ways. They can relate and with a new ideas they can connect. So that is the extended abstract level. So here learning outcome it go beyond the subject and makes links to the another concepts right.

So at this level students can make connection beyond the scope of the problem of questions to generalize or transfer learning into a new situation. So that is the highest level in the SOLO taxonomy.

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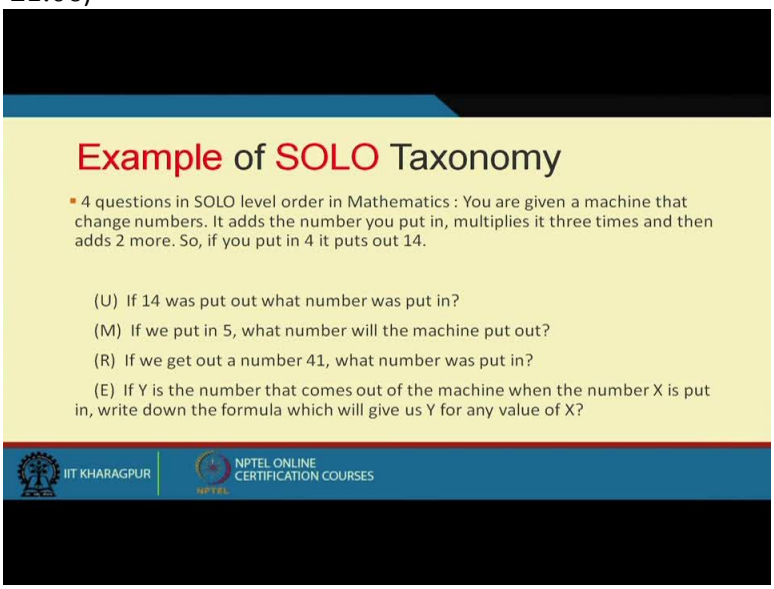

Just I will give an example. Four questions in the SOLO model, you are given a machine that changes number. It adds the number you put in, multiplies it three times and then adds 2 more, so if you put 4 it puts out 14. So if 14 was put out what number was put in? It is there in the question, so it is 4.

If we put 5, the number what number will the machine put out? So in that case 5 into 3 + 2, it is 17. So in that case it is easy, it is the Multistructural from this side to that side. But the relational if you get out the number 41 what number was put in? This outcome is 41, so what number we pretend 17 into 3 + so you are using the relational that concept so that is the relational level. So you put 13, that is why this is 41.

But if Y is the number that comes out on the machine when the number is X is put in, write down the formula. In that case Y equals to 3X + 2. So that is the you are developing a equation an equation so it is the extended abstract concept. So Unistructural, Multistructural level these are lower order cognitive thinking skills.

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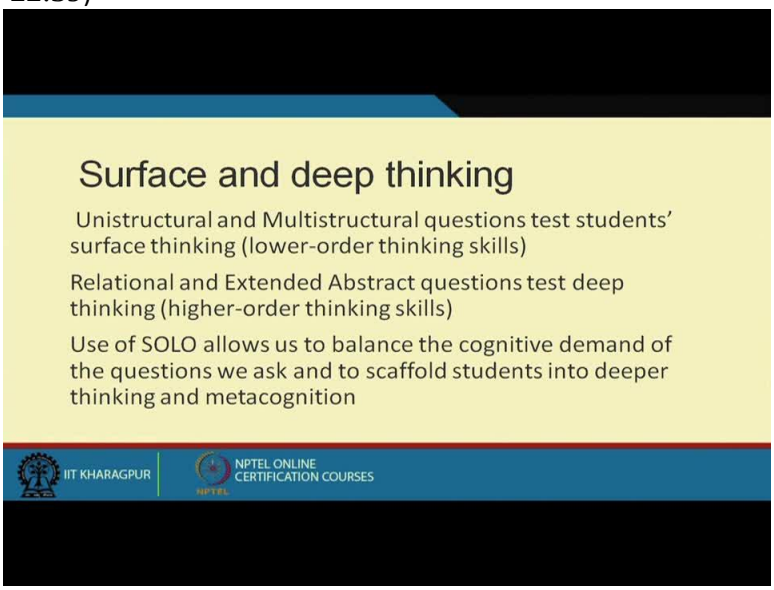

But you know relational and extended abstract is the higher order cognitive skills. So in that case the SOLO taxonomy, what is the beauty of the SOLO taxonomy. The SOLO taxonomy helps the teachers help the faculty members to develop the question which goes from the different levels which can cater the different levels right. The cognitive demand of the question we ask and scaffold students into deeper thinking and meta-cognition.

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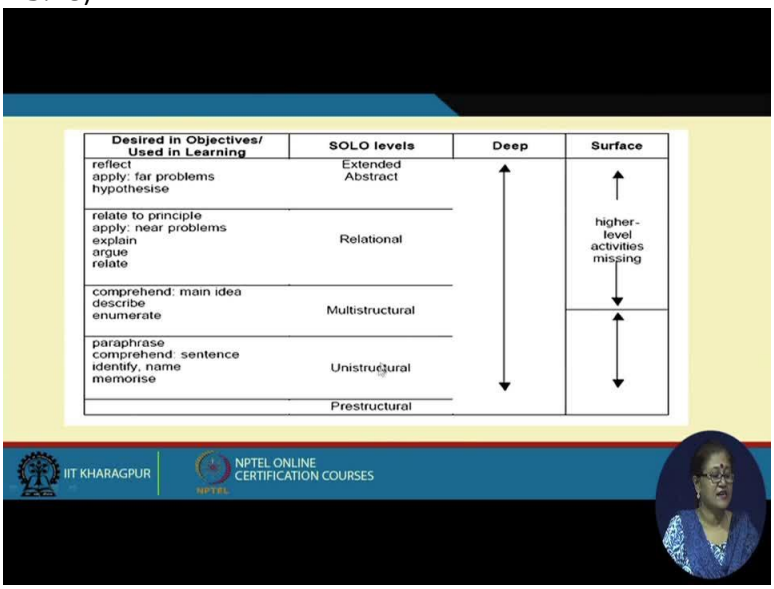

So here in this here I can see that Uni, Multi, Relational and Extended Abstract but the surface level this Relational and Extended this high level of activities is missing. So how you create the deeper questions? Take a Unistructural questions and then ask for at least two or more things, in that case it will become a Multistructural questions. Now put the least for the things into the question, now ask what they have in common.

In that case the common means when relation will come so it will go to the Relational level.

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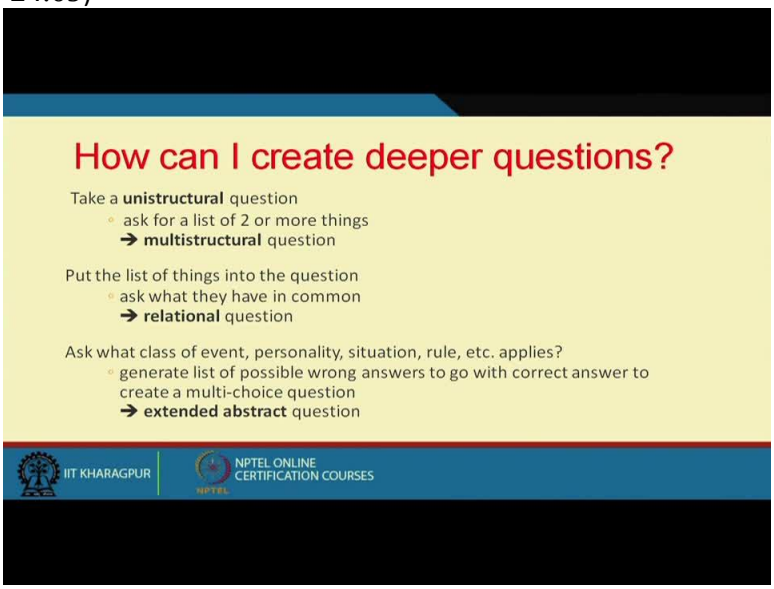

And if you generate if when the class event personality rule all these if you apply if you generate, least of possible wrong answers to go and the correct answers you create a multi choice questions these things and what is your idea about these critically analyze these type of question if you do it will go to the Extended Abstract level.

So in any topic or in anything you can develop the questions from the Unistructural to Multistructural, Multistructural to Relational and Relational to Extended Abstract and if you develop them then only you know these that that is the then only the students or the learners can think the higher order level of cognitive level of they can analyze. Main thing is not the wrote learning.

Now the learners they have to apply in their real life. So these we should as a teacher we should help them to think the higher order cognitive level. So these different and we have to keep it in mind the different three types of learners are there from the learning point of view that the learning approaches point of view Deep Learner, Surface Learner and the Strategic and Achiever and how can we use the SOLO taxonomy to develop the and how the SOLO taxonomy is useful. Thank you.