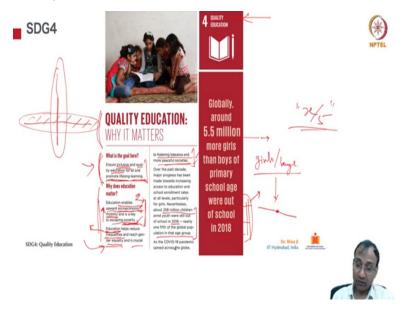
United Nations Sustainable Development Goals (UN SDGs) Professor Shiva Ji Department of Design Indian Institute of Technology, Hyderabad Module – 12 SDG4: Quality Education

Hello everyone. So I welcome you all to this module 12 of NPTEL course of UN SDGs. In this one, we are going to discuss SDG 4 that is quality education.

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So, let us see some facts. Globally around 5.5 million more girls than boys of primary school age were out of school in 2018. So, if you see this, it is a database suggests girls are lagging behind; and there are a number of repercussions of education being affected of any child, whether it is a boy or a girl. Their entire life they are going to face some kind of impact because of the lack of proper education which they deserve at their right age. Why it matters? Let us see. So, overall goal, ensure inclusive and quality education for all and promote lifelong learning, inclusive as the keyword; because the moment we see if girls are lagging behind with respect to boys, that is a kind of a imbalance which is going to get happened in the society over time.

One side is getting heavier, one side getting lighter, and that is an imbalance. Second thing comes about quality education, well, education we all know, what is this quality word doing in here? So that is another point of focus to understand what this quality word actually means, in this context. We will see during the course of this lecture, what does it mean? And he talks about

here further promote lifelong learning. It is very philosophical; it is very kind of profound, which does not talks about only in education need for livelihood, or maybe in learning some skills only.

It talks about a whole life like how one can nourish with this educational inputs; educational nutrient if we call it and for their whole life. So that is the objective over here, which is much larger than just schooling. Because schooling ends the moment you graduate from your school, but lifelong earning, learning does not end with the school. It continues with your entire life, no matter where you are. Why does education matter actually? Why do we kind of put in so much emphasis and after I think food and poverty and health, why immediately there is education? Because the moment the first three things are taken care of, you have a respectable income where you can fend for your family, yourself; you can gather enough at least mandated necessities, fulfill your necessities.

Then, you can take care of properly of your own body, physical and mental well being, and then immediately there is education; because education empowers you for the whole life. We are in such an era now, where education is so much integral with our everyday life and every hours life. So, it is not that we are living in the middle ages, or maybe in ancient times, where it does not matter, whether one is able to learn anything or not. Because, a lot of things were actually physical abilities based. Now, along with physical, mental abilities have taken a supreme position. So, if you are mentally able, you can do a number of things; because there are a number of things available to assist you on the physical requirements.

It is not necessary to carry weight at the top of your head; you can do it by other several means also. But, mental abilities, I have found a very supreme place and that is how this whole human endeavors and things are actually getting sustained. So, education is so important that it plays a vital role in everyone's life. Why it matters, let us see. Education enables upward socioeconomic mobility; you see these words actually mean quite a lot. It talks about socioeconomic mobility in upward direction, improvement, betterment; from what you have today, tomorrow, you should be in a better position. Socioeconomic mobility, that it puts you at the higher, a position higher level; and it gives you an improvement and a key to escaping poverty.

So, if you see how one can get rid of poverty is of course by going for some works, so that you can live, you can earn your livelihood, that can that work can be of for yourself. If you want to be an entrepreneur, businessman or something that, or maybe even a farmer; so you do your own

work, you grow your crops and things. And or you go for working for somebody else, like services; and then you earn your livelihood. So, it is a very easy and everyday regular basis of improving someone's economic situations; that is why, this phrase is beautifully framed a words and terms.

It talks about socioeconomic. So, not just economics if you see, socio word is also there, like humans, we as a kind of group. We are in social animals, we are like living in groups; we are not solitary creature. So, there is a lot dependent on each other. Our families being the first immediate unit, which we are probably all are part of; we are given both by our parents, then we have our siblings, our spouse, our kids, and grandparents both sides, maternal paternal, and other members also in the family. So, it is a small one world for yourself, for all of us. And then there are our other relatives, friends, peers, neighborhoods, our work peers, our other friends and in the whole society; so, there are so much of interdependence.

If you are strong enough, you can be a support system for all your family members; is not it true? If you are strong enough, you can be a support member for your other family members and relatives and friends also. If you are strong enough, you can be a supporting member for your entire society. For example, if you are an entrepreneur, you are able to employ 5000 10,000 people with you. Of course, you are the support giver for those 5000 10,000 people, and their respective family. So, so the how the number actually multiplies, who are directly getting benefited from you because of your skills and abilities, mainly mental abilities? Because you should be able to think at that level and assemble those resources and things, and bring it and make it such a mechanism which functions to enable this kind of environment.

So, that is the situation which helps connecting socio and economic conditions; so, this is where these two terms come together. I hope I am able to explain it to you; let me move forward. Education helps reduce inequalities and reach gender equality, and is crucial to fostering tolerance and more peaceful societies. So education, education is about educating ourselves about something something. What that something could be? That something could be about a basic sciences, physics, chemistry, maths; like 1 plus 1, 2; 2 plus 2, 4; and science and languages if you see, and then other things. Then, comes other specialized things if you want to study history, geography, and economics, and civics, public administration, all of those; then the science side if you want to study physics, chemistry, math, biology et-cetera.

Then, you want to move to engineering, mechanical, electrical, then technology like computer science and design fields, liberal arts, medicine, management, there are a lot of things. Nowadays, even new things such as artificial intelligence, climate change, history, heritage, all of these are also evolving into their unique subject fields. So, there is this generalized set of things which one must study, to make themselves aware of what is this universe, what the sun, what is our planet earth, what is oxygen, how we are living. Now, what are the living conditions, what is ozone layer other all of the xyz; and then there are some specialized fields. For example, I specialize in architecture and design.

So, I can, I have mastery in in those these 2 subjects. So, I can handle topics from this area, I can go for educating people, I can go for research into this area, I can do experiments, simulations, and conduct consultancy projects and things like that. So, that becomes a generalized subjects are like your horizon. Specialized subjects are vertical this thing, like you can go higher, you can go deeper; and you can specialized into a certain subject area. For example, medicine and all, which will help you strengthen your capabilities to go deeper into certain thing; one specialized pinpointed thing, where your contribution can be much higher. And this is this horizon is able to give you a broader perspective and information about other things.

But, even if I am not trained into, for example, statistics and economics; one must know basic nuances of it; because, in today's life, knowing things is essential for your own understanding, first of all. And if you are knowledgeable enough, definitely you will be able to understand what are the things going on in your surrounding. You can educate yourself to first of all be aware of it; make, benefits out of it, utilize them into a better ways and multiple possible ways, and things that. Because, every days, there are some new rules, regulations, bills and things, how the parliament and legislative assemblies actually function. If you are not aware of them, how will you be able to take any benefit out of such schemes, which governments are launching every day?

So, education helps you in variety of other education empowers you for each and everything, what you can do; and those potentials are really limitless. So, that is the work of education. Then, it talks about reducing inequalities, because if you are aware of what this whole problem is, and why it should not be actually carried forward in the future. You will must work towards abolishing, or harboring first of all your own any from the older times any such notions and

things that. If you see something happening with somebody, maybe you should intervene and stop it, and all of those things; and slowly and gradually our society will move towards much refined and finer phase.

And then gender equality. Of course, with time, it has been proven that there is no difference. As far as capabilities are concerned, there is no difference between these generals. Biological things are different matter to understand; so keeping them assigned, anybody's abilities or performing something or learning something or doing something, there is no difference. There is no difference between any poor or rich person's abilities. There is no difference between gender based or distinctions, or any any any such way. And engineer's son also can become an engineer and somebody else's son also can become an engineer, and so on. It is not just to a favour one profession or something.

Everybody carries the same potential. Fortunately, god has gifted us with the same or equal brain powers. So, there is no distinction at that thing; everybody's at equal. So, that should translate in our everyday life, in our society as well. If we take example from the ancient India, there has been several scholarly women which are even the idols for us, why not to bring back in that time; even in today's time across the world, not just one place. If you see there are some countries where women are still do not possess voting rights, or they are not treated as equal; they cannot actually walk and roam around freely and all of those things. Those things are actually still very very medieval and depressing.

So, just because a person is having that particular gender, they lose their freedom; that is not right. So, those kinds of things at minute level or at bigger level, at every level should be addressed. And why is it needed? For fostering tolerance and more peaceful societies; because, where there are laughing and happy people that society you can say, is a happy and satisfied society. You can say, it is a kind of a good place to be. For example, if you see Bhutan for example, they do not assess GDP in terms of economics or monetary gains; they guess, they assess their gains GDP in the terms of across Happiness Index or something like that. So, that is a very amazing way of understanding and bringing everything together.

Because if each and every person is happy, that is what you are all striving for; is not it? It does not matter. I have x rupees or maybe 1 million x rupees or something like that; it does not make any difference. Because at the end of the time, all of the money whatever we have is going to get

remain here only. At the end of your life stage, were you happy? Were you satisfied for what you did in your whole life, is a kind of sense of self introspection, which helps you figure out what was really needed to be done from your life. So, a good healthy and happy society gets a birth from the foundations of education; that is why it is in essential. Let me take you forward.

Over the past decade, major progress has been made towards increasing access to education, and school enrollment rates at all levels, particularly for girls. Nevertheless, about 258 million children and youth were still out of school in 2018; that is a big big figure, nearly one fifth of global population in that age group, by god. So, x by fifth of that age group could not be in the school. It is not just a few numbers we are talking about that entire age groups one fifth 20 percent could not go there. See how big, how big this number is in that magnitude, how far we are from the target. And, again the COVIDs impact.

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As the COVID-19 pandemic spread across the globe, countries announced the temporary closure of schools; that was the most impacting one, and immediately everything was closed, impacting more than 91 percent of students worldwide. By April 2020, close to 1.6 billion children and youth were out of school; most unfortunate, biggest deep COVID-19. Fortunately, I see it as an unfortunate this thing only in the earth unfortunate incidence of this pandemic that India had a collection of 4G by that time. And people are, people were aware of e-transactions buying,

purchasing and transfer money even 1 rupee, 5 rupee, 10 rupee transaction and to buy a cup of tea or things like that.

These 2 things with the help of smartphones, India was miserably able to cope up with the impacts of COVID-19 in a much greater way. That is a definitely a time of a depression; but still, we were able to cope up because we were accustomed to these few things by that time. Remember, immediately schools were closed, offices were closed, markets were closed, or productions were kind of halt halted or majorly disrupted, if not completely closed. And aviation was completely shut down, trains were shut for the for first time in the whole history of. For example, this whole no lineage, such kind of full stop actually came into the being.

But, immediately, if not everybody, majority of the section of the society moved to the digital platforms. And schools actually opened in just in few months time, digitally in online mode. And at least the satisfaction is kids, student's school they were not able to miss the sessions. So, it was kind of a little lagged or kind of it, it went in behind in time; but it was not disrupted. The session was not closed, the session was not wide; so that is the biggest satisfaction that even if. There was some impact, but it did not come to a close. So, we have learned how to kind of bounce back, that is resilience capacity we were discussing in the previous lectures. But yes, that impact is still very big.

If you see 1.6 billion children, and youth were out of school, because of that impact. So, on this front, how much progress we have made so far? So, primary school completion rate reached 84 percent in 2018; 84 percent that is good, 84 percent up from 70 percent in year 2000. So, earlier in year 2000, it was 70 percent and this was 2018. And then is expected to reach 89 percent globally by 2030, 2030 is going to be 89 percent; so still, there is kind of an 11 percent. Even after this, we are still here 2022-23. So, this percentage might be a little lesser than this somewhere here between 84 to 89. But, so there is still 15, 16, 17 or maybe some like 14, 13, 12 percentage of target remaining to be achieved.

In 74 countries with comparable data for the period 2011 to 19 around seven in ten children aged 3 and 4 were develop mentally on the track in at least 3 of the following domains: literacy, numeracy, physical development, social emotional development and learning. So, you see education has several components, and this whole human development human resource development has multiple components; you can see them here. And how these agencies are

actually caring so much to go behind all of those domains equally, they are all important. The global adult literacy rate is 15 years and older was 86 percent in 2018, while the youth literacy rate 15 to 24 was at 92 percent, which is good.

But, this should go to 10 percent. Then, what challenges remain? We are seeing these numbers are still behind 100 percent goal. Despite years of steady growth in enrollment rates, non-proficiency rates remain disturbingly high. In 2018, some 773 million adults, two thirds of whom are women remain illiterate in terms of reading and writing skills. Literacy and education are I think literacy you can say is the level one. So, literacy means the person is able to read and write; that is a very very basic abilities that you are able to read a newspaper, maybe a piece of notice, or something, or maybe a letter. And you are able to write few things, maybe a small passage, maybe a letter, or maybe an official application or something like that.

So that, in case it is needed in your own everyday life, you should not depend on someone else that you please write up this application for me and things like that. So, that is a very basic level of reading and writing abilities; we call it as literacy, we need to as literacy. So, if we see these numbers, and in 2018 some 773 million adults grownups, we are talking about above 15 years of age and elderly; and off which two thirds were women. That is where again, this kind of discouraging information that of all illiterate people two third are women. It is good that men have like a forefront; but women also should not lag behind. So, this should be equal, they also. So, it suggests, if you are a kind of implementer or a policymaker, or maybe if you are executing some scheme or something; then where to work more.

Definitely, for the women's literacy improvement, so that this number comes to an improvement in last stage. So, the sheer magnitude of school closures due to COVID-19 is likely to setback progress on access to education. Of course, years of effort is going to get into a some hit. Where are people struggling the most to have access to education? Those regions? The first comes Sub-Saharan Africa faces the biggest challenges in providing schools with basic resources. The situation is extreme at the primary and lower secondary levels were less than half of schools in Sub-Saharan Africa have access to drinking water, electricity, computers and internet. Because in today's time, even if there is a; forget about internet and computer, there is no water supplies is such an unimaginable kind of situation.

Are we living in the middle ages or dark ages or I do not know what; so, it is so much of a lagging behind. We are talking about creating smart classrooms and things like that, majorly equipped with the computing abilities and presentation abilities and internet; and lots of physical books and even digital knowledge resources books and other stuff journals, papers, et-cetera, etcetera. And there are some schools where even basic things like water is also not available; perhaps, toilets also not available. In India also there were few years back, few decades back, this situation was there. In several villages and remote places, toilet facilities were not there in the schools.

And indirectly this situation actually led to the girls student withdrawing from the schooling. They did not came and complained to the school administration because it is a matter of little, maybe getting shy also. Naturally, if you are in the age of early age, and if you are from a village background; you may not be in general very outspoken and upfront about things. So, they did not even speak and protested anything; they just did not join the school, they did not came; and that became for several years an issue. Why girl students did not go to school? Because, boys can relieve here and there; but girl, girl students cannot do. And this actually situation was actually found out and lot of agencies, NGOs, government institutions, and even other lot of philanthropists; I am also personally aware of one philanthropist, who has worked in the state of Telangana, and many other places like Uttar Pradesh.

And they actually worked for creating workable toilet facility facilities in the schools, which again attracted children, particularly girl children, and midday meal scheme if you are aware of, even this thing. I think I am sure that will also come in the coming slides, that some families out of poverty if they are not able to fend for themselves, even a small kid of maybe 5-10 years old; they will see it as maybe an earner. Even if the kid is able to earn for himself or herself instead of school, they will like to send him or her to maybe place where he or she can work. and even like 5-10 rupees, 20 rupees a day, that is good enough for them.

That is the situation we are talking about. So, midday's meal scheme was implemented to attract kids, so that with a promise that your lunch, a wholesome nutritious lunch is taken care of. And presently you may be aware of, Pan India almost pan India there is this NGO Akshay Patra; they are providing these midday meals schemes. I think is it runs the, I think the quantity runs in

several millions per day, per day per plates, million plates per day something. Statistics, I am not aware of; maybe you can check separately.

But yes, this is actually these kind of schemes of creating toilet facilities, and creating these lunch facilities and things have increased the number of registration and continuation in the schools; which is definitely going to help in the coming decades and the century. Because, more and more students will be educated, and they will kind of grow into a full educated person in their youth, and their rest of their age. And that is going to definitely help our country. So, these are the basic things sometimes we ignore; but they are essential for ensuring education in the country. Inequalities will also worsen unless the digital divide, the gap between under connected and highly digitized, digitalized countries is not addressed.

So, some countries are moving much faster, some countries are lagging behind, like saw Sub-Saharan Africa. So, how this gap can be bridged? How the distribution of resources can take place, equally justified at all places? That is the challenge. Are there groups that have more difficult access to education? Yes. What are those groups? Of course, the first one we saw from this slide one, women, girl, a child. Women and girls are one of those groups about one-third of countries in the developing regions have not achieved gender parity in primary education. These disadvantages in education also translate into lack of access to skills, and limited opportunities in the labor market for the young women.

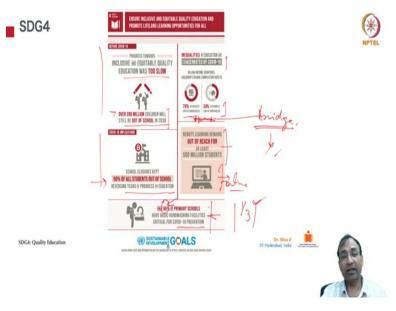
What can be done? Ask our governments to place education as a priority in both policy and practice. Make a check with your local representative; make sure that there are enough resources and things. First of all, gather data whether it is happening; if not, then go behind them and try establishing such educational schooling facilities and college things. And lobby our governments to make firm commitments to provide free primary education; there should not be any charge. We know, we are still fighting poverty. In such a situation, how the family who is living almost close to the poverty level that line; they will be paying for the a fee. So, basic education, primary education or rather the entire education system I suppose, there are several countries which have this model.

Even till PhD and beyond, education is always free. If it is education, it is free. I think India, I know personally vouch for this thing. Because only in this kind of scenario, we can empower our young generation to be and very strong, and enabled country in the times to come; because, we

are going to face lot of challenges in the future. In the next century, there are several countries which are developing at much faster rate than us; we have to also hope. We have to bring back that golden era for our country back again; and that can only be done by the first and only mean of education.

Rest things will definitely follow. So, education at all levels, not just primary; primary to without even thinking must be a free for everyone, including vulnerable or marginalized group, any group; blanket policy that everybody will get free education, at least at primary level. For more details, this link; let us see some more number.

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Before COVID progress towards inclusive and equitable quality education was too slow. Over 200 million children will still be out of school in 2030. Inequalities in education are exacerbated by COVID-19 is low income country; children's school completion rate is 79 percent in richest ones, 20 percent of households, 34 percent in poorest, 20 percent of households. So, you can see this huge gap that happening between rich and a poor countries; so, this is the gap. We are going, we want to bridge; and how can this be done? I think India is also one of the countries where, number of kids who are away from school is much higher.

We have to work towards this to improve it. COVID-19 implications, school closures kept 90 percent of all students out of school, reversing years of progress in education. Remote learning remains out of reach for at least 500 million students. Remote learning means these are online

facilities, internet, computing devices, whether a smartphone or a computer, or maybe a tablet or something that, some digital device and internet. Only 65 percent of primary schools have basic hand washing facilities. You see this number and I was talking about hand washing; only 65 percent close to two-third; one-third still remains critical for COVID-19 prevention. So, if this is not there spread off such viruses will be higher; because this takes care of personal hygiene. So, quality education.