

Psychology of Learning

Dr. Atasi Mohanty

Humanities and Social Sciences

IIT Kharagpur

Lecture – 32

Learning and Instruction (Contd.)

Hello viewers, welcome back to this NPTEL course on psychology of learning. So, in the last class, we were discussing about the different schools of thoughts and their orientation towards learning. So, now we will also now today now just now we will discuss about another interpretation that is the social and situational orientation to the to learning. So, it is the again social scientist and situational social and situational schools of schools of thoughts which have interpreted the learning and this way. So, according to them the attending to a behavior remembering it as a possible model of paradigm.

So, that means society situational contextual factors plays an important role and playing out like how it may work in different situations in context. So, and the key aspects of the observation learning is primarily like socially situated learning theory, social learning theory is primarily by initiated by Alfred Bandura like those who are the social scientist they give more importance on the social how they learn how the individuals how the children how the people they learn in the social context in the group context. So, their approach is that attending to the behavior in the social context and how the and it is also observing the model and it is also when the group members they play together they discuss together say they mutually learn from each other that is the the key aspect is here is the observational learning. So, observational learning group learning situated learning because situated learning is that the acquisition of certain forms of knowledge, but it includes the social relationship situations of the co-participation depends on the depends on it primarily the learning that takes place in the social context in the group context that is situated in the group context in the community in the and it is not just about the content, but it is about the relationship.

So, situation in the particular in the situational group learning context see a situational learning be situated learning because the learning is situated in that group context in the particular location and it is not just about the knowledge or concept, but it is about co-participation collaboration social relationship etcetera. So, knowledge learning that takes place in the social context ok. So, it makes no sense to talk of knowledge that is decontextualized. That means, without the situation without the group context without the social situation learning does not take place there is no question of analyzing the learning knowledge. So, no new knowledge and the learning are properly conceived as being located in a communities of practice like for example, suppose like a group like the group learning in group learning context when the people they are not only learning together, but they are sharing they are participating they are experimenting all these things. So, it automatically develops a communities of practice number 1 to 10 number 1 to 5 number of different practices of learning together different practices of understanding those things.

So, it is done group learning that is that results in communities of practice and it also situated in the communities of the learning communities in the particular context that is called the

learning communities learning properly conceived as being located in the communities of practice in the context of a group learning in the context of social learning where not just learning takes place, but also they are exposed to and all the members of that group that community they learn together and they get familiar with the different types of practices that they used to learn. So, learning is in the relationship between people. So, it is not showing the social context and the group context and learning lies in the relationship how much what is the type of relationship how much they share they how much they share they care they all this in this process only they learn. So, here educated they educated over that means, they say that communities of practice means they need to explore the people in the communities how and how all may participate in the full. So, how the learning takes place in the group learning context.

So, it is more of collaborative learning more of cooperative learning here is the focus is that the educator they will they will instructor will look into how all the members in that group context are learning it is not just about one person or two person how all the members involved in that activity involved in that communities of practice how they learn together how they participate. So, it is about people in the people in community people in the society people in the group ok. So, and there is an intimate connection between the knowledge and the activity activity. So, knowledge is the acquisition of knowledge at the same time activities the learning is a part of daily living such as the problems are being learning from the experiences etcetera. So, when we talk about situated learning even our like for example, whatever we are learning in observation through observation in our family context also because it is the context it is a situation.

So, whatever we are learning in the in our family relationship that is one aspect when whatever we are learning in the schools and colleges in our group in our classrooms again that is the situated learning whenever we learn something in our workplace again that is situated. So, learning they say that learning at the process is situated in the group in the community in the in the in the society that it has a context and that context describes more whatever what type of knowledge how the knowledge and learning has taken place that is the context social context. So, situational orientation society and situations are social and situational orientation is more important how the people learn in the social context. Then next is constructive and social constructive orientation is again a part of you know how the knowledge is being constructed constructed by the individual by the number of individuals because constructive approach is more of you know learner as a construct active not only active learner, but active creator of knowledge ok. So, learning as a mental activity knowledge is created and it is created by the active learning process here individual learner is active as well as the group of learner learners are also active it is individually happen it is also socially happened, but the output is that means, it is the process is constructive.

So, social meaning created by each learner and the social meaning is created by social and active learning and when it is created by the individual learner it is the personally created. So, learners do not transport the knowledge from the external world to into the memories, but rather they build the personal interpretation of that world based on their individual experiences and interactions. So, individual learner can also experience how he is understanding how he is getting the information from the activity from the real world experiences and he tries to learn it capture it either individually or in the group context ok. So, it is not information is not coming from the external world it is being it is being learned by being involved in the situation. So, they and that is at the build the personal interpretation of the world based on the individual experiences or interaction with others.

So, human beings construct the knowledge by giving meaning to the current experiences in the in reference to at their own past knowledge. So, in terms of they we save it we learn it in terms of cognitive reframing that is changing the mental structure modifying our existing knowledge modifying interpreting our experiences our belief systems our attitude all these things. So, we try to try to store it remember it in terms of mental structure new schemas new experiences and its interpretation and with new beliefs and you know ideas and philosophies. So, it is based on the assumption that the sources of the person's understanding of external phenomena is in the person's mind. So, here it as because the learner is a constructor or creator of knowledge hence it is believed that the person's understanding of the external phenomena whatever how he interprets how does the individual interpret the environmental the different content context or different stimulus in the thing it will actually lies within his person's mind.

Because as per his understanding as per his personal belief as per his own personal past knowledge he interprets it because he is the person to maybe that sometime he may unlearn something he may modify something he may reinterpret it he may add something more. So, it is the construction creation of knowledge. It lies within the individual or the learners mind it is there within him because with reference to his past experience with reference to his own understanding he interprets or creates the knowledge. So, mind is viewed here as an active participant here the learner's mind here importance has been given more to the more it has been given more to the individual learner and primarily in the cognition part mind therefore, the mind is the active participant and it helps the people in making sense of the reality whenever the because same situation being experienced by the different individual will be interpreted in different ways ok. So, that is a mind is more important it is acts as a view viewed as a active participant because and it helps the people in interpreting the reality. So, children's ability should also be assessed in that way under different working conditions.

So, it depends again on the engagement participation social and cultural. So, children's abilities so, the more in different they get exposed to different kinds of cultural background different and social context types of participation there in some or whether they are participating how they each and every members they are participating how what is the level of their engagement. So, all these depending on this factor the children's abilities can also be interpreted in that way. So, constructive teaching here primarily involves the students in collaborative groups such as cooperative learning reciprocal learning mutual learning peer tutoring peer learning long term projects long term projects. So, group learning whenever the all the individuals individual learners or group of learners they are working together in a collaborative way cooperative way they reciprocate they exchange their thoughts they reciprocate with each other not just they learn about here in social context situational theory is that that is that means, they primarily emphasize on the relationship social relationship, but here cognition is important, but as a being a part of that collaborative process cooperative process learning process they learn together and they interpret their own ideas is here mind is cognition is more important, but in social constructive theory it is the social relations situation is more important here mind is important, but how do they interpret how do they acquire perceive how do they exchange reciprocate and how do they collaborate all these things.

So, here their cognition their understanding is more important. So, it is constructive and social constructive either created constructed in the social context while learning together or individually being constructed ok. So, that is the social constructive orientation towards the learning. So, these are the so, when we talk about the learning as a process these are the you

can say these are the inputs these are the variables that are enforced from where we receive the information data information data etcetera. And the process what we do with those information these are the processes that is mental mechanisms processes like whether we acquire it simply remember it organize it retain it recall it or apply it or communicate it what we do with that information that is these are the processes and these are the outcomes these are the outcomes maybe that after processing after processing of processing in the working memory then how much we retain in the long term memory then again at the time of requirement how can how much we can retry how much we can reuse.

So, these are the output of this thing either in terms of trend you know competency development knowledge learning resources skills competencies communication skill or attitudinal change certification where what is what are the learning outcome that is the output. So, this is the basic learning process. So, and in between feedback at the time of processing while processing the information feedback is very important and is a two way that means, whenever we are getting the feedback again we are acting upon a working upon it. So, it is a two way feedback. It enhances the processes and from the processes also we get the feedback. So, it is a mutual kind of things.

So, this is the basic you know structure of the learning as a process. And the factors that affect here, the factor that affecting the learning is the first is definitely individual variables the individual who is the learner is the learner learners variable learner's characteristics individual learner's characteristics that is the individual variable and what is the task what is the learning task at what is the topic what is the subject what are the learning variables that is another important factor and the environment. This is the basic structure of any instructional environment learning instructional environment. One is the environment variables like you know learning context. So, context is equally important whether in the classroom situation it is the whether it is the field based education whatever it is the what is the infrastructure what is the ecosystem what is the environment that is the contextual variables. Task related which is the actual content the objectives the goals the instructional objectives that is task related and that is the individual characteristics.

When all these things interact with each other interact with each other then the learning takes place it may be in terms of training in in terms of learning outcome in terms of you know behavioral changes all these things. So, this is the the three important factors one is the individual learner himself his characteristics his features his past knowledge his competence all these existing factors learn the nature of the task the content itself topic and the environment that is the context in which context actually the learning takes place the classroom environment.

So, then these are the factors now besides these things there may be other factors in the intervening variables there may be some variables which are you know which can affect which can change which can moderate. So, variables what are the factors that affecting the learning first is the individual when we talk about the individual variables that learners features learners motivation etcetera learners interest his perception his past experience his learning capabilities like the general intelligence of grasping understanding the things endurance his patience actually endurance and sustenance the patience and his personal factors any individual choice preferences etcetera and his ego that is the part of the personality like if he thinks that like for example, how can he sustain how can he endure for a long period of learning because unless and until he thinks that it is available it is relevant for him. So, that is the kind of ego personality factor that comes in whether it is meaningful for me or not that kind of sense ultimate sense of

sense of being sense of learning sense of being an individual learner etcetera.

So, these are the individual variables that is the learners variables task related variables is that objectives of the training suppose training program or any course program whatever what are the actually instructional objectives. So, objectives at the end of the training program the students are supposed to learn these things these are the instructional objective. Then what is the trainer's competence who is going to teach who is whether the instructor the teacher the trainer who has done his or her competencies their abilities. Varieties of experiences whatever experiences that means, experiences and exposure we are giving to the learner in different context that is variety. So, that is now we are using it multimedia we are using the hands on experiences we are using the technology we are using different kinds of you know even elements.

So, the varieties of experiencing that we are providing to the thing and the communication gap whether the type of communication the teachers trainer and student teacher learner communication is there any gap or communication is very lucid and very clear. Rationality that is the logical validity of that thing rational thing or rationality is the significance and logical validity of that thing. Task overload, but in comparison to the time period whether the task whatever the learning content whether it is overloaded or just optimum that we have to find out that if the task overload with short period of time if we are giving more information then it creates the cognitive load. So, task overload with the task how to optimize it then intervention then any other further intervention further help further helping mechanism further you know reaching out to the reaching out to address the queries all kinds of thing what are the intervention that are being used intermittently. And the environmental variables yes definitely the ecosystem the ecology the environment the context space ambience definitely ambience then the conducive environment in terms of you know in terms of ecological factors that noise getting rid of getting rid of noise getting rid of noise then lighting the you know temperature all kinds of the physical environmental things decorum ambience and then ergonomics related to whether ergonomics that is related to its utility its utility then amenities available then local visits like to give them some kind of varieties of experience and exposure and the service quality like the how the hospital service quality it is like related to hospitality in other kinds of facilities being provided.

So, this is the these are the environmental variables. So, now we have already discussed about the different types of learning now these are basic just active versus passive learning. Active learning is more refers to the learning that they gets the students to learn through the doing it actually getting involved through experimentation through learning by doing learning by playing learning by experimenting active learning. Passive learning is primarily you know it is the teacher centered with more teacher centered and the learn the students learn by just collecting the information the memorizing the information or passively watching and observing and sitting and listening to the information. Similarly, shallow processing the way we learn the things whether in the superficial level some surface level that is shallow learning and the deep learning when we actually refer to the actual objectives then detail out we need we learn by doing it solving it getting into the depth of the thing thorough understanding then self checking and self analyzing self checking self evaluating things all these things in deep learning that is we were going into the depth. So, that is the basic structure of different types of learning. Now we come to the learning style.

So, another is the learning style. So, every individual learning what is the learning style every individual preferred choice, preferred choice like mostly visually some learners we prefer to

learn it visually. So, we are the visual learner that does not mean that we cannot learn from auditory or by doing it something, but maximally we learn through visually through visual visually going through the text pictures graphs etcetera. So, we primarily depend more on or whatever we learn from the visual exposure visual mode we remember. It is remembered better. So, that does not mean that we are deficient in the thing is that, but that is our preferred learning style that is our dominant learning style.

So, in this way the learners can be categorized into different types of learners depending on their preferred learning style. So, here learning styles is that visual learning styles auditory learning styles kinesthetic that means, who love to do learning by doing practically reading and writing people some people are there they can very well remember understand the things when they read themselves and write it down logical and analytical learners social linguistic learner learners solitary learner and the natural nature learners. So, these are the types of learners now we will just go through each each type of learning style. So, visual learning style visual learning styles. They prefer to take the information visually. So, visually that means, primarily in terms of concept mapping primarily in terms of visual diagrams graphs charts visual aids patterns shapes.

So, they try to remember or they try to learn or they learn remember better they learn better in the visual things. If you can represent it the same learning content we can represent it through maps through graphs through diagrams through charts visual aids and patterns then say they remember it better that is the visual. So, the best way to present this kind of visual learner is by showing them the type of relationship of different ideas like after the after going through the discussing all the lesson at the end when if you can summarize the whole lesson in terms of a map in terms of a flow chart in terms of a diagram then they can learn better because they by with one capture of that visual input visual information they can remember and memorize the whole the whole lots of not just information and their relationships. So, usually and it is also judicious to prepare the flow chart at the end of the thing flow chart and in the text book also different kinds of you know tables diagrams pictures are there and mind maps concept maps are actually these are the learning strategies for enhancing the visual learning style. Then auditory learners they primarily they learn maximally by listening to.

So, information in the auditory form by listening to or by speaking by uttering by speaking by explaining vocally loudly explaining something reading aloud sorting their ideas after speaking. So, they read aloud read aloud and self talking. So, saying that the things will aloud understand. So, they can better understand it and even by through by listening to the you know audio records audio records audio content.

So, they will they can learn better. So, that is the they. So, the auditory learners they best learn when the information is presented through strategies that involves talking lectures group discussions or audio lessons etcetera. And they can benefit from repeating back the lessons because like primarily through this video lectures through video lectures video lectures they can repeat it they can they can go through it again and again by listening it again and again. So, that is the from the auditory input they can their system they can remember more. Now, kinesthetic learning style is that learning by doing the hands on experiences when with this kind of learner if you give them some more kind of tactile experiences to understand something by learning by doing then.

So, they remember better. So, another category is the reading and writing style. So, the information best when it is in the words they prefer to go through the read the text go through

the text because for them text books text format is more important more powerful than any other visual and auditory. So, they individually they would prefer to go through the books text again and again read it out and then after that they summarize they write it in their own words and summarize it. So, they. So, the individuals they perform actually very well on writing assignments they go through it go to the text content then write then write it down.

So, they are very good in the written assignments. So, it would be best that is it will be good to help them in describing the chart describing the chart even though the diagrams and charts are there, but to elaborately describe to describe it narrate it and through the written quizzes also giving them the written quizzes written assignments they can learn better. So, both reading and writing. So, they want to read it themselves then write it them. So, their preferred writing style learning style is that. Then another is the logical and analytical learners.

So, they the analytical skill is to understand a particular subject that is the connection between the concepts causes the factors the patterns what is there. So, to analyze they want especially you can say the mathematics as a subject science subjects which requires engineering subjects which requires more analysis. So, when different component concepts are interrelated the cause and effect relationship the type pattern of relationship the connection the intensity the degree all these things when it will be analyzed thoroughly they can learn it better. So, in this context the teacher can engage such kind of learners motivate the analytical learner by giving them some questions that require more interpretation and materials that activates their problem solving skills doing it themselves stimulating the students to reach to the conclusion based on facts or the reasoning let them allow them to analyze and interpret in their own way and then come then call them and discuss with them. So, in this way you can give the feedback and so, it ignites the analytical skill unless and until they themselves analyze they just cannot remember it by memorizing it or mugging up.

So, another is the social and linguistic learners. So, these types of learners they favor the educational lessons that includes the peer work participation group learning peer learning peer learning group learning. So, social and linguistic learners they get the two things out of these things what is the socializing they would love to interact socialize all these things and in this process better they better understand the subjects. So, when they discuss with others they narrate it they explain it they listen to others by all these saying all these things to the group members to the peers in the in the group situation they learn better. So, socializing and explaining narrating so, that that enhances their understanding.

So, better understanding that there is here in this situation the teacher can motivate them to by giving them some assignments like role playing group activities encouraging the students and interaction giving them some kinds of assignments which they can volunteer they can they can collaborate they can collaboratively do it they can share by sharing the stories sharing the stories sharing the experiences out of which learning the contents that kind of social and linguistic. So, language is the media language is the concept through discussion the language is the main major input and the in the social context social and linguistic learners.

Then the solitary learners as you know as it refers to solo learners individual learners self learners. So, they prefer to stay alone and learn the things. So, unlike the social learners some people they prefer when they are alone to sit alone sit alone they independently independently want to learn then prepare the things.

So, solitary learners they prefer to study alone without having any interconnection anything from other. So, they because they are they primarily focus on their own understanding learning when they are alone ok. So, individual work is the students for that means, it is individual whatever they do whatever they acquire whatever they understand whatever they produce it is their own interpretation individual outcome individual contribution. So, here the teachers you know this kind of things teachers they required the that means, the teachers also should give them some kind of you know individual work in terms of diary writing in terms of summarizing in terms of journaling whatever something some individual work to be given to them. And some problem solving recognizing the students individual accomplishments should be also be included like for example, they, but thing is that every learner that means, how to address how to deal with different types of learners.

So, what is the solution because in the general classroom for example, that is why we are using multimedia is that means, multimedia is not just a teaching aid, but it also caters to the needs of this multiple different diverse learners diverse learners. So, it will be with the visual things with the auditory components are there with the you know some hands on activities will be there some assignments will be there I mean even the individual solo learner can also go through the video. So, that in this way the learning and the learning and instruction has come up with the innovative practices innovative pedagogies. So, so, solo learners you can if some solo learners individual learners in they will be given some task you know you observe all these things classroom environment etcetera then you summarize it they can do it. So, so, they prefer to learn loans because they can focus more on their own understanding.

So, that is the these are the solitary learners. Another type of learner is the nature learner who prefers to learn in the context of nature. So, nature learners you know ideal study of environment is calm and quite relaxing environment. So, and if we compare the nature learners with other type of learners it would be more of tactile learners that learning by doing the need the some kind of physical touch physical input physical you know information. So, the only difference is that the nature part of this deal is as nature learners need to be outside to learn better. That means, not in a very closed compact room in the within the classroom, but in the outside external environment.

So, while learning in nature may not always be possible because we are confined to you know classroom environment etcetera, but giving some kind of assigning some hands on activities some projects some outdoor tours or giving some assignments which involves a nature using the nature as an example explaining the nature new lessons. So, that can be very helpful for them. So, that is the if you suppose for example, in the Gurukul you know Gurukul as from Gurukul teaching system you know the classrooms are being organized under the tree. And every second every second period it the children this goes around and changing the atmosphere changing the classroom that you under the tree even it also gets changed with every period. So, that is a kind of naturalistic education system where nature gives an nature give plays an important factor especially you know as from schools of you know Rabindranath Tagore or any kind of you know Gurukul system things where the children's being taught in the natural context under the trees creating the classroom in the natural environment.

So, and then now we will come to the instruction. What does instruction mean? We will start it in the next class. Now, we did the different types of learning styles up to this point. In the next class we will start with the instruction. What does instruction refer to? Thank you very much.

