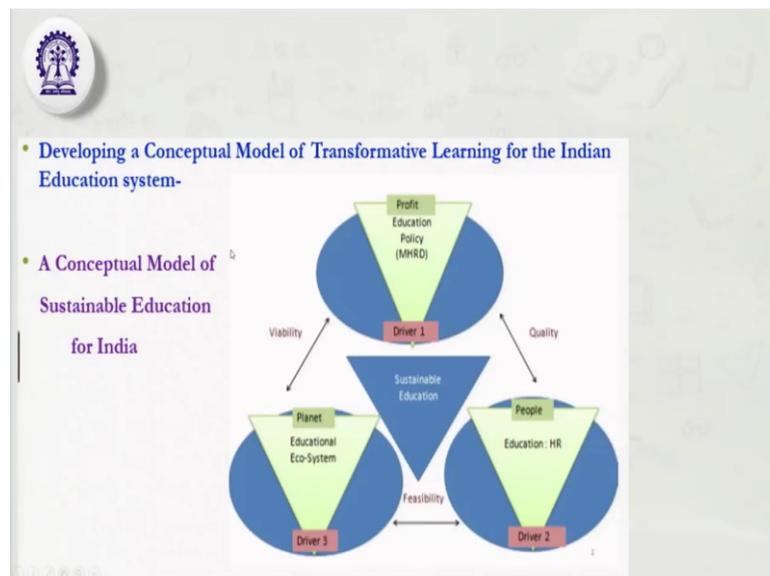


Education for Sustainable Development
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Lecture - 45
Sustainable Education (Contd.)

Welcome back viewers. Welcome back to this course on Sustainable Development and ESD and Sustainable Education. So, last class we were discussing about transformative learning what should be the pedagogy of transformative learning etcetera. So, today we will discuss about a model of sustainable education. So, how our education system can be more sustainable with a in your sustainability approach.

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Let us see now for example, developing the conceptual model of transformative learning for the Indian higher education system. So, this model actually taking into account this sustainability paradigm its triple bottom line model. Now I have developed this kind of model for Indian education system.

Now, we will explain it what this model says about conveys now here like in sustainability triangle that is the people planet and prosperity profit. So, here how we have divided these three circles, three dimensions, three drivers here in the framework of sustainable education. As you can see let us see this is one driver 1 this is driver 1 that is

the which comes under the profit that is the economic economy of this economical driver.

So, here we can say the profit or the prosperity is that; yes of course, in education system it is about the education policy, educational finance, educational schemes all kinds of all the governing bodies statutory bodies like UGC CBSE NCERT all kinds of thing. So, it is related to more towards the education policy that is the department of education central government.

So, here we have kept it as the economic driver 1. So, that is the because it decides the central government decides the education policy and the finance and the budget allocation all kinds of thing. So, that is here our driver 1 is the a ministry of education that is now it is ministry of education earlier it was ministry of HRD. So, education policy and all related budget allocation all things that is the driver 1.

Then the second driver is can yes of course, the people driver 2 that is the social aspect that is the people. So, human resource in education system the human resource that the people who are the stakeholders direct indirect major minor stakeholders that comes under the driver 2 ok. That is the driver 2 that is people.

Then and third is that ecosystem that is environment is another driver. So, here we are we have said that educational ecosystem educational ecosystem that is the driver 3; that is the planet of our education system, that is the environment. So, here these three drivers are there. Now let us see what are how it functions how it interacts with each other, how it correlates etcetera.

So, here every driver has an interaction with the other driver. Like driver 1 and driver 2 they interact with each other. So, here when the interactions the interactions between driver 1 and 2 that is the economic policy and budget allocation etcetera with the educational with the human resource that enhances that decides the quality.

So, with that interactions with their interactions now we have to ensure that this output the out product of these two drivers interactions that should enhance the quality of education. So, here our emphasis on the enhancing the quality of education ok. Similarly second driver 2 and driver 3 that is one is the human resource human resource capacity abilities and the ecosystem educational ecosystem that is the environment.

So, when they interact with each other reciprocate with each other. So, then the outcomes would be feasible; that means, we look into the feasibility possibility of you know maintaining that healthy relationship, maintaining that interactions, maintaining that you know reciprocation as the more productive and qualitative. So, feasibility here comes about the feasibility aspect.

So, then again third driver 1 and 3 here again driver 1 and 3 when we see its interactions that is it the ecosystem environmental eco educational ecosystem infrastructures everything depends on again as per the direction of policy implementation of ministry of education as well as the budget allocation. Hence this the interaction between this 1 and 3 driver it should be viable it is it should be socially viable, economically viable, financially viable ok.

So, here we look into the these two drivers interactions as the viability of whatever policies that we are implementing and the budget allocation with that you know that resources now we are being able to develop a healthy educational ecosystem environment for our system. So, that is the here the viability. So, these interactions of these 1 and 3 drivers would be viable.

And interaction between 1 and 2 driver that should enhance the quality of a education. And then interaction between driver 2 and 3 that should be feasible that it should be feasible to operate to function to work together to work in a very positive way conducive way. So, that our outcome will be very positive. So, here all these all in this triangle as you can say when driver 1 2 and 3.

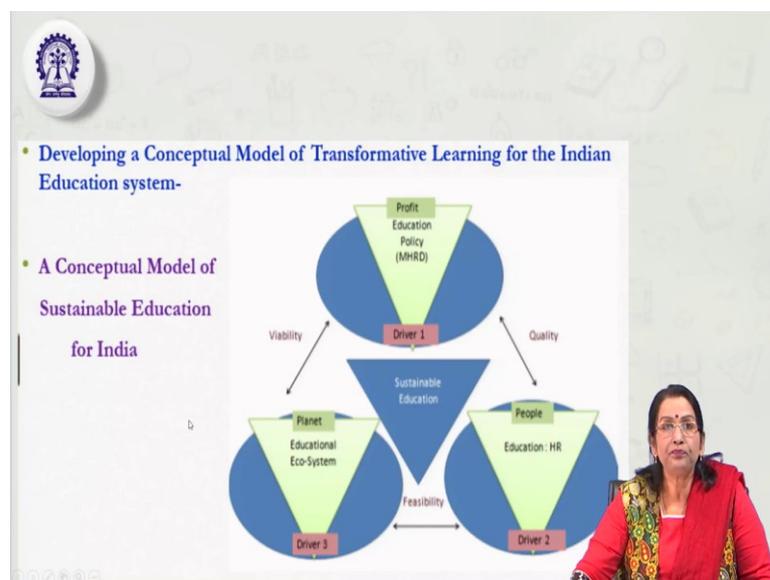
So, when they effect interact effectively and their interaction is very positive and productive. So, here it is also viable it is also maintains quality and it is also feasible then the outcome then only then the outcome can be the sustainable education. So, here of course, when the driver 1 and 2 when they interact there will be some conflicts there will be some issues there will be some challenges there will be some dilemmas, but how to resolve it that is one dimension.

Similarly, when 2 driver 2 human resource interact with the educational ecosystem there maybe some issues there may be some dilemma some confusion, some conflicts, etcetera. So, but that has to be sorted out again. So, and again similarly driver 1 and

driver 3 that is policy implementations of budget allocation with the educational environment.

So, when they interact and we try to ensure the viability of this system, but again it may there may also come. So, many challenges issues conflicts and dilemmas, but how to be sorted it out. So, when these conflicts and dilemmas are sorted out then when these things functions smoothly interact smoothly reciprocate smoothly then our sustainable education happens.

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Now, let us explain it further; now as you can see driver 1, 2 and 3 so, ok. So, when as we have already discussed when driver 1 interact with driver 2 there maybe some conflicts and issues. So, here we have to set the objective very strategically. For example, here the focus of driver 1 here the focus of driver 1 is that is the driver 1 that is policy and allocation budget allocation that is ensuring the learning outcomes through effective curriculum pedagogy then assessment and technology.

So, here definitely with education policy these facilities; these are also being are being prescribed in the policy in clear detailed way. So, here the focus of driver 1 as you can see that is ensuring the learning outcomes through effective curriculum how the curriculum has to be updated has it has to be the curriculum should be framed looking into the holistic development, all round development, harmonious development of the stakeholders especially students and the teachers.

Then pedagogy for should be the appropriate pedagogy, now in this online pedagogy this online classrooms digital platform again we have to look into that how in online platform what should be the pedagogy, how to engage the students, how to assist and evaluate their performances. So, and how now technology in this online context technology plays a very important role vital role.

So, now new and new updated technology have come up. So, how to you use it utilize it properly. So, here in this context as the educational environment learning environment changes. So, the role of curriculum pedagogy and also technology are also changing. So, the focus of driver 1 that is decides that through effective use of curriculum updated curriculum you know research based pedagogy effective pedagogy.

So, as we have discussed about the transformative learning. So, we can adopt the transformative learning pedagogy. Assessment evaluation how in the online platform how we can assess the students performance and abilities not through pen paper test, but through other methods assignments projects etcetera. And technology; how extensively we can use technology nowadays all these Google Meet, Zoom or you know Webex all kinds of technology. So, are playing role active role.

So, this is the for these this objective one is the focus these objectives are the focus of driver 1 ok. Now let us see that driver 2. What driver 2 focuses? The enhancing the educational human resource. Who are the human resource?

Like students are the human resource teachers are the human resource you know others administrative staff supporting staff of the education environment they are the human resource and again also from time to time parents and community people are directly or in are indirectly related to the school education system. So, they are also the secondary stakeholders.

So, enhancing the educational human resource competencies; that is both the teachers, students and supporting staff through training and practice. So, for that for the teacher training. So, that for enhancing the capacity of teachers human teachers resources and ability. So, training teacher trainings are there now it is mandatory teacher training, continuous lifelong teacher training, in service training, pre service training so, different kinds of you know professional development trainings are there.

So, for that for them that for to enhance the competencies of teachers from time to time and updating them regarding the latest research pedagogy and technology ok. Similarly, students are also being engaged to be engaged and similar some from time to time supporting staff our administrative staff our supporting staff.

They are also be and they are also to be trained from time to time regarding the you know regarding the latest you know not only the technical skill and the official or the administrative skills, but also in soft skills in the behavioral in the you know; in the you know nowadays in pandemic also to give some kind of training for distressing themselves some kind of communication skill some kind of interpersonal healthy relationship skills.

So, these kind of things can be given through from time to time; that is the objective of driver 2. How to enhance the capacity of the human resources who are directly or indirectly related to education system ok. Then the next driver 3. Now the driver 3 is here. So, here so, when we are saying that driver 3 it has the objective or the focus on strengthening the educational ecosystem through good infrastructure and technology access ok.

So, definitely. So, unless and until we have the sufficient infrastructure enough infrastructure and this is environment updated technology. So, we cannot make use of it for curriculum transaction especially now this pandemic has given us a lesson.

Now how to manage our self. So, that is in one way it is a challenge it is a disaster everything. But in another way it has also given us an opportunity to update our self in terms of pedagogy, in terms of technology, in terms of you know online platform, in terms of learning, in terms of understanding the students needs, learners needs all these things.

So, this is the focus of driver 3 that how to strengthen our educational environment educational ecosystem with good infrastructure technology access everything. So, now, these three things the driver 1 has the focus 2 has the this focus and 3 has the. So, when as we have already discussed when 1 driver 1 interacts with driver 2 both the drivers they have to ensure this focus how to achieve it.

Similarly, when the driver 2 and driver 3 they interact they have to you know they have to ensure that this focus this objective is being fulfilled. And driver when driver 1 and driver 3 interacts they have to ensure that this objective should be achieved the goal should be achieved with because without you know without financial allocation without policy instruction implementation or support any school any institution cannot establish a good infrastructure set up or the technology access ok.

So, for that whatever necessary requirements are there. So, when so, these are you can say these are this is the. So, all these drivers they reciprocates they interact properly every time all the time 20 24 into 7 because these are very much interlinked we can say driver 1, driver 2, 3. These are the three dimensions of education system and they have to function and operate in a very cohesive manner in an interactive manner reciprocal manner.

So, that is why then only our sustainable education can be possible can be achievable. So, what are these let us see what are the sustainable education goals. It has been elaborately mentioned in SDG 4 SDG 4 that is there targets are there, but here in our system let us focus on what would be our sustainable goals here in our system?.

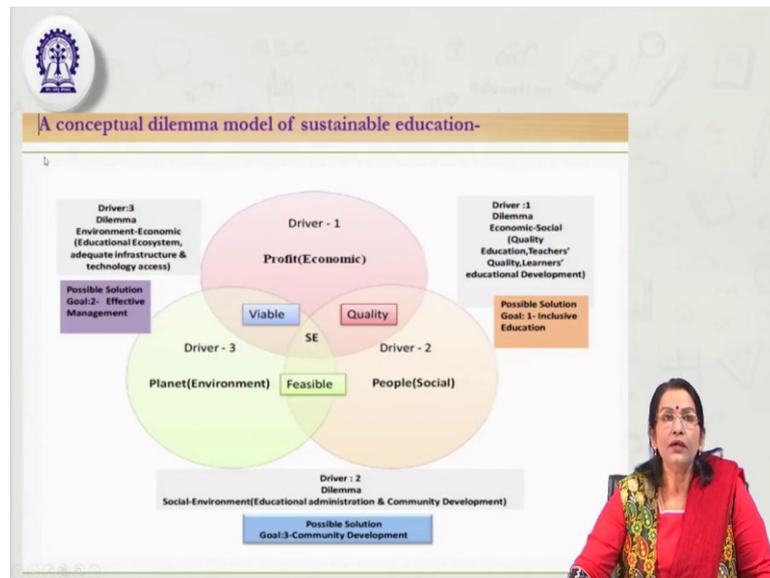
First is that is inclusive education our government our policy also says that we have to introduce these inclusive education everybody should be union, should be learned, should be taught, should be literate should be educated and how universal access and all kinds of technical facilities should be provided to the inclusive education yes; one thing that is the goal of education system our objectives inclusive education.

You know inclusive education with the achievement of these three you know with the achievement of the you know effective performance curriculum transaction assessment technology all these thing. Second is the effective management. So, when the ecosystem when it is related to education ecosystem policy and human resource the output that is the product should be that is effective management of our educational system.

Then third is that community development as education is the public service. So, ultimately it should yield the result to the community; that means, the all around the neighborhood the whole community will be developed. So, we can say the interaction of these three drivers objectives and goals and activities the outcome is that this one.

1 is inclusive education in terms of learning outcomes, 2nd is the effective management in terms of the functioning of the system and 3rd one is the benefit of this education system for the community development. So, you can say it is a conceptual sustainable education triangle how can we enhance our education system.

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Now, here conceptual dilemma model. Here conceptual dilemma model as we have already did driver 1, driver 2, driver 3, they have they must they may be having different kinds of dilemmas confusions conflicts etcetera. So, even though our focus is on the when driver 1 and driver 2 the interact they must maintain this quality.

So, these overlapping areas I can as you can see as you can see that is the quality the more they are overlap they consent they draw the consensus they work together that commonness the cohesiveness forms that is the it maintains the quality.

Similarly, when the driver 2 and driver 3 they overlap they interact with each other this area you can see this is the feasible and this is the possibility of effective interactions etcetera. Then again and when driver 1 driver 3 interact that is this overlapping area you can see; that means, this as the as it will be larger the larger the portion will be the more sustainable system will be. Because as they overlap extensively or to a larger extent so, the viability increases.

Similarly here the more they overlap with each other the feasibility increases similarly the more this one driver 1 and driver 2 overlaps then the quality enhances quality increases ok. So, when for example, it is a dilemma triangle dilemma triangle what could be the possible confusions conflicts and dilemmas? Let us see driver 1 and driver 2 ok.

So, the driver in here in this case what would be the dilemma driver 1 dilemma is that economic social the driver is the because this is the economic aspect of social. So, what would be that economic and social dilemma? Yes; first thing is that quality of education ok quality of education teachers quality learners educational development. So, these could be the question these could be the you know dilemmas that is common areas to be asked like what should be the when 1 and 2 they interact with each other.

So, how we have to ask we have to check what is the quality of education, how to ensure the quality of education what is the standard of education quality. So, teachers quality how the teachers are being trained, how the teachers are being recruited, how the teachers are being identified, how the teachers are performing that is another question. And the learners educational development.

And to what extent learners are being benefited like whatever system we have created, whatever finance curriculum technology, whatever the economic driver 1 is providing whatever people are there driver 2 manpower is there with their introduction what is this outcome what how what are the what are the possibilities like what is the quality of education whether it is at par of the global standard quality standard.

Or teachers quality teacher then you might have observed in the you know the teachers educations the national council of NCTE National Council of Teacher Education is the I you know teacher educations they are the it is then before I think 20 years back there are n number of an enormous mushrooming B.Ed Colleges and training colleges.

So, but in order to maintain that maintain that quality teacher quality and quality of education then NCTE has been established and NCTE controls regulates the teacher quality of teacher recruitment and it has given the you can the parameters policies for the recruitment for the recruitment, teachers development, in service education everything ok.

So, similarly so, these two drivers when they interact these dilemmas could doubt or the challenges or issues can come up that is the what is the quality of education teachers quality and the learners education level to what extent learners are being benefited under behavioral their cognitive and the emotional developments are taking place.

So, here what could be the possible solution as we have discussed that is possible solution is inclusive education. Inclusive education includes not only the cognitive emotional and the behavioral development of the learners, but also it enhances the teachers quality teacher student interaction, interaction then the you know effective learning outcomes in terms of overall personality development of the students and teachers job satisfaction job satisfaction their in service training their updated knowledge their motivation everything.

So, here the possible solution is that if we can enhance if we can establish a very good system of inclusive education where both the teachers students and other stakeholders are directly and indirectly benefited efficiently then we can see that then this is the possible (Refer Time: 19:00) the one part of the sustainable education one objective can be achieved.

Similarly, when the driver 2 and the driver 3 that is the educational eco system environment eco ecosystem and the people you might have observe just take any example of a school in the rural sector ok. So, the rural school in the very very remote area.

So, just what is the environment just imagine what is the environment of the rural school in the remote areas with the infrastructure with the you know with the infrastructure with the technology access whatever then and the regularities and again the people and the people the teachers presents teachers mode of teaching teachers you know involvement engagement.

So, what is the quality of education there? Hardly the if we find that the; that means, for the name sake the school is there, but hardly they have the sufficient infrastructure chair tables or the book material. So, and the teachers are also they are engaged in some other activities or partially they are to coming to sometimes there is no regularity nothing and then either they also you know very much interested and students are not coming regularly to the class.

So, here that is the reason why the drop out comes in that is why the you know students are not being retained after admission after everything or introducing all kinds of you know midday meal books you know study materials uniforms even if after the central governments you know (Refer Time: 20:22) these kind of funding also these providing these kind of things also the why the students retention is very low enrollment even though enrollment is there officially, but in physically actually there is students drop out very less number of students attendance etcetera.

Why it is happening? Because these when these two drivers interact interface. So, their problems are now their dilemmas are not being resolved. So, here the social and environment social and environmental dilemmas we can say it is more related to educational environment administration and the community development ok.

So, here we can say dilemma like infrastructure in terms of infrastructure, in terms of quality, in terms of you know rules and regulation, in terms of people and the environment interactions like the administrative staff and the teachers and students interactions all these outcomes if; that means, it does not give us a very good result then the feasibility.

So, here feasibility the percentage of the feasibility deteriorates decreases. So, here the dilemma is it is more related to. So, educational administration how the education ecosystem operates functions and the facilitates for the learning outcomes. And similarly how the people are people are involved; teachers, students, parents are involved and engaged with an intention to learn. See here what can we say that we have to involve the here the possible solution could be the goal 3 that is the community development.

What is the community development with the more and more the community are being benefited. So, they have to taken active participation in these two system they can reciprocate they can interact with the educational environment they are in touch with administration as well as the touch in the teachers and there is a proper reciprocation. So, the we can say that yes community development takes place as a result of these interactions

Similarly, when the one driver 1 and three when driver 1 and three they interact there may be the dilemmas like you know funding for the resource funding or the resources for the infrastructure for the technology. So, these kind of issues can come up also. So, how

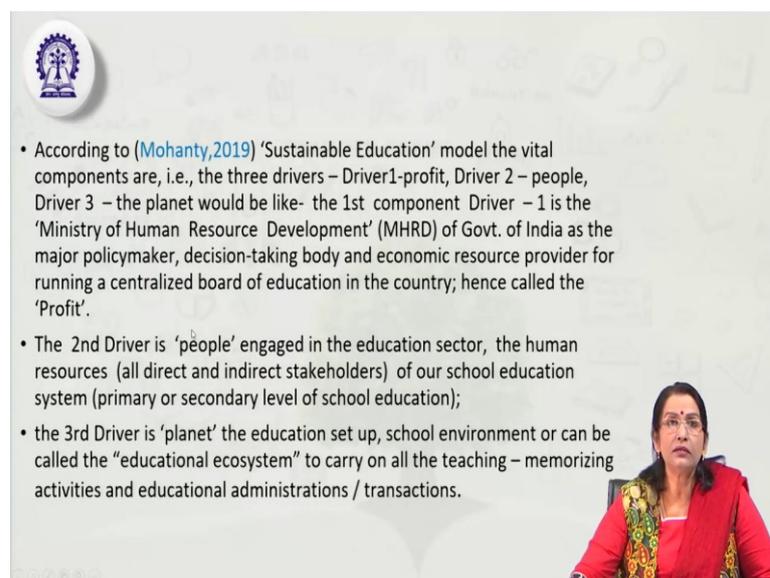
to you know how to sort it out how to resolve it the solution that is the goal two that is effective management.

So, effective management both it requires not only the infrastructure economical financial resources and the proper channelization of the resources in developing the ecosystem or environment with technology access with the proper equipments infrastructure proper environment cleanliness to save drinking water to everything ok. So, that is so, this here these two; that means, when these drivers they interact there may be dilemmas, but how to resolve it. If you can resolve it that helps us.

So, you can say the sustainable educations when we talk about the sustainable educations the three resolutions these three resolutions when we these solutions like the inclusive education the second solutions like the community development and the third solution like the effective management. So, these three things. So, when we can achieve that becomes an objectives of sustainable education ok

So, this is the this kind of model that is this is the holistic whole school whole institution approach this we can also every principal every headmaster every even the head of the department or every principal of a college they can adopt this model and they can coordinate they can coordinate reciprocate. So, that they can anybody can establish this model and try to achieve the sustainable education.

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According to (Mohanty,2019) 'Sustainable Education' model the vital components are, i.e., the three drivers – Driver1-profit, Driver 2 – people, Driver 3 – the planet would be like- the 1st component Driver – 1 is the 'Ministry of Human Resource Development' (MHRD) of Govt. of India as the major policymaker, decision-taking body and economic resource provider for running a centralized board of education in the country; hence called the 'Profit'.

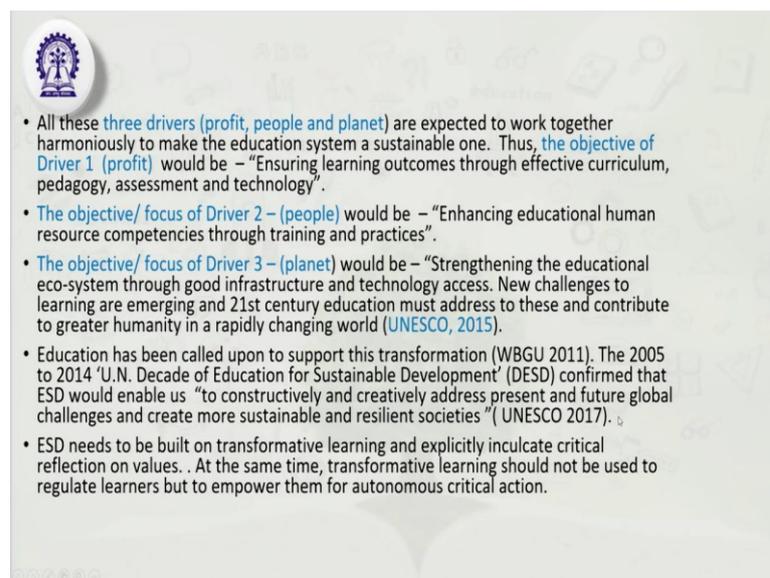
- The 2nd Driver is 'people' engaged in the education sector, the human resources (all direct and indirect stakeholders) of our school education system (primary or secondary level of school education);
- the 3rd Driver is 'planet' the education set up, school environment or can be called the "educational ecosystem" to carry on all the teaching – memorizing activities and educational administrations / transactions.

So, here as here according to as because I have also published this paper in one of the journal; sustainable development journal. So, here ministry of resource human resource development that is the Government of India's Education Ministry of Education. Nowadays it make plays a major role as the policy maker, decision maker, economic resource provider etcetera as we have already discussed. 2nd driver is the people the people; that means, the human resources they are engaged in the education sector the; that means, both the direct and indirect stakeholders.

Then the school education system that primary school and secondary school level system school system educations higher even it can be apply it can be applied and implemented in higher education system also. So, people; that means, students teachers then supporting staff whoever are directly or indirectly related to even the community people are also stakeholders.

Then 3rd driver is the environment educational environment. So, we can say which will be maintained and managed not only by the administrative staff, but also with the proper collaboration of the teachers, mentors, community people and also the students engagement also. So, then only we can create a sustainable education model in our country.

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- All these **three drivers (profit, people and planet)** are expected to work together harmoniously to make the education system a sustainable one. Thus, **the objective of Driver 1 (profit)** would be – “Ensuring learning outcomes through effective curriculum, pedagogy, assessment and technology”.
- **The objective/ focus of Driver 2 – (people)** would be – “Enhancing educational human resource competencies through training and practices”.
- **The objective/ focus of Driver 3 – (planet)** would be – “Strengthening the educational eco-system through good infrastructure and technology access. New challenges to learning are emerging and 21st century education must address to these and contribute to greater humanity in a rapidly changing world (UNESCO, 2015).
- Education has been called upon to support this transformation (WBGU 2011). The 2005 to 2014 'U.N. Decade of Education for Sustainable Development' (DESD) confirmed that ESD would enable us “to constructively and creatively address present and future global challenges and create more sustainable and resilient societies” (UNESCO 2017).
- ESD needs to be built on transformative learning and explicitly inculcate critical reflection on values. . At the same time, transformative learning should not be used to regulate learners but to empower them for autonomous critical action.

So, these three drivers that we have whatever we have already discussed that three drivers profit people actually it is profit not profit and we can say prosperity. So, an

objectives these are the things whatever we have already discussed driver 2 enhancing the educational human resource competence through training and practices.

Similarly driver objective of the three is that strengthening the educational ecosystem through good infrastructure technology access and the new challenges to learning are emerging and the 21st century education must address to this and contribute to the greater humanity in rapidly changing world. This is the UNESCOs goal and how we have we can ally it with our goal of this system of education.

So, similarly so, education has been you know education has been consistently has been has been given the given the importance since 2005 2014 all in the and the 14th and that is the that is called the decade of education sustainable education decade of education for sustainable development again in 2017 UNESCO 17 goals.

So, the how it has been continuously emphasized that how constructively and creatively we can address this and for the; and for the future global challenges to create a more sustainable and resilient society because education and health, these are the two primary domains of the social development. So, here you can say education plays a very key role in not only creating awareness, but also educating people creating our educating people directing their behavior creating employment jobs all kinds of.

So, it plays a very major role in not only bringing the positive changes in the society through economic development prosperity etcetera, but also to make them emotionally they are effectively you know resilient to tolerate to go through to you know to come back to overcome any kind of hurdle or abstractions or the you know disaster in the environment.

So, repeatedly that has to be so, UNESCO has repeatedly advocated for the sustainable education especially 4.7 that is ESD that education for sustainable development plays a very key role key role in achieving and enabling the people to achieve that all the 16 other goals.

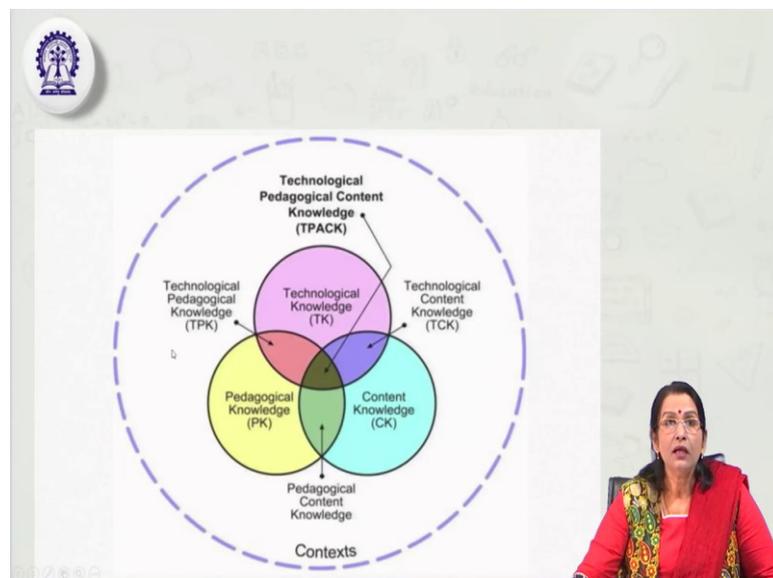
So, that is why so, here ESD needs to build on the transformative learning. How can we achieve it transformative learning requires the 360 degree changes? For you know for making the society effective making for bringing the social complete transformation to the society making the people very resilient, optimist, positive etcetera.

So, in ESD needs to be built on the transformative learning. So, it has to be built on the transformative learning pedagogy and explicitly inculcate the critical reflections on the values. So, we have to we have already in transformative learning we have already discussed critical reflection then creative ideas innovative ideas experiential learning. So, this should be the pedagogy.

So, at the same time transformative learning should not be used as a to regulate, but to empower them. So, here transformative learning is not to impose anything not to regulate others behavior, but to bring that transformation change voluntary change and empower the people to be more autonomous to be more you know 21st century skilled and competent people to develop a skilled manpower to be to make them self reliant, self sustainable and to develop the sustainable habits of mind sustainable consumption production.

So, that not only the not only our present will be; present will be very secured and sustainable, but our future; our future for our future our you know resources or our future of our country of our people our planets would also be sustainable for future generations.

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So, here also this is also another you know this is also a framework given by some researchers like the technical. So, in this transformative learning pedagogy context; what are the important things? One is that the technology, technological pedagogical content, knowledge etcetera that is one important now in the present situation of course,

technology plays a very vital role. Second thing is content knowledge, discipline, interdisciplinary, transdisciplinary, all kinds of knowledge in microcredit macrocredit all kinds of knowledge are important.

Third one is the pedagogical knowledge that how to teach how to learn know how is know what is know whys all kinds of thing. So, where again so, here when similarly when these three domains they interact. So, one is the technical pedagogical knowledge that has to be how technology can be used for the pedagogy and pedagogy can help can use effectively use the technology that is one thing.

Similarly, content knowledge; how the content to be delivered in effective pedagogical thing. So, pedagogical content knowledge pedagogy. So, how the pedagogy can help in delivering the content and how the content can be strategically delivered through different pedagogical technique.

So, you know pedagogical content knowledge. Third is the technological content knowledge here the overlapping here again content knowledge, but with regard to technology how to use technology effectively for creating not only creating content, but you know disseminating for using content.

So, these three domains. So, here we can say the core here the core is that the overlapping the core is that technological pedagogical content knowledge. So, here three things technological knowledge pedagogical knowledge and content knowledge. So, when they overlap and work together then in teaching learning context here you can say technologically pedagogically content knowledge. Technological content knowledge pedagogical content knowledge.

So, when the three dimensions they interact that is called the TPACK technological technology pedagogical pedagogy and pedagogical content and content knowledge. So, these this is the again it is a the present day context online platform it is this is the latest model.

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So, this is the transformative learning we have already discussed. Here transformative learning you can say engage activate and reflect. So, it is a learning cycle it goes on it goes on initially when we are in the dilemma we are in confusion.

So, that frustration there frustration causes frustration then it leads to fear too you know judgment this is a cycle. So, how to overcome this through reflect of judgment can be removed can be avoided through curiosity by reflecting then creating generating curiosity to keenness eager to know.

Similarly, frustration can be frustration can be removed through creating excitement and engaging the people engaging the people similarly fear can also be transformed into courage through activities; fear can be transformed into the courage.

How we can see now these things these things how it can be transformed completely the frustration. How frustration can be transferred to excitement through engagements how fear can be transformed to courage through activities and how judgment can be can be promoted can be improved can be transferred to curiosity through reflective thinking ok.

So, similarly as you can see transformative learning is a process of examining, question, questioning, validating, revising, arguing, different our perspective different perspective. This is the Bloomstruck this is the Kolb's model that we have already discussed. Concrete experience that what happened actually after when we experience particular

event situation context we explain we after receiving the concrete experiences then we analyze what happened actually, then we reflect on it observe it ok.

So, then through this after observation reflective analysis then we try to find out what did we observe we experience actually then on the basis of that we formulate the abstract conceptualization why it happens why all kinds of the conceptual analysis like why it happens why did this happen to me why this what is the why did it happen what are the causes what are the effects then abstract conceptualization then we frame some hypothesis and assumptions.

And in order to examine it whether it is valid or not then we try to actively experiment on this what will I do. If this is the cause that these are the things then I have to experiment on it whether it is justifies it is strategic it is effective or not that we can explore that we can find out after examining experimenting the assumptions our assumptions and hypothesis. So, if we found that it is this much is productive this much is beneficial then that much only we will continue with it.

So, it will be embedded in our learning system ok. So, this is the kind of transformative learning framework that we can go through and it is very much required for the sustainable education.

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So, transformative learning you can say transformative learning these are the things efficacy, creativity, mobility, collaboration, differences and these are the integration of the model. So, these are the how the vision leadership and community how it can be transformative learning can be embedded not only in the school education, but in the leadership training in the corporate training everything everywhere.

So, starting from the differentiation we can identify the what are the differences then we go for the collaboration, from the collaboration to mobility to creativity to efficacy then efficiency then comes the transformative learning model ok. So, from the old things; so, we have discussed about the Mezirow's theory, how the Mezirow's theory of you know transformative learning how these new things happens latest things happens from the old things old ways to how to from the old things in a new way then the new things in the new way.

How transformation takes place stepwise ten steps we have already discussed in the Mezirow's learning theory the same thing happens here.

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• Conclusion

- In the recent years, sustainability has become a slogan for raising social, economic and environmental awareness. Higher Education Institutions (HEIs) play an important role in promoting development principles and practices. In addition to educating students on sustainability topics, these institutions should take on a leadership role in incorporating sustainable practices into their services and operations and in transforming their local and regional communities into more sustainable communities. Acknowledging the urgent need for Sustainable development and the importance of research in this process, universities and their researchers bear the fundamental and moral responsibility to contribute with their research to Sustainable development.

So, now I am concluding this chapter this chapter on sustainable education that how all of us we can try to adopt a to adopt the sustainability and sustainable education you know ESD in our environment in our institutions in our organizations.

So, higher education definitely plays an important role in promoting the development and developing the policies and principles and practices of course, it also requires you know sustainability to be introduced to the leaderships to the it should be incorporated in that in the sustainable practices in teacher training in pedagogy and in pedagogy in both at the local level at the regional level and how community can be community can be involved in the sustainable development process.

And not only in education because from education we can also expand it, we can also apply it in other domains like you know we can apply it in our lifestyle, we can apply it in our entrepreneurship, we can apply it in our business situation, we can apply it in our social set up social activities. So, everywhere this sustainability model through we can apply it in our different dimension or spheres of life.

So, let us begin with the sustainable education model then from there onwards we will learn how to lead a sustainable lifestyle, how to lead a how to develop a sustainable planet, how to even use and consume the things in a very sustainable way, how to produce sustainably without exploiting the environmental resources or without exploiting the people or without destroying the resources.

So, with minimum resource depletion with the sustainable habits sustainable habits of mind sustainable consumption style then definitely we can proceed towards a sustainable future. Because our target is how to conserve the resources and how to protect our planet for the sustainable future. So, that we will we can live longer our future generation can also maintain a quality life in future also.

So, that is our goal ultimately what is that what is the ultimate goal of this ESD and SDGs and sustainable education is that? Yes; of course, ultimately the goal is that community well being ultimately we want to protect our planet. So, that we can live happily live together live cohesively and live comfortably ok.

So, that is the you can say that the you know ultimate goal is the community wellbeing. Community wellbeing not just within the country, but global community we can say global wellbeing global wellbeing. So, global wellbeing when we are happy, we are healthy we are sustainable and we have enough of resources, we are reciprocating each other very effectively, we have very good positive interpersonal relationship healthy relationship and our whatever social changes are taking place are also very positive.

Then definitely we can proceed towards the sustainable future not just in India, but across the globe. So, that is the whole purpose or objective of launching this course ok. Thank you very much. I think you can also better explore more opportunities in our day to day habits.

So, it we need to have a paradigm shift towards the sustainability. Nobody is going to observe us monitor us regulate us, but we should ourself regulate our or you know evaluate our self through critical thinking whatever I am doing whether it is sustainable or not. So, gradually through a habit we can change our mindset and then we automatically the mindset can change our behavior and habits.

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The slide features a circular logo in the top left corner, which is the emblem of the Ministry of Education, Government of India. The main content is a bulleted list under the heading 'The Role of Institutions'. The text is as follows:

- **The Role of Institutions**
- The presence of a new international agreement or a new legislation alone is not enough to guarantee action.
- The SDGs' ambitious vision must be converted into specific action plans and must find a foothold in existing institutions of governance to have impact. It takes time for global and regional institutions to change; it takes longer for all national policy priorities, legislations, planning cycle institutional arrangements, programmes, and modes of working to be dovetailed with the new paradigm, and for human, financial, and technical capacities to be put in place.
- For implementation to happen in an effective manner, governments must invest resources and time for:

In the bottom right corner of the slide, there is a small inset video frame showing a woman with glasses, wearing a red sari with a colorful border, speaking.

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- Awareness raising, both among citizens at large, but also more critically among those tasked with the Agenda's implementation.
- The need for strengthening awareness of the specifics of the Agenda among policy makers, senior officials, and front-line workers responsible for policy implementation.
- Developing the ability to exercise the right to education through modifying existing national policies, legislations , and plans in line with new SDG commitments, allotting funds necessary for their implementation, strengthening implementation mechanisms, and strengthening monitoring systems.
- Strengthening their ability to enforce the right to education through strengthening existing redress and state accountability mechanisms.
- Building a wider community of SDG supporters that can push for the Agenda's implementation by creating enabling environments for civil society and citizen participation in the governance processes.

So, habit is the second nature similarly we can proceed towards a sustainable future not just not by the target given by the UNESCO that is 2030, but much much before that 2030, but by this 2022 by 25 we can achieve a sustainable lifestyle consumption style and sustainable education platform for our students for our stakeholders for our community. I have also given some links you can also go through it.

Thank you very much.