

Psychology of Learning

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Lecture – 5

Psychology of Learning (Contd.)

Hello viewers, welcome back to this NPTEL course on the Psychology of Learning. In the last class, we were discussing about the principles of learning and how different principles govern learning. So, to continue with that, we will just explore other aspects of learning. So, there are different types of learning, just as there are different types of human learning. For example, one is the non-associative learning.

Non-associative learning is nothing but just our response to, reaction to, a strain stimulus. So, it is just non-associative, that is earlier there is no association between this stimulus or these environments or whatever it is there. So, it is just non-associative because we are, for the first time, interacting. We are responding to a stimulus that is non-associative. So, habituation means, as a result of some regular practices, exposure to something like that which has been developed into a kind of knowledge. The knowledge that we have captured. The idea that “oh, this will happen” comes to us because, in the process of habituation in our everyday lives, we are exposed to that thing.

So, for example, clicking of the wall clock. It is a regular thing once we know it. What happens is earlier, in the beginning stage when we are alone in the room we attend to that: “oh something is taking off.” There is something. Some stimulus is there, but gradually as we become habituated to that, then we overlook it. “Oh it becomes a part of our things.” So, that is the thing. That habituation. It has become a part of our practices, part of our daily habits, part of our regular exposure etcetera. Now, another thing is the sensitization. Sensitization is that when purposefully something has been given to us or some or the individual is being induced to react to respond in a certain way.

So, sensitization, we primarily think in terms of either medication or any drugs or any kind of things that has been injected or that has been given to us or we have been exposed to that kind of thing to you know to regulate our behavior or to behave in a certain way. So, that is the kind of sensitization habituation. It is just the opposite that as a as a part of a day to day practice and regular habit and exposure we have learned it, but it is sensitization means we have been we are being induced by stimulated by something some external drugs some external agency some external stimulus like this. So, it is so, it will like for example, according because of the effect of that stimuler or that you know that stimulus then we behave or we behave in a different way because we have been sensitized by these drugs or medication or whatever to behave in a certain way. So, that actually regulates our behaviors that has an impact on our behavior.

So, that is called the sensitization. So, we behave in a different way because of the sensitization of or of some medication some stimulus within us. Then the next is that associative learning. Associative learning that for example, if we we could establish a kind of

relationship like suppose we have two different events two different events, but we could associate them these two events and we could get the meaning of it. Maybe that maybe that one is that natural response to the environment, but along with that something is happening simultaneously concurrently.

So, we may get some associations. So, in our day to day life also due to some some sort of exposure or maybe coincidence you can say maybe some intuition something like that we associate one event with the another event. So, that is the associative learning that the learner that means, learner they associate two different events or two different elements. Now, the meaningful learning is that meaningful learning is that especially in the context of learning when we whatever we are learning acquiring the new information that we are occurring how we are relating it to our past experiences or maybe that how we reconstructs its meaning its its a meaning its the reconstruct its meaning its interpretation in our learning process. All these how relevant and significant it is for our you know for our idea for our knowledge for our information or for how important that concept is in and is that concept it is meaning in our cognitive framework.

So, these are the things primarily it is more related to education. So, and David Oschubel David Oschubel he is a that means, educationist and the instructional designer etcetera American theorist. So, he said that the way the type of the learning in his students relates the new information to the to their prior knowledge prior information or entry behaviour existing knowledge. So, that help him in adjusting or reconstructing the information that is in the process. In the so, when we are exposed to the classroom learning.

So, whenever we are exposed introduced to a new topic definitely we try to recapitulate from our old past experiences or existing learning etcetera and we try to relate this new learning to the past learning to just to get the meaning out of it just to interpret in a more meaningful way. So, that is at this in this process when we could successfully relate it associate it then we get the meaning at and we find we find that this learning process is more meaningful is more relevant more authentic for us. So, the significant learning occurs when the new information is connected to the pre existing relevant concept that is there in our cognitive structure in the framework. So, so, when we can successfully relate it we get the meaning out of that then it becomes this learning becomes more significant. The next is the cooperative learning cooperative learning usually what happens in the classroom in the classroom or the classroom or the team projects or in the laboratory laboratory.

So, that we work in a group we work in a group. So, that is its group and how do we learn in that group by you know knowing each other by learning each other by observing the things by you know by doing something together. So, by interacting by having a dialogue discussion all these things. So, this interactive learning actually it builds the culture of you know cooperative learning based and it also it has a remains relevance for the academic experience. So, because it is not just about sharing our thoughts and ideas and working together doing some things, but it is also exchange of information it is also enriching our work with the confluence of ideas like whatever we are saying whatever somebody else is doing, what is the other friend is saying we try to try to analyze all these things and try to synthesize all these things to get a cohesive idea common idea consensus idea which would be more beneficial.

So, cooperative learning that learning together in a positive in a constructive way exchanging thoughts information ideas etcetera and along with that positive relationship building. It is not that counteracting or challenging somebody else view points, but is

understanding others perspective view points and learning from other sharing the information, exchanging the information and coming to the idea which is more cohesive which is more consensus which is more enriching in terms it is relevance and application. So, John Dewey was the first educationist who has promoted this kind of building knowledge in the classrooms with the peer support with the interactions and so from there actually cooperative learning cooperative learning. Nowadays also we are also talking about the collaborative learning. So, these are the thing these are the thing that when learning together and learning together and not just learning together by observing each other, but sharing our thoughts learning from each other then tutoring also peer tutoring also comes under this thing peer support also it comes under these things.

So, learning together with the new ideas positive spirit and the relationships. So, you know for example, the examples are you know new ideas new concepts new propositions all these things actually all these things we learn from the group learning team learning. And suppose we have the suppose we do not know some of the new concepts or maybe that we have some doubt and dilemma about certain concepts. So, that get clarified in the context of group in the group discussion. So, it is a kind of you know it is a kind of collaborative learning cooperative learning mutual learning peer learning.

So, where everybody every individual member member learns learns better. So, thing is that, but yes of course, cooperative learning is that usually in the classrooms in the higher education secondary even the school education also we become a part of one group or other group. For different subjects we have the different groups also like for science groups we have the different lab groups for social science also we have the different projects groups some co-curricular activities we have the different groups. So, the basic purpose intention of forming this groups is that people will learn together and mutually learn and mutually they can teach each other mutually they can clarify the doubt mutually understand different perspective. So, it has immense benefit.

So, the cooperative learning is also is one type of learning then. So, here in cooperative learning also yes another thing is that whenever we learn new things often what happens it was initially we will try to relate it to our past experience, but after that after sometime we try to recycle it reprocesses or reconstruct it maybe that we just felt that no it is not actually the same thing, but now it has changed its connotation has changed its meaning has changed. So, we recycle it is reprocess it. So, the learning experience of the information also is subject to the recycling process. So, meaningful learning takes place with the new information having the new information with more relevance more meaning more logic more new data more new data and more of the new processing and including others perspective it gets changed it is either being reconstructed recycle and come up with the new idea.

So, that is a learning it emphasizes on the importance of knowing how to relate the concepts rather than to memorize. So, here we the changing concept of concept or the with the construction of new ideas new learning the whole process of learning also changes ok. It is not just mugging up it is not just rote memorization it is just memorizing and reproducing it is nothing like that rather we are constructing we know how to relate one concept to the other rather than just blindly memorizing it. So, when we relate one concept with another. So, we analyze it sometimes we give our own ideas.

So, here we becomes more innovative more creative a more you know more you know more original in contributing our own things or giving our own meanings from our experience and

from our intuition etcetera. So, knowing it is the know how process know how process of analyzing synthesizing creating the new concepts maybe that sometimes unlearning or rejecting some of the things ideas and recycling reconstructing the things and coming up with the new idea new things. So, cooperative learning is primarily saved by 3 crucial elements what are these 3 crucial elements one is that heterogeneous group yes when we talk about the group learning group must be diverse. Because similar kind of similar with heterogeneous homogeneous group will have the similar kind of group characteristics all the people will be having the same similar experience same discipline same knowledge. So, heterogeneous group is more constructive in this because the different people different student different partners different group members they have the diverse background knowledge everything.

So, then it is it becomes more fertile it becomes more constructive because different people says different things, but how to draw the consensus out of them. So, everybody that means, each member who does not have the idea of other perspective. So, they mutually learn different perspective. So, whatever they whatever solution or the product whatever they think to come up with idea to come up with they think in diverse perspective from different perspective. So, it is you can say it is relevance increases it is meaningfulness increases.

So, heterogeneous group is the you know is the is actually the is the successor is the success is the you can say this successful group in the things up in deriving the maximum benefit mutual benefit maximum meaning maximum effective solution of any particular discussion or concept. So, then positive intervening the positive interdependence like each member suppose it is a group of 5 members ok group of 5 members all the 5 members are different. But positive interdependence is that everybody is dependent on others, but that relationship is more positive nobody can think of no I am independent I am more intelligent I can do this thing that thing not like that. Positive interdependence they are mutually dependent everybody has to learn something from the other member, but that relationship dependence is more positive. Effective communication definitely clarity in communication effective communication again even not just the 2 and communication should be 2 way or you can say multi way because everybody whenever 1 person is saying all the 4 members they are equally responding equally perceiving you are equally listening attending the things and the feedback.

And of course, after they everybody mutual feedback like whatever 1 when 1 person says something that other 4 persons they listen and they give the different feedbacks. And the feedbacks actually strengthens the outcome. So, heterogeneous group then effective communication positive interdependence of the feedback are the important things the next is that individual responsibility individual responsibility. So, think that all the members in the group that they think that yes I am here to contribute something it is not that all these 2 people will do it everything and I will just sit to sit idle no not like that. So, every learner should feel committed should feel responsible should feel dedicated and should be should get involved in the process of learning.

So, individual responsibility that is because he or she will think that should think that no I am the member of this group and all of us we are learning together and I must have some contributions I must do something I must contribute something or I must convey my ideas and thought. So, that we it can be enriched. So, individual responsibility of each and every member. So, that is the collaborative learning cooperative learning. Then emotional learning emotional learning is that as the name implies in the learning process where maximum emphasis importance is being given to the effective domain that is the effective that is our effective

domain our emotion emotional emotion plays a very vital role.

So, stimuli with great affective load for example, for example, whenever we watch a movie watch a movie the if the movie is very emotional is content is more more dominated by the emotional content or may love affection emotion anger whatever may be the thing. So, then we get swayed away with the with that process. So, stimuli here the stimuli is that movie it is loaded with the affective content. Similarly the learning particular learning type particular type of learning or the or the intention or the objective learning objective also it is more it is a more loaded with the emotional content. So, to so that to influence the mind to influence the emotion to influence the mood or to influence the temperament or the behavior emotional behavior of the learner.

So, primarily in the context of clinical counseling stage suppose the suppose the client is having some irrational fears some irrational you know behavior something like that. So, in order to remove that remove that irrational phobias and the unusual behavior abnormal behavior random behavior. So, sometimes therapist they also use this kind of mechanism that is to that to train them to teach them to counsel them in some with some content which is primarily dominated by the emotional content. So, primarily it is saying that it is the primarily it is being used in the therapeutic process. So, and that is also sometimes it is also called the systematic desensitization.

That means, you are when the person is behaving in a particular way that means, something some significant factors may be that some emotional factor dominant emotional factors influencing his behavior. So, how to reduce that like irrational fear irrational anger irrational bias bias you can say sometimes. So, how to remove that how to slowly and systematically desensitize systematic desensitization that how to remove that irrational behavior how to remove that abnormal anger or abnormal phobia or any kind. So, how to reduce that emotional load slowly and steadily. So, special support that only special kind of contents and a special kind of sessions are being organized.

So, to desensitize slowly and steadily maybe that by advocating by promoting by encouraging the clients to think of any to imagine to think of any happy moments any positive things and successful events all these kinds. So, that they can the therapist will be able to reduce to remove that kind of irrational behavior or anger. So, then observational learning. Observational learning is very common from since childhood we have been we know that we have been exposed to you know we have been experiencing in in our case also we used to observe our seniors or parents or friends our cousins etcetera. So, and it is being it is being propagated by Albert Bandura it is a part of social psychology social learning process.

So, that human beings in the in the process of socialization we maximally learn through social observations. So, observation is that in suppose even like fan following when we talk about the fan following what is that fan following some people they like the person because they like the his or her mannerisms his etiquette his looks his you know his dressing sense or his behavior his action whatever maybe. So, so that is why it is a kind of it is a part of social learning process ok. So, by observing so, here the observer realizes the task that is when we observe certain things he again simultaneously the the observer also evaluates it evaluates whether he likes it or does not like it. So, if he likes it he tries to copy it try to imitate it.

So, through observation learning imitation takes place ok. If he observes from the for example, in the in the childhood case in the sense in case of the children whenever they see that for

certain kind of behavior the child the other child the other person the other child is being incentivized is being rewarded with chocolate and these and then he tries to copy that behavior or even in case in case of parents in case of the parents of the children in the at home they used to copy the parents behavior also. So, thing is that here they observe then they try to copy, but when they would like to copy it repeat it or imitate it provided the thing that the this kind of behavior is being rewarded by. So, this incentive at that end so, they copy it the copy it. So, here so, gradually slowly and steadily they formulate the the imitate behavior and the form in the process they form role model role model.

So, hence the grow of role model role model means they used to copy the the models behavior that in the way on sometimes what happens unconsciously or unknowingly also suppose the teacher will like automatically unknowingly unconsciously we also try to copy his way of talking his way of his dressing sense and his mannerisms etcetera it also sometimes happens unconsciously because when we grow up and we have a strict we have a very strong impression of that teacher or any model etcetera in our mind we knowingly or unknowingly we are copying it. So, that is the that results from the observational learning then imitation modeling behavior all these things comes. So, maybe that we learn sometimes we learn we learn observe through observations in the regular basis, but the more thing is that suppose unless and until we become independent unless and until we search our own identity and we decide our own focus our career goal etcetera we used to, but in the initial we used to observe others and try to repeat the things. So, it is we learn observation on the daily basis and it is a type of learning that is social learning primarily in the process of socialization and it also helps a lot in learning many things like the so, social skills especially the social skills then even the even academic behaviors like the study habits the disciplines the study habits all these things sometimes we also observe others maybe there are seniors our elders in the home and we copy it and we also try to repeat it. So, learning by discovery learning by discovery that is not is unknown completely whenever you are venturing to learning domain or the classroom etcetera you are completely unaware of what is going to happen.

So, it is a so, whenever you are exposed to certain kind of random situation then you start evaluating finding or assessing evaluating what is it we try to explore it to try to understand it. So, that is that is learning by discovery and John Bruner Bruner was actually the theorist who actually propagated that stood all the children should be exposed to that kind of learning by discovery let them discover themselves. So, instead it is just opposite the prescription prescribed learning when the teacher says that you do these things these things these things go these to these books and this is the content this is the thing it is more kind of prescription doctors prescription, but learning by discovery means every learner every child every student should be exposed to certain kind of situations. So, they will learn by discovering themselves ok. So, subject learn for himself slowly steadily progressively ok progressive here without meditation meditation mean there is no other person to help him out of help him out, but that is the discovery they will explore it they will find it out and maybe that actually in the in if we want to interpret it more meaningful way we want to introduce it as a regular feature of the classroom as a mode of pedagogy then maybe that the teacher can act as a role of act as a facilitator to later to let them explore discover it and then we will discuss in the classroom.

So, by asking everybody is the queries and their concept their ideas then it will be discussed in the classroom. So, discovery approach especially you know new especially that science subjects or something new some new subjects. So, it is a meaningful way of learning also the role of the teachers is there to encourage the students to be innovative to to be interested in knowing the subject not just mugging it up and delivering it in the classroom, but just to know

to learn to for the knowledge sake for the knowledge sake how to explore the world of knowledge. So, teachers role is to encourage them to be self-sufficient to be to be interested for this learning by discovery and later on can be can be solved without can be sorted it out through more discussion. So, learning by discovery so, it is that the let the given the even now it is also in higher education we have used to adopt this problem solving problem based learning problem solving problem based learning when maybe the problem will be assigned to the learners or the problem the students will be lived will be will be left that you go around you will find out the new topic and new any problem you picked up the problem and try to solve it.

So, learning by discovery there is no pre pre concept idea no template no background no information previous information nothing. So, will as you move on you will discover the things. So, next is that so, this trend is that for it is also it is also very important for promoting the independent learning self learning creative problem solving. So, so here this thing is the slowly and steadily when, but it actually what happens. So, if you that means, once initial at once at one or first or second try you will be little bit awkward it will feel you will feel awkward difficult you know difficult because it is unknown completely venturing to an unknown domain.

So, but slowly and steadily if you go on practice as a part of your curiosity etcetera it will be slowly it will. So, slowly learning takes place by the successful approximation. So, here it is called learning by successive approximation as opposed to important here thing is that yes, but you here another thing is that learner needs to be very reflective very calm very patient because impulsively hurriedly he cannot finish it up. So, for discovery learning in order to be creative to agree to be creative in solving the problems then definitely you have to move on slowly and successively. So, here, but slowly in the long in the long run in the long process it can also empower our meta cognition.

Meta cognition is that now the as you practice go on practicing this kind of discovery learning creative learning again and again. So, it empowers because with every attempt you will empower yourself in understanding some new dimension new concept of cognition that is empowerment of meta cognition. The learner will begin to understand his own cognition how he learns how he remembers how he could solve the problem that is the knowing about the cognition that is the meta cognition. So, in the later part we will discuss more about the meta cognition another is the rote learning rote learning is nothing, but storing the information by mugging up by repetition by rehearsal you know all these like we in the early stages of our schooling now we used to remember the period period table the multiplication tables the you know formulas the chemistry chemical formulas then mathematical formulas etcetera these are only mugging up repeating because as a as a result of the repeated repeated occurrences repeated things repetitions or auditory repetitions practices even math practices also rote learning takes place that is the with repetitions it becomes a habit is it becomes you know it becomes a part of our system we can remember so that is the rote learning. Then the next is so yes of course, what thing is that the rote learning that means, if rote learning to some extent it is helpful because suppose we need to remember certain basic things and it will be it will be useful for the higher level of complex problems.

So, it is to some extent it is to some extent it is it will be helpful, but the more the complex the higher learning in the in case of the higher learning conditions or more complex learning material it is not going to help us because we even our memory capacity we are we have the limited memory capacity we cannot mug on we cannot rote through rote learning we cannot

mug up all the things details yes some of the basic formula some of the basic things that we can remember, but in order to solve the complex problems maybe that we need some these basic formulas basic you know multiplication tables basic algorithm something like that. That may be useful, but that is just we can use it as a tool. Rote learning that is some memorizing some table some formulas maybe we can use it as a tool to solve the higher difficult learning difficult problems. Memory learning is used as we process the higher level of complex things. So, in that process it becomes more constructive because we have to uncover certain things some new concepts new dimension and we have to analyze it then we have to synthesize it. So, consider unlearning certain things constructing and reconstructing. So, with the constructive approach to learning it requires some analysis it requires reflective thinking it requires more contemplation.

So, that gives a different cognitive view. So, that is why we say that the more we analyze the more we synthesize the more we reflect the more we criticize. Then we can remember because in our brain actually we have done all the exercises. To and fro all the exercises. So, we are not going to forget it so easily. So, this a constructive approach to cognitive things. So, now, how this information are being processed how we can retain where what is the capacity of short term memory, how much we can retain through rote memorization etcetera all these things is related to memory system that is the famous memory model by Atkinson and Siffren's model that is very popular that we will discuss in the memory chapter.

So, first thing is that how we first perceive the stimulus then process it then retain it then retrieve it. It is a complete system of memory. So, now, this is the last portion of the first introductory chapter. Next phase we will go to another chapter. Chapter 2. In week 2 lectures we will be discussing about the major learning theories. There are lot of theories, but we will be discussing only a few theories. Thank you. Thank you very much.