

## **Psychology of Learning**

**Dr. Atasi Mohanty**

**Humanities and Social Sciences**

**IIT Kharagpur**

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### **Psychology of E-Learning (Contd.)**

Hello viewers, welcome back to this NPTEL course on Psychology of E-Learning. We were discussing about the important factors and characteristics and features of e-learning course designs. So, now to continue with that we have to before now we have already discussed about you know feedback how it should be designed etcetera.

Now the thing is that we have to ask sometime from time to time we have to ask relevant questions like what key pieces of knowledge they will be absorbing, how we are going to design, map the measure the or assess their learning outcomes, what could be the expected learning instructional objectives, how to translate it, how to break it down into the into the assessment skills. All these things what can they do with all these newly acquired information these questions we have to ask our self as the instructor before actually planning or designing something.

So, people have an inherent tendency need to learn and experience the new thing that is the thing, but how to capture that curiosity, how to capture that insightful that insights insights or self sufficiency in creating abilities, creating activities, learning activities, how to satisfy their curiosity for learning, how can we satisfy their you know their in their questions their queries. So, how the inquisitiveness and how can they feel that 'yes you are self sufficient now' to so, because we can carry forward we can carry forward to use these things apply this in our in our life. So, and another key component of this particular psychological principle also like how to satisfy the needs achievement need of the learners. So, how that is the principle of experimentation principle of experimentation like the learner wants to experiment it validate it try it out by doing himself.

So, that is the this is the kind of you know give them the real life experience. So, so, before this are designing the activities that require the learners to apply already learnt knowledge to solve the problems and allow them to increase their comprehension for a given topic by experimentation by by actually real life applications that we have also to keep in mind before designing a course. So, from time to time we have to engage them in group exercises or the learner must also the after going through the courses they can also create their own blogs and discuss the particular topic with the with the different experts etcetera. So, and develop an e-learning presentation also to delve into the idea of the theory etcetera. These kinds of things also can be created can be created or given the opportunity should be given to the learner to keep create these kind of situation with their peers.

So, how to so, how to satisfy their inherent need achievement need and then the curiosity their inquisitiveness for the for acquiring new knowledge applied knowledge significant knowledge and how they can experiment on it and apply it. So, these things have to be taken into account before designing the course. So, applying the psychological principles before developing an

e-learning courses that is we have already discussed a little bit like tapping the power of subconsciousness for the e-learning courses. That means, their intention their motivation their achievement need how then how it can we provide them an immersive learning experience how can we engage them significantly how can we inspire them to learn more better how can we encourage them to you know to set their career goals to imagine to develop their own career goals long term goals and future learning goals. And how to again how the learner can visualize that whatever they are going to learn or their learning they can use it in the real world.

So, what are its relevance and usability or the real world applications then different again how to then hence we have to we need to develop different kind of learning goals performance goals learning objectives. It is not just about the content. So, before designing the thing in the learn in the course overview in the course objective we can say there are different types of goals develop learning goal is there for the sake of learning performance orientation performance goal skill development goals then knowledge acquisition goals and all kind of goals. So, different types of goals and objectives to be specified. So, to be basis specific and detailed and as a detailed course outline with the timelines etcetera. And again at the at the end also in the in the course also we have to signify specify the expected learning outcome like after going through the course what are the skill sets what are the piece of knowledge what are the information they are going to acquire they are going to learn they are going to develop and they are also going to utilize it.

So, the skill sets the piece of knowledges into both interdisciplinary trans disciplinary and etcetera and what can they do with this knowledge and information and skills. So, how it can enhance their career prospects scope their earning ability their professional skills their all their even achievement needs all kinds of things. So, that is not that all these things would be designed should be taken into account. So, we have already discussed about the positive enforcement is a very powerful tool. So, from time to time feedback should be given feedback this knowledge of the result their improvement their progress their in terms of either in the praise mode in the praise mode motivational mode or even in sometimes you can use some kind of credit score some kind of extra credit.

So, to sometimes by designing the game also we can in which the learner also level of after a they have scored a high enough. So, using the game from time to time also it is a kind of motivational factors. So, immediate rewards immediate rewards immediate feedback actually gives a sense of satisfaction that is the instant gratification as well as the long term goals are also the benefits that can they can retain they can receive after acquiring the new knowledge and the skills. Similarly, the learners also they gravitate towards the collaborative experience they always look forward to develop a networking group network professional networking they then friends and the peers and the you know even the looking for the mentors and the guides all kinds of coaches. So, they are also very much they saw how to integrate the social interaction in the in e-learning environment and not just for the sake of only classroom discussion and content discussion, but also future a future a prospects.

So, how to create the collaborative experiences by combining by using multiple things that is also that is also very important because this it it has a it it is very much relevant for the reinforcement how we can extensively use that tool this kind of thing factors as a positive tool of reinforcement and motive and drawing their motivation towards the course. So, all these things are again the how they can relate the relate the information how thoroughly we have to also analyze thoroughly the audience the target audience their cultural background their professional background educational background and accordingly customize the content for

them. So, and similarly and learning is ultimately governed by the psychology principle because ultimately we are dealing with the human beings. So, all the context here the context may vary, but the human psychology remains the same. So, we have to understand how the how our brain and our learning behaviors they dictate how much we learn why we learn.

So, through storytelling. So, in to begin with some kind of introduction by giving storytelling method we have to again how to how can we engage our self through all multisensory method by using all our all our sensory organs then. So, that is why and e learning is still evolving still developing still growing up and every day every day some new additions are coming up new and new additions new tools new apps new strategies are all coming up. So, these are some of the factors that ensuring the optimum implementation of e learning as we have already discussed about this factors like motivation is most important factor to push the individual for starting for beginning for retaining their attention motivation and complete the course self strong self motivation. Then yes of course, emotion is emotional involvement emotional involvement emotional intelligence because emotion regulates our motivation and that also moves on towards a good performance.

Then it also retain the enthusiasm pride all kinds of thing as you can see the different factors to different factors how it it these are the these are factors that is relevant for e training e learning implementation starting from language to awareness to content to you know resources also computer resources the technical skills basically in the computer literacy and etcetera difficulty in engaging the learner. So, these are the factors to be taken into account also at the same time self discipline self discipline is very important because the learner has to be independent he has to self regulate his own academic behavior and that is why e learning gives the learners enough freedom, but how that freedom and freedom can be utilized properly. So, you have to get you have the learners they have they are receiving the freedom of studying any time anywhere any as per their choices, but at the same time how can you how can the learner use it prudently how can they be self disciplined how can they use that freedom and flexibility prudently how. So, for that matter they need some internal discipline some internal discipline can be achieved through self reflection self reflection then focus then goal setting proper goal setting etcetera. The social skills like the social skills are good behavior good habits and then ethics and then the spirit of collaboration then empathy sympathy good listening skill then sharing the knowledge self tutoring peer tutoring all these things actually these are also the part of the collaborative system learning system that has to be developed also.

Stress is that stress is that a person will experience stress in the learning process if they learn only by one way or the individually. So, in order to avoid that avoid that is that is why social interaction is very important if he is studying alone and he is feeling lonely that I am the only one only learner. So, he feels stressed. So, for that matter social interaction adding the social interaction discussion all these things are very important. So, of course, so that can be often sometimes what happens that is that in the traditional this thing actually the why when the learner only studies on his own without the social interaction or engagement he feels very bored bored and that is the that is the disadvantage and how to compensate it in comparison to the traditional classroom where first face to face learning face to face interaction it it can also motivate the dull students or unmotivated student etcetera.

So, so the in the physical classroom actually the teacher can motivate can engage all the students even if those who are not attentive you know because there is a face to face interaction face to face contact face to and the group situation and group group interaction

that happens in the physical situations, but that is the biggest thing that is the most important challenge in the e-learning platform. So, now, now we will come for the instructional design because instructional design is all is there for every for physical training also as well as it is the same for the e-learning also e-training. So, nowadays you know nowadays all the organizations corporates they are doing these training programs online training programs online training programs. So, for online let us see for the online training programs what could be the modus operandi what could be the effective design. So, all of us we have already known about the ADDIE model ADDIE instructional design model.

So, so similarly this program this program can be introduced can be implemented in the online training program also because and so through it is perceived as an adaptive hypermedia system applied to the online education. When we are going to add put the ISD format instruction design format for the e-learning then we have to develop we have to update ourselves with some technology also like adaptive hypermedia and other kinds of links etcetera. So, adopt we have to make it you know we have to in order to customize this training program we have to adopt some mechanisms also. So, we tend to cover them through you know in the modern era and through them constructive approach that is freedom of choice constructive approach. So, here the learners are allowed to choose what they intend to do what type of learning they want to trainings they want to go to they want to do it.

So, they can predefine their learning path carefully track it follow the program instruction design and really they can find out the really good e-learning courses. So, when we compare the different kinds of courses being offered by different organizations different universities etcetera we also always compare the technical processes also the there the speed the pace the requirements all these things. So, instructional design for e-learning actually is based on this primarily based on the user feedback user friendliness. So, behavioristic approach primarily behavioristic approach and it begins with the basic assumption of the assumption that knowledge is objective and meaning and that only one correct answer can be. So, if you adopt the objective approach to e-learning behavior or instructional design here learning knowledge acquisition knowledge as the knowledge any piece of knowledge acquisition is actually is an objective is a goal is a is very much is a very much strategic objective and the goal and we have to how to achieve that.

So, here there is nothing there is no opinion no bias nothing, but it is either correct or incorrect. So, here in instructional design primarily behavioristic approach has been has been used extensively and because and they also follow certain assumptions certain objects or techniques what are the techniques to be used for used for instructional design as we know there are different models of ISD's. So, one is ADDIE models and different authors also they have also they have also developed their own models. So, now, the basic features of these ADDIE models or the instructional design models are the discrimination.

What is the discrimination? So, in the this when the learning objective requires like for example, behavioristic we have to we have to translate all these learning objectives into a behavioral mode that means, which can be measurable which can be achievable which can be accessible.

So, first thing is the discrimination when the learning objective requires the learners to identify whether the concept belongs to the specific category that means, because the learner has to classify it categorize it. So, identifying the key characteristics and the qualities of the categories how their learner are identifying it all these things should be the should be very

clearly mentioned clearly given. So, sometimes what happen options will be options will be available, but the learners are required to drag and drop into the drop into the box. So, the correct answer or drag and drop some kind of some activities. So, how how clear how clear the learner is in his understanding that this is actually the most appropriate one.

So, discrimination ability, generalization ability. So, it is suitable when the learning objectives are given like the learners identifying after identifying that rewards of an item belonging to one category or other category. Now they are expected to assign the some same attributes to all items within the category. So, that they have to use it as you can see they have to use it for the multiple categories of the similar group. So, the teaching through the examples for example, in inductive approach sequentially progressively improve an inductive approach of presenting the learning content from the simple to difficult from simple to complex etcetera.

So, learners also after observing series of independent online examples etcetera. So, they can also identify their own common characteristics they can generalize by formula by rules they will be able to solve similar kind of problems. So, generalization is very close to that what we do actually perceive it as an active learning and we can apply it in our day to day to day life and we can also it is it has a direct connection with the construction knowledge construction. By looking at this similar kind of examples how can we construct our own knowledge also. Now then the association, association is a is the example of conditioning how like in learning in conditioning you know artificially creating that conditioning, artificially creating that association can be established so that the learning happens.

So, association is an best example of conditioning in with the linking the specific stimulus with a specific stimulus that is unconditioned stimulus can be with a unconditioned stimulus any artificial condition stimulus can be associated. So, there is a tendency in today's e learning to create the e learning interaction based on associations whenever the learning objectives are required the new information presented to presented to be linked linked to the specific practical application the similar kind of thing. So, so with repetition with association that kind of learning environment it creates a kind of conditioning processes so that the learners will be able to learn acquire the new information similar in its practical applications. So, now the presenting the information within a context can also help the so that means, it has it has to be situated the that is called the situated learning. So, whenever we are giving a presenting a content or concept an item etcetera it is it must be given a particular context.

So, that is called the situated learning. So, context the background should platform should also be informed should also be given to them beforehand. Then chaining so, chain of response you know in in apparent conditioning also we have learned about the how sequentially in the chaining process progressively we are moving towards more accurate performance correct performance. So, here chaining is referring the learners automatic performance on specific procedures slowly and steadily one by one step by step then slowly is making the progress and moving towards the correct answer. So, like the chain one step leads to the learner to the next step.

So, one by one sequential with one by one he is learning how to move on how to learn how to acquire. So, primarily it is as the performing the drill task repetition task repetitive task. So, repetition drill task practice task these are the actual items of the chaining. So, creating the drill task also in e learning it involves presenting the theoretical model first theoretical given the model will be given then you will be given instruction you move on these to that to these etcetera. So, like the every step there is an instruction and if you follow that instruction move

on the chain of response and chaining process takes place.

Usually you can see in the in the even in the games also in the game some repetition up some kind of educational games also it happens. So, the repetition the online practice also helps the learner to reach the desired outcome desired result. So, sequencing the order exercises drag and drop kind of thing quiz making then instantly giving the feedback such exercises are actually the typical examples of the this drill task applied in the e learning course design. When suppose if the if the nature of the subject is something like you know acquiring the mechanical skills some technical skill some kind of skill based education content then in that way this is chaining when drilling exercises are being applied. So, now the reinforcing the desired and weakness seen weakening undesired behavior then behavioristic approach is the same thing shaping the behavior. How can we shape? We have to encourage the positive response desirable response correct response and we have to discourage. So, we have to discourage the undesirable or incorrect responses see really also instructional design also it is based on the as because it is based on the behavioristic approach the type of reactions to be received by the learners after interacting in the learning training online training material is also very important. So, the reaction from comes from the online instruction or the corporate trainer in the either in the lively live session synchronous live session setting or in the asynchronous mode indirectly or afterwards and that is through the discussion forums either in the live session will be receiving this kind of queries and questions etcetera or in the asynchronous mode through discussion forums or may be mails whatsapp messages etcetera. So, here the learners experience behavior may be enforced. So, how here again how this feedback can be extensively successfully utilized feedback can be utilized the intention is that how to reinforce the correct answers correct behavior correct learning strategies and discourage undesirable behavior. So, actions of the behavioristic principles in gamification primarily these behavioristic approach principles are being extensively used in gamification when we are designing the different kind of games. And now a days games are also extensively used in management courses in technical courses etcetera primarily to reinforce the certain desirable behavior and discourage the learner to follow other kind of irrelevant steps.

So, that the expected learning outcome actually happens takes place. So, and for how whenever we are designing such kind of things through gamification we of course, we take into consideration the consideration the adult learning theory how adults learn because it is here again andragogy what are the assumptions of andragogy. So, here applying before applying this behavioristic approach in training processes then we follow the theory of adult learning theory adult learning theory of e learning for the for the training instructional design for the training. Now here in adult learning Malcolm Knowles he has actually develop his own theory is very important and in his theory there are five assumptions. Five assumptions related to characteristics of adult learners when we talk about pedagogy how the children learn as per their developmental stages they have the typical trained and the characteristic.

Similarly when the adults learn how do they learn. So, there are five assumption about this and so applying the Knowles five adult learning theory assumptions are very relevant for the e learning. Now let us see what are these assumptions.

So, assumption one is the self concept self creating a learning experience that offer minimum instruction minimum auto and maximum autonomy. So, unlike the unlike the younger children's younger students design course design adult learners we have to give them the clear learning experiences we have to give them the clear instruction minimum instruction clear instruction offer them the minimum instruction, but in a clear form.

So, that they can maximize their own independence freedom and autonomy. So, that is the best assumption is that sense of self concept is that the adult learner is that is not that he should not feel that I am very much dependent on the course rather I have my own identity I know many things I am confident. So, to have that self to retain their self concept of the learner accordingly the instruction should be given. So, that is why the learning the learning support system to offer the guidance and help as much as it is required and adult learners require the new information build up on the existing by the time they learn certain new courses they are already having immense experiences. So, their backup is already there filled off with the existing knowledge and experiences.

So, whatever new things they are going to learn. So, automatically they will link up with their existing knowledge experience etcetera. So, they must be encouraged to explore the topic on their own. So, that means, a discovery learning approach a kind of problem solving approach should be and should be the strategy for adults because they are already confident already they have the means experiences they already know many things. So, whenever we are assigning them some task and the topics and etcetera we must give them the freedom to learn to explore to discover many more things on their own.

Assumption two is that adult learner experience they are already adult learners they are already mature they are already professional they are already they have already work somewhere. So, they have immense experiences and we have to treat them think before designing the courses that we have to think them they are matured enough they are grown up they are matured enough to learn something. So, to cultivate the life experiences and to give them some. So, they have already have the wider knowledge base etcetera. So, that is why it is it is best to include a varieties of different instructional design models for them it is not just to stick to one category one type of, but to allow them to explore further we have to integrate embed various types of you know various types of learning models.

So, assumption three is that readiness to learn. So, in the social media online collaborations and these are the different types of tools to tie the learning to the social environment. So, when we are designing something for the adult learners as a training module then we have to link them with the different social platforms like social networking platform online collaborative collaborations and anything new that is happening. So, this kind of links and tools should be provided to them.

Then the next is for the online collaboration the next assumption is the orientation to learning. So, now, we have to emphasize on how the subject matter is going to solve the problems that the adult learners are regularly encountering. Suppose for example, suppose in the professional and the workplace they are facing they are facing some kind of difficulties problems. So, whenever we are designing that training program we have to think that how this course this kind of course is going to help them in solving their day to day problems day to day problems at the factory at the market in the market or in the workplace etcetera. So, we have to address their problems. So, in designing the content we have to address the their problems they are facing on the in their day to day life in the workplace as in the regular professional activities.

The next assumption is the motivation to learn them how can where there must be valid reason for this course offering this course and so, the adults would be the professional should be very much motivated, they should be very unique, it should be very engaging and it should be very meaningful for their experiences professional experiences.

So, adult learners need to be feel need to feel that as if these are more involved in the process of the learning like whatever they will be learning they will gaining the gaining the information that will be very much relevant or helpful for mitigating their challenges in their work workplace or the work life. So, that must be that must be informed that must that kind of assumption that can be theme or objectives should also be there. So, then this is the thing now applying the Knowles' four adult learning theory principles of Andragogy the Andragogy that we have already discussed now must have an hand must have a hand in the design must have their experience would be the root of all the learning activities whatever we are designing experience should be based on the experiences. Then again we have to offer the memorization of offer memorization task some kind of instructions create the projects assignments. So, real life application must be there benefits must be tied with the e-learning courses real life experience real life applications then real life world benefits applications and the increase how to increase these professionals in engagement by integrating real life scenarios and the case studies.

So, that means, whatever we are designing for the adult learner it must be very much relevant for their professional life professional skill professional you know professional development or mitigating the challenges in the professional life. So, these are some of the similarly opportunity to observe the information these are some of the how to gain the practical knowledge. So, these are the some of the principles of Andragogy. These are going to be applied in the e-learning design especially for the instructional design module for the employee training etcetera. Now, I am just stopping it here. In the next class we will complete the other parts. Thank you very much.