

Psychology of Learning

Dr. Atasi Mohanty

Humanities and Social Sciences

IIT Kharagpur

Lecture – 41

Psychology of E-Learning

Hello viewers, welcome back to this NPTEL course on Psychology of Learning. So, today we will start a new topic that is psychology of e-learning. So, all of us are very much familiar with e-learning online education, online classrooms etcetera. Now, to explore more about this e-learning platform environment and what is the psychology behind it. So, to begin with now we can say the what is the definition of e-learning. So, e-learning you know as that means, it is in the simplest way it is that is the education that we get through technology online platform, electronic media, multimedia or through the through internet connection.

So, either through you know through the internet connections or websites different websites. So, to define e-learning now it is like any form of teaching training or tutoring etcetera designed to meet the need their students needs learners need at of any age group. They can be children, they can be adults, they can be professional etcetera. And to continue for their professional development, continue lifelong learning etcetera through different devices like mobiles, desktops, laptops etcetera using different multimedia resources, electronic multimedia resources, computers, different devices etcetera.

But the basic thing is that through internet connections or website websites that the websites, website technology, website facilities and the internet connection through which we can get the learning. So, learning through the electronic media electronics the internet media that is the e-learning. So, now what are the features that is yes in e-learning platform especially during COVID and the post COVID we have been extensively using this e-learning mode even in present day also as a part of its hybrid classrooms, the hybrid classrooms to enrich our classrooms, enrich our assignments, classroom teaching and discussion etcetera. So, I have been extensively using it and what are the basic features is that accessibility. Through this e-learning modality the accessibility of learning materials, resources, instructors lectures and tutorials, assignments, lab component etcetera has been increased like anything.

So, accessibility towards accessibility of the learning resources, material, experts, teaching etcetera through internet through internet through the websites via websites and the web links and the internet access. Now, it has extensively increased in the sense that every user, every learner at any remote place at any corner of the world can have the access to good quality education through this internet connections or the e-learning portal. So, accessibility has increased enormously user friendliness it is very because the all the learning materials are being customized as per the individual requirements. So, user friendliness and the even through the different icons through the links through the different you know icons logos etcetera it has been made it has been updated it has been revised again and again to make it as user friendly as possible. And social justice. Social justice in the sense that it is being equally distributed the access to good learning quality education higher education experts talk experts discussion experts you know you can say their advice their mentoring all these things are

equally distributed across the globe across the country and across the continent.

So, social justice has been ensured by providing equal opportunity and accessibility to good quality education to everybody. So, another feature is the personalization and individualization is of course, personalization in the sense that the different categories of learners are there as per the requirement as per the need as per the subject content as per the their preferences etcetera. So, that is it has been personalized somebody wants to do something on computer science data analysis he can do it something somebody else can do it and tourism he can do it. So, it is more of a personalization and has it has all these courses are being designed as per the personal preferences of the target audience. And individualization it is one to one learning also it is one to one learning that any individual learner can have the access to learning content lectures tutorial etcetera by having the access by possessing his own instrument in gadgets electronic gadget mobile handset what is the accessible and learner centered.

So, here primarily the e-learning platform primary focus is the target group target audience that is the learner. So, learner is the key component in all these online classroom platform online education platform. So, it is more learner centered in the sense that what are their needs their choices their preferences and then how to you know how to customize the whole course thing as per his understanding because it has been made in a very you know strategic way very an instructional design has been made in a very inductive way sequential way. So, at every level feedback will be self check exercises feedback will be given to the learner. So, that he himself can map his own progress at the same time it is also it becomes also very much explicit to the course coordinator also.

So, learner centeredness. So, individualization as per the individual preferences individual that means, every individual learner can have the access to this to this learning material classroom access their lab etcetera at his own convenient time and space. Personalization as per the personal preference of the learner and learner centeredness actually all together it revolves around the learners understanding his needs under performances his learner goals learners you know motivation everything it revolves around the learner. So, learner centred. So, open learning and life long learning.

So, it is again the learning environment is very open at any time at any point of time from anywhere in the world it can have the learner can have the access that is open learning environment and life long learning. It is continuation throughout the life anybody can continue on or other way. So, either through professional learning professional learning as a part of the profession or you know in as a hobby as a knowledge acquisition as the career development anyway. So, it is a life long learning. So, primarily the intention is to bridge the gap between digital divide like the haves and have nots like you know unless and until till that means, till internet has come up now before that technology has been has been an technology access has been a very luxurious item for learners and those learners have affluent learners having the having the they can afford to do afford to get this bandwidth etcetera.

So, they were only getting the opportunity for digital divide digital device as well as the online learning, but now with the increasing bandwidth and global with globalization and global access to internet connection being very cheaper and the and the in the consensus decision of all the governments etcetera. So, when internet has been made free and or subsidized given in the subsidized rate. So, now, it gradually slowly it has bridge that gap of digital divide within the society between the poor and rich from the haves and have nots urban and rural and you know the elite institutes and the rural schools etcetera. So, it has tried to bridge the and to to

a large extent it has bridge the digital divide within the society within the families within the communication within the same generation and it can fulfill to some extent the learners expectations. So, now, coming to the digital classroom.

So, it is the digital classroom is that as it is very you know latest mode of learning latest pedagogical concept latest sequence andragogy also like how digital classroom can be customized has been made very popular having all the features and it has completely changed the face of learning and education in 21st century ok. So, here the thing is that the thing is that unlike the traditional one traditional physical classroom situation etcetera like the teacher used to teach us teacher used to instruct us gives given teacher used to give us the task homework prescribed this book that books and provide us the learning content etcetera, but it is just opposite in the digital platform that is the learning resources immense learning resources are there and the access to access to internet access to internet connection access to different open source of learning material access to different digital libraries access to different elite institutions elite faculty elite lectures videos all kinds of things are freely available and anybody can have the access can get the access at any point of time anywhere in the world. So, here the primary thing is that is not just knowledge acquisition is there immense resources of knowledge the knowledge resources are there, but here the learner has to be learner has to identify at what do I need or what should I select what should I what is my choice or how can I enhance. So, multiple things is the like multiple things are available here the learner has to pick up what I intend to do or what will cater to my need, but it is not just what I will do, but how I will learn it why I am learning it all the query. So, it is more of learner students are asking self reflective questions about the knowledge acquisition.

So, mode of a knowledge acquisition the content the context its usability its applications its implications in different context. So, prior to getting into any online classrooms retailer classroom or any online e learning courses etcetera the students the students they need to evaluate they need to reflect on their own needs their own needs requirements their future plans scopes and how they are going to utilize this knowledge in the relevant field in the profession or career or anywhere. So, here and now the and having the access to personal computer personal tab or you know smart phones etcetera now it is a vehicle now. So, these are the these are the computer devices the mobile smart phones mobile you know tabs or the computers laptops these are the devices and which the any now the students are on the students or the learners can afford to can afford to get it. So, asking many questions before selecting any course or topic and then possessing this kind of personal device computer device smart phone etcetera.

So, this is the vehicle for the learning. Now, the so, the here the students pattern of learning are not found in the classroom. Usually what happens in the general physical classroom when the teacher was teaching or we are participating or listen to thing usually the teacher can predict teacher can predict what is going on in their mind what how much attentive they are or how what is the what may be the you know what may be the doubt in their which reflects in their face or what is the what are the they comfort and discomfort what are the why their attention is fluctuating or. So, their motivation level anything hit the teacher can very well easily map it can observe it can assess it, but in the digital platform this is very difficult to get it. So, what is the pattern of learning in which way the students usually follow that is very difficult. So, which are not exactly without going getting into the details we cannot assume it you cannot predict it.

So, the computer primarily accommodates the range of intelligence you know preferred to

means of learning impacting the students as students attainment here. So, here the device the computer device actually it accommodates all kinds of features to features to you know to measure to measure to evaluate students progress that preferred learning styles how much their understanding their you know their innovative thoughts their creative ideas all these things are being incorporated in the computer device to accommodate a range of intelligence and to map the students progress and level of attainment etcetera. So, however, so, this that is what is the psychology of learner behind the computer ok. So, a computer we design the course and feed it in the feed it in the computer or through float it through the website or the internet, but the thing is that before designing the course that again the learner is the same human being only the thing media the media is different, but the learner the learner ultimately the customer is the student the learner is the human being. So, same things the human psychology also plays an important role.

So, how can we map the psychology of e-learning or the e-learner you can say how can we map the psychology of e-learning student of a learner in the e-learning portal in the online platform or the digital classroom. So, with this regard the three again the three learning theories the major theory learning theories also theories are also being consulted are also taken into consideration before designing any e-learning course. Because here all kinds of the prominent theories like the behaviorist theory their approach is more of the behavioral observable observable behavior or change in the behavior all kinds of. So, their approach is more concerned about the environment learning environment the context and the social interaction social interaction from where we can map it we can measure that yes the learning has taken place by observing their behavior. So, by utilizing the behaviorist theories that in an environment and social concepts.

So, here you can see the computer software are being software computer software interface design is being prepared then interactivity and feedback how to incorporate student learners interactivity or to teach a student interactivity and the feedback instant feedback knowledge of the result how it can be incorporated in their design. Again similarly the concept of incentive in terms of reward and punishment you know through the course like the credits credit scores the credit points is this point how to put the incentive as a reward system and punishment system etcetera the like minus marking or the giving the extra credit point how it all these things can be incorporated. Similarly task analysis how the larger task can be can be broken down into different sub task and how it will it should be structured in the modular way then how it will be offered all this task analysis sequencing how to put it in a sequential manner in the inductive manner from easy to difficult from simple to complex format and how learning experiences can also be incorporated. So, all these things are taken from the behavioristic learning theories. Then constructivist learning theories. Their approach is more towards the cognitive cognition as well as the social aspects.

So, here we can say within the learning platform how e-training. So, when we are organizing some professional training course of the teachers or the professionals or the professionals how can as a part of how the training module can be designed in the online platform and the e-portal that is e-training while designing the e-training how can we incorporate the social perspective social networking how it can be things how can they personalize the learning as well as they develop they build their learning communities how can they interact how can they collaborative collaborate how can they discuss the thing you know in the discussion forum send the message instant message through whatsapp email and how can they write in the blogs then fostering the communities of practice like in the virtual platform also virtually also they can collaborate they can communicate then they can cooperate and they can also complete

certain things they foster the different kinds of practices communities practices and fostering the then again e-teaching is also possible in as a part of their training program e-mentoring online mentoring is also there online tutor is also there e-teaching module modules are also there is all these things. So, here the constructivist points of view approaches of the social behavior and cognitive behavior how these are also incorporated in the e-learning platform.

Then comes your cognitive first cognitive theories learning theories their approach is more towards the cognition yes intellectual development cognitive development as a at the developmental perspective how slowly and steadily. So, when the cognitive is and constructive is the collaborate their perspective common perspective like the cognition in terms of different learning styles intelligence and multiple intelligences all these factors also can motivation and engagement as you can see the this is the convergence of the constructive approach as the cognitive approach. So, how it can be incorporate the motivation and engagement learning styles different learning hats like playing the different roles intelligence general factor multiple intelligence these are again how these can things can also be included in the e-learning portal depending on the complexity of the task.

And when a cognitive purely cognitive psychologist or the theorist approach is that it is of cognitive development, but from the developmental perspectives. So, now, then the developmental stages of cognitive cognition emotional development then all other kinds of ethical issues and the personality traits moral development all individualized instruction all these things comes in. So, in this way by identifying the basic features from the different learning theories and how to in how these things these principles these psychological assumption how these things can be incorporated in the e-learning designs. So, the major so, that is that these are the mapping the major principles of psychology from the different major learning theories how these things are being are incorporated in the technology enabled teaching. Here the platform the media the context has been changed earlier which was the physical context now it is the online context of the digital context.

So, the major change in there in the digital context the learning context environment is changing, but otherwise how can we. So, as the environment changes the modalities also changes, but the anyway it is the human human interaction, but through a virtual mode human interaction the learners are there the tutor is there, but it is a human interaction, but the platform the context changes that it in learning, but the same principles there, but how to map those principles which are feasible for and how to how to integrate in the digital classrooms. So, all the essence things from the behavioristic constructivist and the cognitive theorists approach. Now so, the psychological dimensions of e-resource analysis and evaluation. So, here the learning resources are e-resources learning resources are e-resources how this e-resources analysis and evaluation can be done.

So, we can see that first thing is that how to construct the understanding. So, if you are designing the core psychological dimensions of e-resources. Resources are available, plenty available, but thing is that what is the level of understanding required for that. So, constructing the understanding level of understanding for the resources. Social construction how collaboratively the learner can learn, how they can interact, how can they socially construct the knowledge, how can they collaborate, how can they share the social construction approach.

Satisfaction and motivation the individual satisfaction of the learner individual not just the understanding and learning, but also the learner individual learner is also very much happy and satisfied. So, then again yes definitely development maturity the difficulty level of the

content. So, contents should be optimum as per the level of understanding of the particular target group. So, developmental maturity that means, it should be designed in such a way that the learner of the particular age group they can easily understand it. So, it should match with the learners maturity level developmental stage.

Then changing attitudes. So, how these e-resources how by blending the psychological dimensions how these e-resources can bring the change in the attitude of the learners. So, changing the attitude of the learner. So, when we talk about the mass learning or the you know informal learning etcetera. So, how it can change the attitude of the learners and the changing the behavior. Ultimately learning is that the change in the behavior bringing the modification, bringing the positive change in the behavior.

So, even the e-learning resources how can it bring the changes in the behavior. So, these are some of the psychological dimensions which are being taken into consideration before creating the e-resources e-learning resources and the may be its open learning resources or customized resources for the specific courses designed for specific target audience etcetera. So, these are the psychological dimensions of e-learning resources. Now, the characteristics of the e-learning is that e-learning is definitely e-learning is a very comprehensive term which implies the computer enhanced learning technology enhanced learning. So, it is purely restricted to it is purely restricted to online learning yes online learning.

Now of course, before this COVID pandemic also we are also using it as a technology as a tool and in hybrid mode we are also using it. Now with the with pandemic and with the fully fledged online digital classrooms not only you have we have that means, we have we have been very successful and we have been very techno savvy to innovate to innovate to create something some more software's more technology tools and etcetera. So, enable us to more lucidly how successfully we can take the completely digital classrooms etcetera, but it has also wider application in terms of not just it is it is beyond that post COVID this technology enhanced digital classrooms are just beyond the computer based learning using a computer learning and the digital classrooms e-learning resources is a completely completely different that means, it is outreach it accessibility it is implications has has has increased immensely. So, again definitely it is not it is even though it includes audio visual learning it includes multimedia it includes some kind of instructional design for distance learning, but it is something beyond that ok. So, here e-learning portal is that means, learning undertaken facilitated supported here that means, along with these multimedia e-technology features how it has been made how we can how it has been made more user friendly more humane and more futuristic more accessible more you know more simulated.

So, all these and how to how to add new features to make it more more lucid more simple more interesting. So, through different by I mean technology is being updated every every year every moment every time. So, how taking the advancement taking the advancement of technology how can we allow so, equally make our digital classroom our digital pedagogy our internet our e-learning resources how can we enhance the quality of the content quality of accessibility quality of user satisfaction and moreover user friendly communication system all these thing we can nothing we enhances. So, there are different types of e-learning it can be the text driven it can be the text driven again it can be interactive text driven is given in the text format etcetera interactive that means, it some in e-learning resources courses it has interactive component in the sense that they form the learning community they work they work together in the labs virtual labs they then they collaborate with each other in some projects. So, here more graphics chart diagrams videos interactions live sessions are being added.

So, similarly simulated environment also simulated simulation is also another feature in the sense that it makes more it is more it makes by introducing the similar simulations like making the digital thing is more lively more realistic more interactive it just like just the second replica of an of an actual classroom physical classroom how to make it as lively as possible as you know as close to as realistic classroom real classroom. So, different kinds of e-learning. So, they are also in using extensively they are using graphics, graphics videos audios and the latest and the latest tools technology tools also tools and games then charts chart works then different features or additional features. So, and the benefit of this e-learning is the potential is that it caters to the every one's needs that nobody that means, that is for example, every everybody should have the access and access to quality education. So, it enhances the inclusivity it enhances the quality of education and enhance the accessibility of quality accessibility of every learner every citizen towards the quality education.

So, and customer and cutting to the needs of individual needs of every learner every citizen every professional. So, it accommodates everyone's need it can be customized it can be personalized and individualized needs and needs are to be can be addressed very easily while making it more motivating more attractive more interesting more informative all kinds of. So, lectures can be taken multiple times for example, when the course learning resource materials are being designed. So, it can be repeated again and again it can be it can be accessed to any access to any content can be made at any point of times repetition practice all these things it also it also ensures the mastery learning. So, that this kind of easy access the repetition all this it also improves the mastery of the learning.

So, any even the slow learner can also be maximally benefited by replaying it again and again going through it again and again and scalability is also very high it can begin with the basic primary or primary fundamental things starting things to the enrich most enrich contents communicating the new training policies to difficult concepts to different ideas to different formal educational things as I saw. So, scalability it can be increased it can be scaled up to at a scaled up to any level depending on the requirements of the learners and the stakeholders. So, now I am closing it here. In the next class we will continue with other benefits of e-learning. Thank you.