

# **Psychology of Learning**

**Dr. Atasi Mohanty**

**Humanities and Social Sciences**

**IIT Kharagpur**

**Lecture – 22**

## **Motivation of Learning (Contd.)**

Hello viewers. Welcome back to this session on the Psychology of Learning. We were discussing in the last class what motivation is, what are the different types of motivation and intrinsic motivation, extrinsic motivation etcetera. Now, in this class, we will discuss some prominent theories of motivation. So, what are the different theories and how are the different theories define motivation. So, there are many theories of motivation, but here I have just taken the prominent theories.

So, these are: drive theory, arousal theory, expectancy theory and goal setting theory. So, we have already discussed about the intrinsic motivation and extrinsic motivation. As you can see for the extrinsic motivation these are the factors responsible for the motivating the learners and these intrinsic these are the factors. We will be discussing all these things. So, type of motivation, their factors and their role as the motivators.

So, in intrinsic motivation these are the factors that motivates the learner and in extrinsic these are the motivators. So, now we will discuss about the different theories. So, this is a drive reduction theory. It was propounded by the Clark Hull. Hull theory is called as the drive reduction theory in learning. So, here it describes the biological need for food and water. So, we have certain drives.

So, biological needs actually prompt create some kind of drive. So, that drive state is like that. This is the basic model of learning. It is like a drive. So, with the biological need it creates the internal drive state that is feeling hungry thirsty etcetera. From there we start the activation. Activation means all action oriented, goal oriented behaviours that gets activated when we try to achieve the goal: maybe our food or anything.

So, that is activation of different kinds of behaviour and from their behavior the behaviors that reduce the drive gets activated. Behaviours reduce that drive means, which satiates satisfies our hunger or any kind of biological need. Then the behavior that reduces this drive that is hunger drive or thirst drive etcetera that kind of behavior will be strengthened. And the behaviors that do not reduce the drive will are weakened or will be rejected later on. So, this is the basic concept of drive reduction theory. How can we reduce the drive then those kind of behavior will be strengthened. So, this is the basic learning theory of Hull's theory.

Now, let us see how it is defined in motivation. So, here drive theory says that reduction of the need drive prompts and ignites us. So, suppose for example, it is a state of homeostasis there is no need at all like the biological need. We can have the psychological need emotional need social need also. So, homeostasis means there is no need we are in the equal equilibrium state. Now then some kind of imbalance takes place some kind of imbalance may be feeling hungry.

So, that drive that creates a drive that creates a that creates a kind of internal state mechanism. So, that it prompts us to act to perform. So, then it ignites then it motivates to fulfill that need how to motivate how to satisfy our hunger how to fulfill that need. So, then it ignites us to towards some actions. Similarly drive reduction theory if there is a need automatic these and activities that satisfies those need satisfy those need fulfilled that need that is called the drive reduction.

So, this is the basic philosophy of drive reduction theory. So, here we can say drive theory says that it is a psychological concept that attempts to explain why and how the people behave in the ways they do. What is the basic need? What is the basic reason? Why the basic reason why the people are behaving in a particular way it primarily started with that. So, it focuses on the idea that drives which are urges internal urges internal mechanism or the motivation that prompts the people drive the people towards some action. So, there are primary here there are primary three types of drives.

One is the biological drive drive may be feeling hungry feeling thirsty etcetera another psychological drive psychological drive and the third one is the social drive. So, social drive under social pressure so, under because social maybe that we desire aspire for social acceptance social desirability social recognition all these things that is a social need. So, I need to I need to that that social need that belongingness to be the team members if group affinity all these things it is these are the social need. And biological need at the to fulfill the basic needs of our body physical physical requirements. And psychologically the psychological need is the which prompts of mentally at the cognitive level emotional level that is to do something to learn something to do something that is a psychological need.

So, this theory was actually created by the behaviorist Clark Hull 1943 and he proposed that the primary drives are that drive the human behavior. A primary drives maybe we can say the biological drive is your primary drive. So, that is drive for the food drive for all biological processes social interaction etcetera. So, that is the primary drive and these drives actually what drive the people to take the action and engage in various kinds of behavior like if for example, just take the example of you know like the individuals or the organisms who leaves in the in forest in forest area or maybe even interior area or rural area. So, their biological needs are biological needs are very important because they have to search for the food to satiate their biological drives and needs.

So, they are engaged in all kinds of you just think of the our primitive our primitive civilized and primitive civilized civilizations the you know the forefathers of our in of our human beings are they are searching for the foods in the jungles in the forest etcetera. That means, that is by only therefore, in that their case biological drive is very important primary drive because they are not very sure about these things. So, they have to act they have to search for the food ok. So, and it is it is also equally influential. So, this is the basic concept of drive theory which is also very valid in the field of psychology because you know over the years then many different versions of this theory has come up.

Initially even though it started with the biological drive primary drive later on you know later on it has been unfolded into different kinds psychological needs social needs and how the individual because of the psychological need and drive how it prompts the individual to engage in different psychological activities. That means, they will suffer giving satisfaction of satisfaction getting satisfaction similarly social needs. So, all these theory different versions

of these theory has come up later on. So, then you can say different types of as we have already discussed biological drives which are primarily the basic needs to survive to reproduce to. So, which are very much related to our basic requirements of the biological requirements then and these are all that is that is called the primary drive.

Psychological drives are actually related more towards the psychological needs like needs such as a need for love, need for attention, need for approval, need for recognition ok. So, these are the psychological drives that is why these are called the secondary drive because without these that means, after the primary drives primary needs are fulfilled then these types develop these drives comes up. So, that is at this it is importance for our psychological well being then we will be mentally happy we will be psychologically satisfied. So, these drives are often called as the secondary because it is importance is for psychological well being because and unless and until suppose unless and until these drives primary drives are fulfilled we cannot think of psychological well being or secondary drives. So, social drives are those again related to our needs for the social interaction.

We want to want recognition, we want the member membership, we want the leadership position, we want the promotion. So, that is because we want to get the social attention, social recognition for need for social interaction, social recognition. So, then other there are also the these drives are often referred as the tertiary drives. So, the social drives are referred as the tertiary drives because they are not necessarily the survival of psychological drives, but they are important for our social lives our recognition our starters. So, it is a you can say as you can say automatically there is a hierarchical structure primary drive first basic thereafter psychological drive and then thereafter the tertiary drive psychological drives are secondary drive.

Now, these are the tertiary drive after that after social drive achieving the psychological drives the psychological well being then we think of social recognition. So, here so, the again there are varieties there are different varieties of theories that are related to this drive theory. So, let us see what are the theories related to this drive theory incentive theory here one is the incentive theory. Incentive theory actually it suggests that people are motivated to take action in order to receive the award. So, here again it is more related to external reward it is more related to extrinsic motivation is more related to incentive as because there is an incentive there is an reward there is an award.

So, then that is that mobilizes people to work. So, here extrinsic motivation and this theory is primarily based on the operant conditioning operant condition which says that learning that occurs as a consequence of the consequences of our behavior because the more and more we repeat the behavior we try it out we act upon. So, then gradually slowly we can observe that the more accomplished performances actually is bringing us some reward. So, here incentive is there, but in order to achieve that intense incentive reward we have to perform in a skillful way. So, learning that occurs as a consequence as a result of the consequences of our actions as a as the as the result of our perfect or appropriate action we are getting some incentive and that incentive actually prompts us to learn that right kind of behavior ok.

So, here it is primarily based on operant conditioning theory of learning and in operant conditioning similarly primary types of reinforcement are positive reinforcement, negative reinforcement and punishment as we have already discussed in the behavioristic school you know learning theories how classical conditioning that is Pavlovian theory and operant conditioning that is Skeener's operant conditioning like. So, here conditioning is the secondary

learning processes that means, with association learning takes place, but here the in this process of learning incentive or reinforcement plays an important role in shaping the behavior of the learner, in shaping the behavior of the organism in the sense that organism gradually learns that understands that in order to achieve this reinforcement I have to modify my behavior. And that reinforcement can be of different types of positive reinforcement is the reward negative reinforcement is that you know suppose we want to you know get rid of some kind of behavior negative behavior abandon some behavior then we use negative reinforcement and punishment is directly that means, by for regulating and controlling the behavior changing the behavior. So, these are the different types of reinforcement or incentivize you can say through which we can shape we can create that reward behavior we can create that learning behavior. So, positive reinforcement is the type of reinforcement that rewards the behavior and yes actually it they have they have done the experimented it on the animal behavior, but suppose in case of human beings actually in case of adults primarily the positive reinforcement works a lot.

But in case of children in case of children this punishment we also use often use this negative reinforcement and punishment to regulate their behavior to modify their behavior. So, these are the examples an example like if you give a child a toy after they eat after they eat their dinner then you are using a positive reinforcement to use the likelihood that the child is that know that after just after taking my food I will get the toy or I will get some chocolate. So, that actually prompts motivates the child to that is to complete his food complete his food complete his that means, completely taking his food and after dinner act behave properly in the dinner during the dinner. So, that is here getting the chocolate getting the toys after the dinner process it is the positive reinforcement. But similar negative reinforcement kind of you know when you that means, it is a type of reinforcement that remove as remove an unpleasant condition after the desired behavior is displayed.

Like for example, suppose you know like whenever we are giving the punishment physical punishment we are giving the physical punishment to the children like do not do this do not that means, to dissuade to avoid that avoid that disruptive behavior and to motivate them to apply the desired behavior. If you behave properly if you complete the homework the otherwise I will you will if you know if complete the behavior complete the homework then only I will give the things otherwise I will withdraw the withdraw this withdraw this toy or chocolate or the fee or incentive whatever. So, if you will complete this homework then will I will give it to you this toy or toffee or whatever. So, that is the negative that means, you are prompting him to display the desired behavior then only you will get he will get the. So, here negative reinforcement is withdrawing the reinforcement for any kind of unpleasant condition, unpleasant undesirable behavior if you withdraw and by changing in the being is the desired change in the behavior then you can give it.

So, and for example, if you take away the child's toy after they eat and their dinner and you are using negative reinforcement to increase the likelihood that the child will eat the dinner in the future. Suppose he has not taken the dinner right now ok, now you will not give him the toffee or the you know toy or whatever. So, this gives him a lesson no unless and until until I comply with the requirement of eating in the during the dinner then I will not unless and until I complete this act I will not get that. So, this is the kind of negative reinforcement. Punishment is the kind of you know is a result of it involves the bringing an unpleasant consequence after a behavior that means, when we are punishing the children for engaging in any bad behavior any temper tantrum any act or something that is the punishment.

So, these are the three types of examples. So, here you can say so, this is the things that the incentive theory primarily focuses on the reinforcement how the reinforcement can be regulated can be manipulated to bring the right kind of behavior. Then comes the arousal theory.

Arousal theory actually a theory of motivation which suggests that human being seeks an optimal level of arousal not the minimal level of an optimal level optimal level as against the minimum level. For example, in you know for example, in attention also for example, in attention suppose in order to learn something in order to understand something in order to perceive something we need to attend it. And for understanding certain things perceiving certain things in its right you know with right content or right you know meaning inherent meaning understand we need to attend it. So, for understanding certain things even in the in case of learning for understanding a content we need to enough we need to give some attention. So, that optimum that optimum level what could be the optimum level of arousal or attention optimum attention that we need to give that that actually provides in the motivation also as motivation is the internal process. So, human beings are need to give some optimal achieve that optimal level of arousal unless and until you might have observed that the animals the dogs and the things pets and when they are lying down. Unless and until they feel hungry they are hungry they will not engage they will not make any attempt to move on or to seek food or to search around etcetera.

So, that you can say. So, for and being feeling hungry actually that from search. So, that they then optimum for achieving that getting the goal of gaining the food or achieving the food palette or any kind of incentive we need to have some optimal level that is required level of arousal ok. So, that is optimal level of arousal it also happens in case of attention in order to learn something perceive something we need to have need to achieve and give the minimum level minimum intensity minimum level of attention to that content then only we can under similarly an optimum level of arousal is required in order to get engaged in any kind of activity. So, in order to mobilize organism towards some activities some towards the movement etcetera some optimum basic level required optimum level required level of arousal is required is required.

So, that is the arousal theory. So, the arousal theory of motivation says that one's level of arousal plays an important role in determining one's level of motivation. Here we can say in case of human being arousal is that you know like our sustenance or how long we are actually we are we are keeping in mind that activity that target that goal how much we are we are thinking about how much we are you know active in searching for the resources searching for you know or engaging our self in that kind of goal oriented behavior in studies in works etcetera. So, the once level of arousal play an important role in determining one's level of motivation. Now if like for example, in learning also whether it is surface level superficial level or then deep level or you know strategic level etcetera at what level we are learning we are learning or performing. So, that decides the level of arousal is there.

Suppose somehow we are you know we are least interested and somehow we have want to complete it finish it get rid of some somehow we get by heart memorize it and deliver it ok. So, for that is momentary at the at particular level. So, in order to engage our self to make a movement a minimum level of arousal is required. And depending on the type of level of arousal and type of you know attention type of initiative we are taking it plays an important role like what type of goal we are achieving, what would be the level of performance, what would be the level of motivation that will sustain that will prompt us to achieve that thing. So,

our all kinds of motivational activities towards the goal oriented behavior it is determined by the level of arousal how much even in case of a human beings in case of us we can say that is a kind of stress a kind of tension in kind of type of anxiety a kind of you know minor worries seriousness no no I have to complete it that kind of conscious awareness conscious effort conscious anxiety.

So, that it is that is in a in learning behavior we can say this is the kind of arousal that that ignites us keeps us thinking of keeps us thinking or mobilizing us towards that kind of behavior. So, this theory actually say that the individuals are motivated to seek out the stimulation when they have the low level of our arousal. So, that is for example, suppose your level of our level of arousal is very low maybe because of biological reason may because of the emotional reason or whatever may be the reason, but at that moment we need to need some stimulating factors stimulating factor. Like for example, when we are studying at in the late night late night and we are feeling drowsy still drowsy, but our target is there we have to finish it up at that moment maybe we want to bring some kind of vibration some kind of vibrant stimulants in our in our behavior in our during that period because to ignite to increase our level arousal. Suppose you are feeling drowsy then we use tea or coffee as the stimulant.

Similarly music maybe we can use also use all music slow music to ignite our thought process to enhance our arousal process. So, this is a kind of stimulation what can stimulate us to engage to become highly focused to become highly motivated. So, as motivation again is a continuous process. So, there are these are the factors motivational factors are there motivators are there stimulants are which can increase the level of arousal. So, the arousal theory arousal theory actually theory of motivation was first proposed by Henry Murray in 1938 and he says that is from his observation is found that human needs for achievement power and again human achievement needs human needs are he has he divided that describe the human needs into three different types of one is need for achievement need for power need for affiliation.

So, he believed that the needs were motivated by the desire to reduce one's level of arousal. So, here as per Murray's definition needs needs were motivated to motivated by the desire to reduce one's level of arousal to reduce one's level of arousal. When suppose we need something we are highly motivated then it creates a kind of tension and some cannot restlessness you can say kind of restlessness anxiety stress etcetera. So, to reduce that arousal level so, human beings they are engaged in different kinds of activities. So, a needs for the achievement may be that people who are very much achievement oriented success oriented performance oriented their achievement need is very high.

The people who are very much oriented towards power acquiring power exercising power mobilizing power over others all these. So, their power needs are very high and in order to in order to achieve that they are highly motivated. So, and similarly affiliation, affiliation is that closeness identity togetherness. So, these kind of affiliations. So, the arousal theory of motivation has been further developed by others like Robert Zajonc and Atkinson further and they say that like for example, this is the they have described it like this.

So, in the that is it is called the Yerkes-Dodson law what is this? Suppose when we map the level of arousal suppose arousal in one in x axis and y axis suppose another is the performance. How arousal affects our performance? How arousal affects our performance? So, here with the as you can see with low arousal level with low arousal level performance is also very weak and as the arousal level increases arousal anxiety level or arousal level increases. So, performance also gradually gradually increases. So, when the performance level is optimal.

So, optimal level as much required optimal is as much it is required optimal arousal with optimal arousal performance will also be optimal.

So, here you can say optimal strong performance can take place with the optimal arousal ok. So, suppose if the performance that is the optimum level, but if when the arousal level gradually decreases when the now the with the strong performance high performance high arousal optimal arousal optimal performance takes place together. So, afterwards when the arousal level decreases again it decreases then it impairs the performance because of the again maybe that. So, as you can see with the high here it is I can say it is the in the middle it is the average optimal level means it is the average level as much it is required level of arousal. But when the again when the arousal is increasing is going on increasing, but it affects the behavior affects the performance because.

So, with increasing level of arousal excess beyond required a mark or a count or a required intensity or a volume. So, with increasing ever increasing arousal level that means, suppose take it as an anxiety tension or whatever as a with high anxiety high arousal it impairs the performance because of the strong anxiety. So, like for example, similarly in the stress also before exam we are facing the stress. So, stress you can say stress is also a kind of you know anxiety kind of arousal kind of anxiety. So, with the low stress if suppose we are not at all whether not at all serious not at all that means, we are too casual that means, 0 arousal level is very low.

So, definitely our performance will be weak very. So, with increasing now it creates some kind of tension etcetera etcetera then we slowly become more anxious more stress etcetera. So, that is the it is the knowing it is it is up to the optimum level it is required as much as it is required then the performance increases. So, here we can say the stress suppose if arousal is a stress. So, up to the positive output perform positive outcome we can say the stress anxiety is positive is constructive is functional then it is called the U-stress that is positive stress positive anxiety positive arousal, but beyond that if you are suppose you might have observed some people are very nervous very nervous before the exam they are prepared well everything is done, but if because of the high anxiety high tension high stress then performance unaffected. So, beyond that optimal level high arousal high anxiety high stress then they become distressed it is the destructive dysfunctional or damaging.

So, now, what is this optimal arousal? Optimal arousal you can say it is how does this explain our friends who wants to go to the you know clubbing every night. So, that is an example given here every night of the week and our roommate who gets overwhelmed by going to a bar once. So, this is the kind of what is the optimal arousal to which actually well everyone's arousal level are different there are individual differences variations etcetera. So, according to psychology this theory it says that theory is extremely personal and it is extremely personal individual and it may even vary over and the courses of a person's life. So, depending on its importance any factor any topic any component.

So, again it is related to person's life personal life means how much value the individual attached to that component. Some people are very keen to going to the nightclub. So, very highly anxious some people are you know just they just explain they are very casual. So, how much value meaning they are they actually attached to this goal. So, that is primarily may be that they want to be confined some people are know they do not want to go outside they are they are very much interested to be confined into the room and think of or doing and engaging them in their individual you know hobbies activities etcetera.

So, it is extremely personal and vary over the course of a person's life how much time how much importance you are giving it. So, depending on that your arousal level also be different. So, hence it might be change with the again it might change with the change in the moods. So, even though so, arousal level even though we say that the minimum level of arousal is required, but again it is related to our you know affective state our motivational state our inter it changes it changes with the mood. Like for example, we say that 'oh abhi mood nahi hai' it is right now it is not the mood. I will I do not I do not feel like you know going to a bar going to a club party or there is any kind of ceremony etcetera.

So, it also changes with the changes in the mood. So, it may be high so, that is a high and low arousal activities. So, either way the you know either way the cravings we have to eat or certain desire we have to head for gym or one of a bunch of calories etcetera whether to go for a gym, whether to go for a party, whether to go for attending a ceremony or not all these are if it depends on our not just the moods mood changes etcetera, but also biological that physical fitness also. Suppose we are too tired, suppose we are too exhausted then we may not be a mood may not be positive to do or to engage ourselves. So, it depends on the individual's choices, individual lifestyle, individual emotional state all these things. So, high and low arousal activity high and low arousal activities for example, the activities that increase or decrease our level of arousal may be that or tea and the coffees or chocolates or having a short conversation over phone or just going through the music slow music etcetera it stimulates whether it stimulates our arousal level or not.

So, whether it prompts us to get engaged get more motivated or get engaged in the deep learning etcetera or not that it is that is again it is also very personal. Stimulating and challenging activities are considered to be high arousal like when for example, when we seek for some kind of vibrating stimulating factors like having the strong coffee tea music or maybe some listening to some kind of motivational speech or some kind of spiritual or the very soothing music. So, these are kind of things now considered to be the high arousal because we are as because we are lacking that optimum or as the arousal level. So, we need we search for different motivating factors which can stimulate you know our mechanism stimulate our mental impulse to engage ourselves in that positive activity or the high performing activity.

Now, the next is another theory is the expectancy theory. Expectancy theory actually says that this theory suggests that the motivation is not primarily matter of being pushed from within through various vigors or the drives or the arousal etcetera rather it is more of a question of being pulled from without expectations of attaining the desired outcomes. So, expectancy that is what do we expect. So, here expectancies of this theory says the motivation is not primarily matter of being pushed or drive only it is not the reason is the not only biological biological need or drive etcetera, but something related to related to expectation external expectations of any desired outcome and of any positive result etcetera because of that also motivation takes place ok. As you can see expectancy is the effort here expectancy is the effort. So, will my effort lead to the high performance when it we related to performance achievement academic activities etcetera.

Here expectancy is related to effort. So, we expect can if I work hard for 10 to 12 hours before my exam can it bring positive result for me high performance can it read to the very good CGPA for me. So, will my effort lead to high performance this is a kind of expectancy expect expected learning behavior at some goal. So, on the basis of then we mobilize we start making effort. Then instrumentality instrumentality is performance it becomes plays an mediatory or

a kind of performance the will be the performance lead to the outcome. So, here performance with our effort performance instrumentally plays an role of instrumental to instrumentally mobilize mobilize the performance towards the positive outcome.

And here the result is the valence is that rewards. Rewards do I find the outcomes desirable as per my expectation if I work hard for this can I get the desirable result or rewards can be can it be satisfactory can it be a very positive reward. That means, with the reward what is the level of valence that means, where we are happy where is satisfied or not that is related. So, this is a kind of theory relates to expectancy that is our expectancy about a goal and with that expectation we make the effort. Then in our performance actual performance it plays an instrument role of an instrument to mobilize that performance towards leading towards the outcomes. And at the end when we get the reward outcome then whether that whether this do I do we really find that outcome desirable satisfactory or not that is the degree of valence that is the satisfaction level of satisfaction.

So, this is the basic you know basic structure of expectancy theory. So, expectancy theory basically it states that the person behaves the way they do because they are motivated to select that behavior. So, primarily in learning behavior we make effort hard work we strategically prepare our learning material content etcetera. We participate in various kinds of teamwork projects because we are self motivated and we act we are highly motivated because by engaging our self in different kinds of activities then we not only expect, but we also try to achieve that. So, here it is a this theory is based on certain assumption as like for example, our behavior is based on making certain conscious choice from a set of possible alternatives. Like suppose if you have the 3, 4 alternatives then we out of this 4 alternatives when we make one choice because after mapping it that means, with mapping it with some kind of hypothesis some kind of assumptions like for example, if I take up this subject will I be able to score high will I be able to answer the question papers the complete the task satisfactory or what is my level of understanding or my ability of understanding and basic ability of that subject.

Also making it suppose when 4 choices are available making certain assumption and mapping it with our with the learners existing skills and competencies then he makes a choice once yes. So, according to the because again ultimately when he selects that goal he also maps it with the with the effort with preparation with content etcetera can it bring us can it bring me the high grade or the good success or the good job or whatever. So, this theory says that the behavior we choose will always be the one that maximizes our pleasure and minimizes our pain. Suppose so, that is the primarily it is very much relevant when the selection of subjects selection of subjects like for example, after just after schooling like there is very much you know confusion at that moment whether to go for science, whether to go for humanities or whether to go for commerce.

So, that is a very crucial stage. Similarly, before just entering into the job also after completing the grades or the education then entering into the job that is also very conflicting very confusing. So, here we have to make a choice suppose there are 3 or 4 choices available then we have to identify the right one and then we have to map it we have to assume it we have to hypothesize it can it really be helpful for me because here the subject nature of the subject, the content, the difficulty level, our ability to learn the subject to cope up with that requirements, our level of understanding of the subject then therefore, how much we can put in then the resources available then support systems available all these assumptions all these hypothesis when we analyze then we try to select the best one. So, but at the end when we whatever choices we have made when it can bring the maximize of pleasure and it can bring their

maximum positive outcome. So, that definitely this would be very overwhelming and it minimizes our pain or the stress. So, here you can say the expectancy is there. There is a believe that if we work hard, we will be able to complete or hit the target.

So, expectancy is this kind of belief. This kind of expectancy is target oriented, goal oriented and on the basis of our expectation we set the goal for ourselves. We set the things. So, these are actually when the individual makes conscious effort to set the goal on the basis of his or her expectancy and how much effort and how much of the available resources he can put in. Otherwise, he can also seek the help of a mentor, the manager, the guide or the teacher. So, now, I am stopping it here. In the next class, we will discuss it further.