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Lecture - 42 Sustainable Education (Contd.)

Hello viewers, welcome back to the class on ESD. So, in the last class we were discussing about multiple intelligence that is proposed by Howard Gardner. So, let us continue with that discussion multiple intelligence by Howard Gardner.

(Refer Slide Time: 00:30)



So, as we can see as we can see multiple intelligence as initially he said that it was 7 types of multiple intelligence were are there, but later on he added the another naturalist dimension of in multiple intelligence. So, and the latest person is that it is having a 9 aspects 9 types of multiple intelligence, 9 types of intelligence that is the added one new one is the existence of intelligence.

So, anyway let us discuss about what does it mean multiple intelligence. So, besides our basic intelligence we have all the individuals we have some special ability special types of intelligence and every individual can be special can be can have one or other type of special specific intelligence. So, that is called the multiple intelligence that we cannot say that it is only academic competence or there is only one intelligence that is academic

intelligence or IQ etcetera, but individuals can have or they can vary in terms of different types of intelligence.

So, let us take it like first thing is let us take it as a spatial intelligence, spatial intelligence is like; then they have the very their perceptions their intelligence is very high in so far as the space is concerned, space is concerned that is seeing and mapping the world in 3D. So, they have the ability to map the whole world to imagine and map the whole world the space especially the space. And also the three dimensions also to map the space in a very effective way, that is called the spatial intelligence.

The examples are like for example, our architects are very good persons having spatial intelligence. Architects because they are they design the they design the buildings and the plants all kinds of things on the platform of space both two dimensional one dimensional and three dimensional. So, you can say spatial intelligence like the our engineers and the architects they are the best examples of having the high level of spatial intelligence.

Then the next comes the musical intelligence. So, musical intelligence people having musical intelligence they have the capacity to recognize and create and reproduce and reflect on the music. Even often sometimes also they are also very good musicians, they are very good singers ok, they have the talent of you know talent of being very good singers and the musician.

So, musical besides that they have the very good sense of you know sense of perception understanding, the nuances of music the tones, the ragas, the themes in a very very it means very meticulous way very to death in depth which the laymen may not be able to understand. So, that is called the musical sense extra personal musical sense or musical intelligence.

So, they can recognize the difference differences minor differences in tone, tune, volume and ragas of all kinds of musical instruments and the music as such. And they have to capacity to recognize not only recognize, but the to create the new tunes, because it is a kind of you know creative dimensions of the human personality. Not only understanding, but would be able to create such tunes, such music, such rhythm, such ragas etcetera and also to reflect on the music.

So, all these you know all these Indian Idol shows, Zee Music shows, musical you know live shows are the best examples and the judges who are sitting there they are having this, you can say high musical intelligence. Third is the logical reasoning, logical reasoning that is a people having the high logical reasoning are very much rational in it in their thinking, they can logically, objectively, rationally think about any think about in object, analysis, problems etcetera.

So, they are very much skilled at you know deductive reasoning they can draw the very effectively, the conclusions deduct they can break it down break down any complex problem etcetera into its parts and logically relate it objectively analyse it evaluate it and deduce the conclusions. So, deductive they are very skilled at deductive reasoning detecting the patterns.

Sometimes they are very good in identifying and predicting having the intuitive thought to predict the pattern, underlying mechanism, underlying pattern among pattern within the design within the framework, within the situation, within the context, so within the you know image etcetera. So, detecting the patterns and logical thinking. So, they can very much relate one and dimension one aspect to another aspect in any platform.

So, having the detective reasoning or applying the deductive reasoning capacity capability of you know drawing the logical conclusions from the you know very complex source of information, to draw it to you know rationalise it to and break it down into the many objectives, many goals, steps and etcetera.

So, they can very very well understand the complex problems analyse it, very properly think rationally analyse it critically, evaluate it and draw the conclusion draw the solution. So, in a very deductive way deductive reasoning way. So, that is called the logical reasoning logical reasoning.

Primarily we can say we can also call it as the mathematical logical reasoning like, people who are experts in mathematics in mathematics or science subjects or mathematical reasoning rational thinking. So, this where we will we are suppose to use our logical reasoning, rational thinking, deductive reasoning. So, that kind of, that kind of expertise shows a logical reasoning lasing intelligence that is one aspect of intelligence.

Then another is the interpersonal intelligence, interpersonal intelligence I think in the last few classes we have discussed about the interpersonally interpersonal intelligence, similarly interpersonal communication is between group ok. So, interpersonal is between the between at least two individual two individual members within the group, one to one one to one or one to many relationship interpersonal that is a communicating and reading the. Not only communicating our ideas to others, but also perceiving understanding their perspectives, their understanding, their perspective, their viewpoints etcetera.

So, communicating effectively to other persons, other individuals as well as understanding their perspective and from sometimes also studying their behaviour, studying their intentions, studying their goals and objectives also. So, mind study or you can say reading the reading their minds. In the sense that what they actually they would like to do their interest interested in their inherent motivation is, what is the inherent motive or intention is there.

So, that is the that is that we can know through our interpersonal intelligence, the more intelligent a person is interpersonal intelligence he can better understand. Others better evaluate their intentions and their you know motivation based inherent motivation.

So, that is interpersonal between at least two or more than two individuals within the group as well. So, then body kinesthetic intelligence; that means, who the people who are you know who are very much you know thorough in their in understanding their own body. In own body in the sense that their physical ability that you know their talents their so far as the sports and kinesthetic body activities are concerned they are very good you know you they can be.

For example, there can they can be very good yoga trainer physical instructor very good sports person maybe in different types of sports person. So, they have not only they have a very good you know body construction, but also their athlete usually they are the athletics and they have you know they have the ability and capacity and you know, in you can say motivation of you know excelling in the sports field or in the body exercises.

So, their body kinesthetic intelligence is that they can better understand their whole body parts and how it functions and how effectively it can function in the environment and they can. So, they have the well developed physique as well as the as well as physic as the ability extraordinary ability to excel in one or other types of sports. So, that is called

the body kinesthetic intelligence using ones own body in highly differentiated and skilled ways ok.

So, we can say we can give the example like all types of athletes, swimmers, sports persons are they belong to this category. Even also the judges also the judges also; that means, who are the trainers like you know sports trainers coaches are also they fall into this category.

Then the linguistic intelligence, linguistic intelligence as the name implies it is primarily having the excellent intelligence and skills and competencies in spoken English, written languages, communication language and you know in describing or narrating different kinds of ideas thoughts etcetera. So, linguistic intelligence they have the mastery of spoken language, in written language and the communication then also writing the very good literary pieces.

So, that is the linguistic intelligence all kinds of authors you can say authors, poets, great writers, script writers, you know story writers one act the novel writers and the one act play. All kinds of the writers and even you can say the you know artists also actors and artists they are also having this very good linguistic capability often. So, to so that they can play the roles by memorising the memorising all the dialogues and deliberating, delivering in you know in a very clearly and elaborately and it consists spontaneous way off expression.

So, then here comes our intrapersonal it is just the opposite of inter interpersonal. Intrapersonal is knowing ourself better knowing ourself individual. So, understanding yourself what you feel and what you want; that means, understanding our own self our own intentions, motives, motivations, our feelings, emotions, thoughts all kinds of. That means, knowing ourself in a better way. So, that is the you can say that is a relationship with our in individual self in ourself.

So, you can say our personality or our outer self our outer self and relationship with our inner self you know personality is the outcome of all our psychophysical traits. So, it is the intrapersonal intelligence is understanding ourself much better in a very clear way. So, that we have every justification for our actions, thoughts, emotions, feelings we have we have the clarity in our with so far as our behaviours, our you know behaviours are

you know expressions are coming expenses expressions and interactions with others are all are related.

So, that is into the better we understand ourself it will be easier for us to understand others. So, intrapersonal intelligence we can say is a is the prerequisite for you can say interpersonal intelligence. So, these are the you know I think here it is given 8 types of intelligence, but later on existential intelligence has been added the new dimensions to this. That is knowing about the understanding about the existence the core of our existence, the you know value of our existence. That is what is happening right now currently, all across the globe.

That is what about our own existence of this planet, existence of the globe, and across the across this domain, across this platform to understand every you know every aspects every dimensions and to enhance our knowledge about what happens at present in this world and why it happens how it is going to take us for the future all kinds of existential intelligence.

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So, now let us move to this all these kind things I can I think we have already little bit discussed about the ESD competencies. Similarly here competences with reference to multiple intelligence we have already discussed about ESD competences here some of the competences regarding the multiple intelligence.

So, multiple in interpersonal intelligence, we can say we have already discussed about the collaborative skill interpersonal between two member or the in the within the group or the between the group members within the team etcetera. So, collaborative skills sometimes interpersonal meditation leadership cooperation empathy teamwork these are all interpersonal. How; that means, how effectively we not only adjust relate ourselves in the within the group what would we act and perform also effectively interpersonal relationship.

Strategic planning you know it is more towards the decision making, planning and decision making taking the decision making strategies, awareness of success factors the you know checking about the. They are checking about the knowledge about the behavioural changes, knowledge about the behavioural changes, the organizational development skills.

You know key competences like, a key factors in any success successive success successful act or planning etcetera. So, decision making planning formulation of strategies and effective utilisation implementation of those strategies for developing individual skill and competences as well as organizational effectiveness. Then normative competences that act I think we have already discussed about this normative competencies.

The knowledge of the sustainability of the current status and as well as the future sustainability, what would be the you know what would be the ideal steps or the you know how what would be the strategic plan of action for sustainable future with regard to the aware not only awareness of you know sustainability. But justice, fairness, happiness, well being, risk taking behaviours you know ethical questions all kinds of things that the normative norm regarding the norms and rules of the environment of the globe.

Anticipatory skills that is working with the scenario, forecasting, predicting you know back casting; that means, analysing our past experiences and intergenerational equity. These are the analytic anticipatory skills. These are some of the key competences with reference to multiple intelligence also which can be applied in the area of SDG 4 so ok. So, these are the respective you know examples and case study examples and explanations that you can let later go on.

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Table 3. Cont.					
Key Competencies	Human Rights	Gender Equality	Culture of peace and non Violence	Global Citizenship	Cultural Diversity
System Thinking. Ability to work with Feedback loops, systems and sub-systems, buffers and multiple variables, nested scales, resilience, and tipping points.	Do learners have opportunities to reflect on the role human rights play in changing systems of power or oppression? Can learners identify how human rights feature in human social or economic systems?	Are learners able to reflect on how social political and economic systems are distorted by gender inequality? What feedback loops might be operating in issues of gender in their culture?	Can learners build or model social or political systems of peace? What are the feedback loops (social, economic, political, or enological) which create or maintain violence? Can learners reflect on levels of 'social capital' that need to be maintained to ensure a peaceful society?	How can system change knowledge be used to increase or decrease knowledge of or ability to act as a global citizen?	How do diversity issues influence tipping points in social, environmental, or cultural change! Is changing the diversity of a culture a key step towards initiating cultural change?
Integrenoral Competency Preserving Ahility to hold contradicties feelings and thoughts Personal and group sees management Cultivating awateress Finding order pose and companion, meaning making Ellephenoral Love and connection	Can learners reflect on when the impulse for humans rights spring? What strend alwateness of completeness enhance or deterants from the societal recognition of human rights. Can learners reflect on the effect human rights or the lack of thuman rights has on personal feelings of safety or peace? Can learners reflect on the role of love and companion on human rights?	Can learners reflect on how the present level of grader equality affects their inner states of safety, compassion, stees, and connection? To what extent are cultural levels of stress affected by grader inequality?	Can learners reflect on peace and what levels of peace they find in themselves? Can learners reflect on when violence comes from in themselves and what learners reflect on the section of	Can learners reflect on what it feels like to them being both a person of a place and a global orized? Can learners reflect on how an awareness of a global perspective changes their sense of themselves? Can learners select on how aw arrners global obtainably intersees or decreases their lavels safety or well being?	Can learners reflect on how their cultural values related to diversity increase or doctonate their feels of presence? Can learners reflect on what effect cultural expressions like art or their sinner states? Can learners reflect on how cultural expressions like art or music can change their personal experience of being in a group?

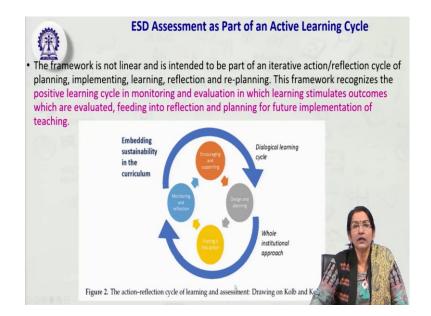
Similarly, systems thinking that is; that means, having an analysis of the holistic perspective. That is ability to work with the feedbacks loop systems and you know simple systems and the multiple variables of the complex situation. And that requires the immediate address, resilience you know identifying the key points etcetera. So, systems thinking that is analysing and thinking from a holistic perspective ok.

Then intrapersonal competency that represents of our presenting our ability to hold you know have contradictory feelings with, contradictory thoughts, ideas, views and feelings with ourselves.

Then the within the person, within the; then group stress management then cultivating the different kinds of feelings of inner peace, compassion, you know meaningful life value orientation, service orientation, express experiencing love and compassion and connecting ourself with others in the globe. Not only just family members friends and family members, but with others as well as well like.

Even in the in a strange situation in the new in a new situation novel situation also we can relate, ourselves to other members or the group members the fellow beings or other even. We can sometimes we can relate also ourself to the nature itself. So, that is the intrapersonal competency.

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So, again ESD assessment ESD assessment is a part of an active learning cycle. Yes of course, as we are going to implement the ESD in curriculum in practice in pedagogy and all kinds of thing in a in whole institution context. Then how this how this ESD which has become a part of a learning cycle, active learning cycle how it can be assessed? So, though ESD assessment as a part of an active learning cycle if we want to in engage ourselves in active learning cycle with the whole institution approach.

Then here we have to you know develop a framework we have to develop a framework that is, with the positive learning cycle in monitoring, that framework will monitor the and evaluation that which learning stimulates the outcomes which are evaluated, feeding into reflection and planning for the future implementation of teaching.

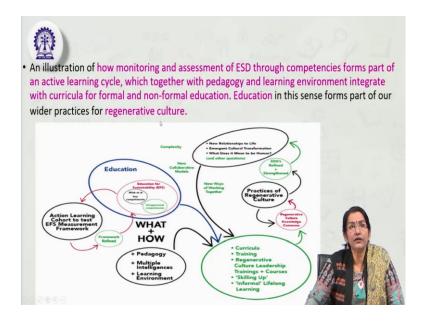
So, as you can see as you can see if there are three there is there are four primary domains. Like for example, encouraging and supporting then designing and planning putting into action and monitoring and reflection.

So, like for example, this is suppose this is the learning cycle ok, ESD based learning cycle. The action reflection cycle action and reflection cycle ok, of learning and assessment drawing again it is based on the Kolb's theory of experience and learning ok. If it is the learning action reflection cycle, first thing is that; first thing is that dialogical learning cycle, having the dialogue, having the dialogue like encouraging and supporting ok.

Encouraging and supporting designing planning having the dialogic, dialogical cycle having the debate dialogue discussion or the verbal communication then did in this is being initiated. Then comes the whole institution approach gradually we adopt it across the institution, whole institutional approach like putting it into action. Then monitoring and reflecting on it then again encouraging and supporting. So, here from this institutional approach then again we try to embed the sustainability in the curriculum.

So, embedding the sustainability in the curriculum dialogic learning after the embedding then we are having the and learning it having the dialogues, discussions hands on etcetera and from there we are going to implement it for the whole institution. So, this is the learning cycle ESD based learning cycle, how ESD can be embedded ESD can ESD sustainability can be embedded in the curriculum, through whole institution approach and this is the learning cycle learning, action and reflection; learning, action and then reflection. So, again it is based on the experience a learning model.

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So, here it is an illustration has been given illustration given, how monitoring and assessment of ESD through different competencies can form a part of the active learning cycle. As you can say, when we relate it to the pedagogy and the learning environment how it integrates the curriculum both formal and non formal education? And how it is regenerative in culture and scope?

Like for example, here you can say here can say the this is the you know curricular, the whole institute within the institution we have developed curricular training, regenerative learning, culture of leadership, training courses skill skilling up then informal and lifelong learning these are the going on activities ok. So, then it is related to what plus how here again we add that what we are going to learn out of it and how we are going to learn out of it.

So, here definitely for what and how this pedagogy yes of course, multiple intelligence and learning environmental context these three factors are very important. This is one dimension when we in when we related to the whole institution approach, how ESD can be embedded in the whole institution. So, that is one context is the pedagogy multiple intelligence learning environment that is one type related to this.

Then comes the education and within education as we can see education for sustainability EFS then key competence is required key competences required for the and interpersonal intrapersonal competency. So, this is the a domain of education again domain of education that is also directly related to the whole institution approach that is the curricular training etcetera.

Then another domain is that new relationship to life emerging cultural transformation, what does it mean to be human and other questions. So, these are other co-variables or confounding variables like new relationship to the life, emerging cultural transformation, how does it mean to be a human. So, here we can say here, how SDGs are refined and strengthen then practices of regenerative culture is there, then regenerative culture, knowledge commons, then a new ways of working together all kinds of things.

Cultural transmission then new ways of thinking innovation and transformation that also takes place this is one thing. So, and new collaborative models that can be that is one aspect that is the creative aspects then again from the education also from whatever we have the competencies and the education for sustainability that we have introduced how to act upon it.

So, action learning that is action learning cohort to test the e f s measurement framework the framework redefined. So, whatever we are proposing, like education for sustainable development, sustainability key competencies strategic thinking system thinking, then intrapersonal relationship, competency etcetera, how we are going to implement it in

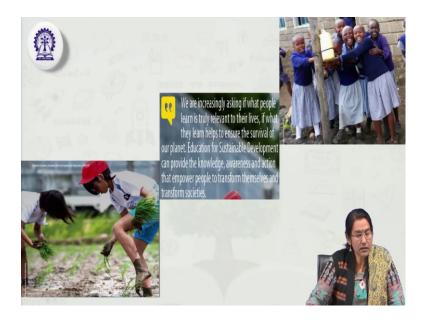
terms of act active learning. So, this act action learning cohort is also they are too and which can be measured which can be measured through the framework.

So, the framework again from time to time these are being refined. So, education domain the pedagogy domain pedagogy with learning environment context and multiple intelligence that is also another important domain. And the innovative thought process like new relationship, new pattern, new cultural, then the emerging cultural transformation, then the you know hybrid fusion and hybrids across all the things.

Then SDGs redefine all the SDGs redefine plus strengthen more action plan, more strategies, practice of regenerative culture, regenerative culture knowledge domains all these are again these three domains. We can say this whole institution this kind of framework can be implemented for not only for monitoring and evaluating the assessment and assessing the ESD.

But also implementing the ESD based curricula and embedding the ESD in the curricula and from time to time evaluating it, strengthening it after getting the feedback. So, this is the framework of active learning cycle embedding sustainability I mean embedding ESD.

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So, these are some of the you know how ESD can be embedded in our curriculum or practice and whole institution these are some of the examples. Like you can say you

know how the children can be introduced to the you know natural process of you know agriculture, planting the trees you know all kinds of agricultural sciences and the relevance of the eco ecology and environmental science.

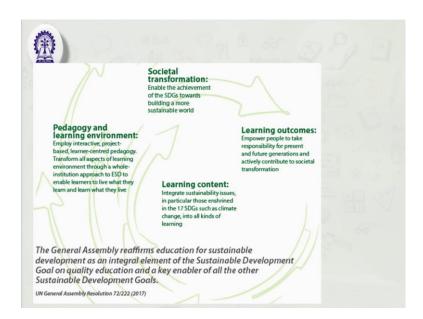
So, similarly then togetherness relationship building team work students can also be introduced to that. So, here we can we are increasingly asking if the if what people learn is truly relevant to their lives or if what they learn helps to ensure the survival of the our planet. So, education for sustainable development can provide the knowledge awareness and action that empower the people to transform themselves and to transform the society.

So, ESD can help us not only in understanding the natural domains, natural concepts, you know natural you know concepts; but also helps us in understanding these things and also enabling us empowering us to not only adjust and adapt ourselves to the environment. But also can face or empower us to face the challenges to face the challenges; face the challenges.

To solve the critical problems, complex problems and by transforming the individual self as well as when all the individuals every individual will transform themselves, transform themselves by adopting sustainable habits and getting rid of unsustainable things, unsustainable lifestyle, consumption etcetera.

Then definitely all of them we will be all of them together can move forward towards transforming the whole society. So, transforming self and transforming the society through ESD based actions habits and the learning styles and the pedagogy.

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So, here again this is the learning cycle again how this social transformation takes place, general assembly that reaffirms that education for sustainable development is an integral element of sustainable development. Goals, the all the 17 goals and on the quality; based on the quality education and the key enabler of all the other sustainable development goals.

So, as I can see the learning content is important, when even if when we adopt this whole institution approach. One is the learning content is there which integrates the sustainability issues, you know in particular those enshrined in 17 SDGs with all kinds of targets, climate change, poverty or you know water, then land space, taking care of land space, ecosystem. All the 17 SDGs, starting from infrastructure to marine life to everything.

So, that is the learning content how the content to be developed embedding the sustainability issues mentioned in 17 SDGs and its targets ok, all kinds of learning that from there. So, then again pedagogy here again pedagogy and learning, how to learn it how to it is to be taught how it is to be explained? So, employ the interactive and project based learning. So, it is it we have to communicate we have to educate people we have to inform people through education, through communication, through dissemination of information, through interaction.

So, here pedagogy and learning environment will be more interactive more project based, work based, learning by doing or experience based, learner centred pedagogy because the learners plays the key role learner centred pedagogy. So, all these thing these are the key pedagogical units. Then transforming all aspects of learning environment by asking different types of questions who, why, when, where all kinds of reflective questions critical question analysing these questions and answering.

Answering these questions to learn know about, who, why, when all the reasons of course and effect relationship and different types of relationship. And transform all the aspects of learning environment through a whole institution approach. So, again whole institution approach when we are going to adopt it embed ESD in every sphere in every dimension in every you can goal every step.

So, that is called the whole institution approach ESD not only in that content curriculum and pedagogy, but also in practice, but also in environment, but also in communication everything institution approach to ESD to enable the learners to live what they learn and learn what they live. So, here we can say whatever we are learning actually we are leaving that kind of life and whatever we are living that we are actually learning from our curriculum and content and practising it.

So, we can say learning the live and living the learning. So, in this way so that. And so that every learner will be enabled to live the life that he is learning about sustainability that is in the institution. So, that is that can bring that 300 degree transformation transformative approach to whole institution approach to ESD which not only enable the learner to learn new things certain sustainable things and practices, but also live the life of having that sustainable behaviour consumption etcetera.

So, then in this way then we can gradually move towards the social transformation. Definitely in a community if all the people all the members they start behaving sustainably adopting sustainable habits consuming sustainability and taking care of their environment etcetera. That definitely it will empower the whole society community that is to enable at the achievement of SDGs or not only just ESD or quality educational SDG 4, but all other 16 SDGs also.

That is the unable to achieve the all the SDGs towards the building a more sustainable world. So, simultaneously we can make progress towards achieving all the 17 SDG

automatically the transformation social transformation can be possible throughout the world vary at the earlier stage, so even though UNESCO has kept the data as 2030. Then the learning outcome, how these are going to be come out as the learning outcome? That is empowering the people to take responsibility for the present future generation and actively contribute towards the social transformation.

So, when societal transformation takes place then the learning outcome is that; that means, the people are the people are being empowered. Every stakeholder is being empowered with the responsibility of, with the responsibility of taking care of the a planet and their environment not only at the present at present, but also for the future, but also conserving this restoring these resources for the future generation as well.

So, that is the learning outcome that is the long term learning outcome or the goal of all our education our ESD based curriculum framework or whole institution approach. So, empowering people to take the responsibility for the present as well as the future generations active actively contributing towards the social transformation, conservation etcetera. So, this is the framework. Now, I am just concluding it here right now. The ESD based learning framework now in the next class we will continue.

Thank you.