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

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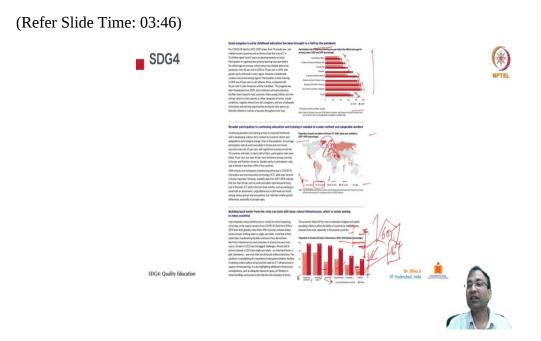
There are YouTube videos, maybe this link, you can follow and check in the YouTube, and see for yourself. So, let me give you some stats. Change in reading proficiency for grades 1 to 8, from 19 to 20 year 2020 percentage is a millions of children; so you can see reading proficiency bit just we are talking about from grades 1 to 8, class 1 to 8. What is that reading proficiency, let us see; sub-Saharan Africa very low. This dark red is latest one 2020 and prior to COVID-19 is this pink this one. So, if you see that reading proficiency has come down everywhere; it is very. So, 14.8 here; earlier it used to be 17.5. So, this much of progress reading proficiency and then Central and Southern Asia 36, from 47.8.

So, now there are less number of kids from this class, this range of class who have this reading proficiency. So, that is the number I see Latin America here; so the lowest one I see in this place, Sub-Saharan Africa. And then the highest I see here, Europe and Northern America. Even before COVID-19, the world was not on track to meet reading and mathematics targets. In 2019, only 59 percent of children in grade 3 were proficient in reading. The pandemic is projected to cause an additional 101 million children; roughly 9 percent of those in primary and lower secondary

schools to fall below the minimum reading proficiency threshold, increasing the total number of students failing falling behind to 584 million in 2020.

This wipes out the progress achieved in education over the past 20 years. Similar declines are observed in area of mathematics; nearly 2 thirds of the children falling behind live in Central and Southern Africa and Eastern Southern Asia. The proficiency rate was already very low in Sub-Saharan Africa before the pandemic. So, learning losses in this region would likely occur among the children below minimum level of proficiency, recovering of the learning deficit globally could occur by 2024; but only if extraordinary efforts are made, only if extraordinary efforts are made.

So in the world also, if you see this number has come down from 54.5 to 45.3; so that is the change we are seeing over here. And in the next one, we have secondary school completion rate between 2010 to 19 percentage wise completion rates secondary school. Sub-Saharan 26 to 29 improvement, improvement, improvement, improvement, a slight improvement, improvement. So overall, yes, this has improved.



Then, we have participation rate in organized learning, one year before the official entry age for primary school 2010 and 19 percentage. Organized learning one year before official entry age of primary school; Sub-Saharan 36 to 43. Oceania you do not have this data; Australia, New Zealand, yes here also. And then this has come down a little bit, this has improved, improved;

overall world 65 to 73. So, we can see this participation rate in organized learning; this has improved in this 9 year span. The next one talks about proportion of youth and elders with basic ICT skills; latest year available in 2017 to 19. So, gray is like no data available, and very light pinks 0 to 24.9 first quarter, and then second quarter, third quarter, 4th quarter 75 to 100.

I hardly see anyone in the dark category. But, this one's majorly here in this side, this side these fill here, remaining mostly are in this category; and then the lighter ones. In the next one, we have proportion of schools with basic infrastructure 2016 to 19 latest percentage wise, single sex sanitation, toilets for both the genders, drinking water, electricity, hand washing, computers, internet. So, percentage wise if you see, in the whole world 40; and the least developed countries with this pinkwala, this is 16 to 40, then 26 to 48. So, of course world's average is higher. That means the advanced countries; they will be having even much higher percentage in all of these.

So, in the least developed countries this is always behind; I think internet is the even the smallest one in this whole by just 16 percent. Then, we have 26 percent for computers, then we have electricity 33 percent, 40 for handwashing, 56, 56. I think huge range to cover 60 percent; that that is more than double than what is already there.

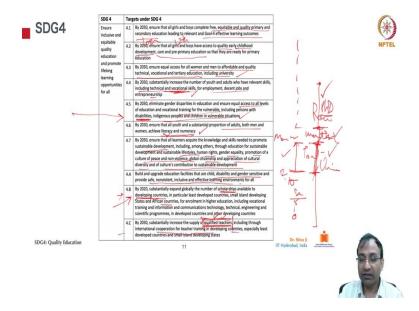
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So, the proportion of first needed is much higher, percentage wise if you see; some more figures. COVID-19 has wiped out 20 years of education gains and additional 101 million or 9 percent of children in grades 1 through 8 fell below, yes that we saw. So, let me move ahead.

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So, what are those targets inside this SDG 4 that we will see one by one; so, we have 4.1. By 2030, ensure that all girls and boys complete free, equitable, quality primary and secondary education; secondary means up to tenth, senior secondary is twelfth; leading to relevant and goal for effective learning outcomes. Then 2030, ensure that all girls and boys have access to quality, early childhood development, care and primary education; so that they are ready for primary education. Then third, ensuring equal access for all women and men to affordable and quality technical, vocational tertiary education, including university you see this. So, primary begins from 0 to 5. Then we have secondary up to tenth, and then we have senior secondary up to twelfth.

Then, it goes in the tertiary education you go for your degrees, under graduation, post graduation; you go for research PhD and postdocs, and all of those. So, it keeps on going up and up. So, not just senior secondary up to tertiary so that everybody goes for some graduation; and they go to university colleges and they get their degrees. Then, even go for specialization, a master's level degrees, so that they can specialize if you know. These undergraduate degrees are majorly to give knowledge about one particular field; for example, art, science, humanities, engineering, technology, medicine, management, et-cetera.

And then the master's degree is that where you specialize, you go into one particular domain into that subject area; and you specialize into it, you gain mastery over it. Then, you can put in your efforts in much stronger way; that is why master says. And then you enter into the research world, where you go for earning your PhD degree, where you become an independent think tank; and perform academic and research activities all alone. So, you develop those abilities, you develop the argumentation, research and investigation, and all of those abilities where you can find research authority.

You can work on the main component vision research methodologies, you can draw some inferences and results; you can generate some new knowledge, some normal knowledge. You can add to the overall domain of knowledge created by humans that is the PhD stage. So, it is desirable at least at this stage, one should go for; I would definitely vouch for master's degree at least. So, that you kind of you command on your subject area; that is that I would definitely recommend. But yes, the SDGs actually talk about at least tertiary education undergrad level, so that everybody is graduate.

Next, substantially increase the number of youth and adults who have relevant skills, including technical, vocational skills for employment, decent jobs and entrepreneurship; because these you can employ immediately and get some work opportunity. Eliminate gender disparities in education ensure equal access to all levels of education, vocational training for vulnerable those groups, including persons with disabilities, the another group which gets affected these schools and their premises. They are not even fit for regular normally able kids; then what to think of especially abilities. So, that discrepancy also must not exist, and our premises of schools and colleges must be friendly to the especially abled group of people, indigenous people and children and vulnerable situation.

By 30, ensure that all youth and substantial proportion of adults, both men and women achieve literacy and numeracy; so, literacy writing reading. Numeracy, so that they have number related capabilities, they can account; they can calculate how much they have earned, how much of interest and how much of taxes. And such basic calculations, so that nobody can cheat them in the regular life, those kinds of instances are also there. So numeracy, because such majority of these people if you see, why this is essential. Work in an organized sector, and they earn whatever money from the contractor or that vendor; sometimes they get cheated.

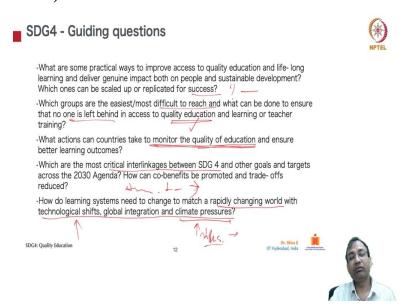
So, this should not happen to them; so, even this attention is paid to that level. So, that for everyday transactions in the market all of those things, they can take care of themselves; that is

numeracy. Next, by 30, ensure that all learners acquire knowledge and skills needed to promote sustainable development SD, including among others through education for sustainable development, social lifestyle, human rights, gender equality, promotion of culture and peace, non violence, global citizenship, appreciation of cultural diversity, and cultures contribution to SD.

Build and upgrade education facilities that our child's disability and gender sensitive, provide safe nonviolent, inclusive effective learning environment for all. By 2020, I think that is a mistake or something, I do not know. So, substantially expand globally the number of scholarships available to developing countries, scholarships to developing countries, so that people from these countries come can go to developed countries for gaining some education, skills and things. In particular least developed countries, small island developing states and African countries for enrollment in higher education, including vocational training and information communication technology; teaching engineering and scientific programs in developed countries and other developed countries.

By 2030, substantially increase the supply of qualified teachers; how this whole thing is going to happen, is because of qualified and able teachers, is not it? So, we must actually empower our people first of all to become teachers, good teachers. Then, there will be more educated population; then again, there will be again finer nicer and good teachers. Then again, it will multiply, multiply, multiply. So, we first need good qualified teachers who can empower our generation, including through international cooperation for teacher training in developing countries, especially in least developed countries, small islands.

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So, there are some a guiding questions with respect to this. What are some practical ways to improve access to quality education and lifelong learning, and deliver genuine impact both on people and sustainable development, which one can be scaled up or replicated for success? Think about it. Which groups are the easiest most difficult to reach? Because even if you are trying, there may be some practical situation, where you are not able to reach to a certain targeted group, or group of people, or maybe your community. They may be having some unique kind of maybe bottleneck. So, what can be done to ensure that no one is left behind; actually taking care that no one is left behind in access to quality education.

We have established why this is crucial and essential learning a teacher training. What actions can countries take to monitor the quality of education and ensure better learning outcomes? Monitor the quality education, how do you do that? How do you take care of this? Which are the most critical interlinkages between SDG 4 and other goals, and targets across 2030 agenda? Maybe as an assignment for yourself, you can plot this; you will get to learn a lot of things. Maybe you can relate something which is local to your place. How can co-benefits be promoted and trade-offs reduced? How do learning systems need to change to match a rapidly changing world with technological shifts, global integration with climate pressures?

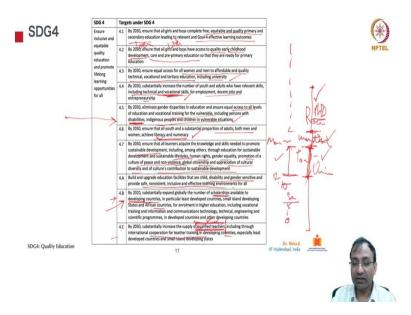
So, now come the real challenges. If you see technological shifts, a lot is changing in everyday life. Every few months there are new electronic devices, there is some new computing abilities,

some new machine to do a regular works and everyday works and things like that. Where do you see your own fit in this fast changing world? Only with the help of your own continued, proper education and new skills, you will be able to cope up. So, that technological shift, you also have to keep moving with that shift.

Global integration, so that, you are able to kind of respond from opportunities from anywhere; then you can play a part at global level and climate pressures. So, climate pressures and impact we know; so there are a lot of risks, opposed by this thing. How do you empower yourself, create your resilience to defend from this?

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So, the agendas; so from here MDG2, EFA to SDG 4. So, the scope was for primary education children based; in this one, education for all. Under these basic education children, youth and adults; and SDG 4 suggests basic education plus post basic education with lifelong perspective. Why this is important? Let me go back again to this previous slide is because of this technological shifts, global integration and climate pressures. If you are not empowered, and if you are not changing yourself every day, how are you going to cope up with this? That is why SDG 4 is very important.

It does not only talks about primary education or basic education, lifelong education. Coverage: low income countries, conflict-affected regions. This in EFA, it was yes, universal in intention; focus on lower income countries. But, here it is a universal agenda for global north and south also; because generally global south is a lagging one. So, process led by UN, UN, and the UN and member states here in this case. Policy focus, access to and completion of primary education for all, access to quality and basic education for all; access to quality based learning for all, equitable access to post basic education, relevance of learning in and work for citizenship and all of this.

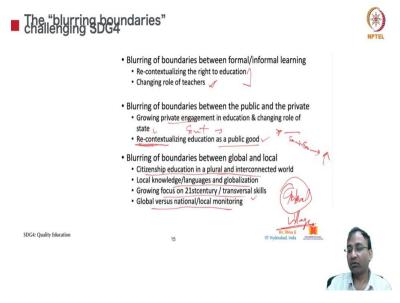
So, if you see the scope has really widened. Number of targets inside we saw. In MDGs, like MDG2, it was only 2; here there were 6 goals, now we have 10; we saw initially here, these ones.

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So, ensure inclusive and equitable quality education and promote lifelong learning opportunity for all; that is the one line basic premise of SDG 4; so that there is no one left behind. Universal relevance for both; rights-based public common good; inclusion, equity, gender equality; address all forms of discrimination and situations including emergencies. Right to Education, right to Education.

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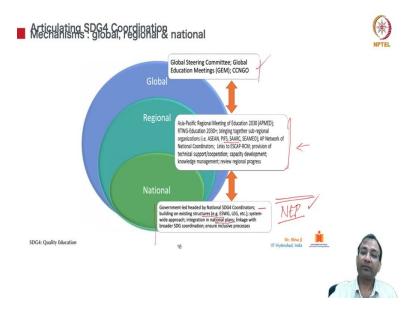
So, blurring boundaries, challenging SDG 4; blurring of boundaries between formal informal learning, re-contextualizing the right to education, changing the role of teachers. So, teachers can

play a vital role. They are not just there to give you ABCD or 1234; a lot of things they can teach. They can teach you a value education, they can teach you vocational things by themselves training them in right places; and then they can help you with life lessons, life skills, like life also is kind of a thing or a challenge for everyone. Everybody faces it very uniquely and they come up with their own a unique ups and downs.

How to cope up how to keep on moving with these changing times in the weather at professional level, personnel level, social level at any level. So, all of those things if you see, teachers can play a vital role to empower. Further, blurring of boundaries between public and the private, growing private engagement in education, changing role of the state. So, not just government department, all other agencies, and bodies can come to help it; re-contextualizing education as a public good. Now, we have already established. Why is it good for everyone to the overall socioeconomic condition of a country, and this has the capacity to lift it. Further, blurring of boundaries between global and local; now, I think it is. So, we have moved on from the silo based public administration center or a country's well system.

So, one country is here, one country is there; and there is no relationship no dialogue, I think gone are the days. So, there is so much now this whole world is reduced to a global village; you may have heard this town. So, world is reduced to a global village and how do you establish yourself in this global village. Citizenship education in a plural interconnected world, local knowledge, language and globalization, growing focus on 21st century, transversal skills, global versus national local monitoring, so both ways.

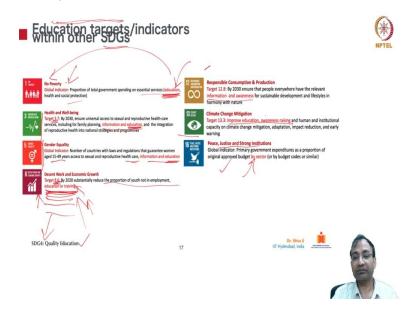
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So, from national to regional to global, how does it work? You can see here government led headed by national SDG coordinators; building on existing structures, system wide approach, integration in national plans. You may be aware of new education plan NEP has come, and there are a lot of a new changes, which we are going to experience through this new education policy. So, this policy actually is quite diverse in its scope; and it is going to take care of education in a much in a healthier way. And this has adopted a lot of inputs from what is happening at the global level, for imparting no education at all levels.

And how to kind of delegate even certificate courses or diploma courses, post graduate diploma courses; out of full degree programs and things like that the way ignou also used to work earlier. IGNOU is always practicing for a long time now. So, those kinds of things in every college, all the graduations are I think going to be of a minimum 4 years duration; so, there are a lot of reforms. Even at primary level, the number of the years at which a child can enter is also kind of changed from earlier to now. So, a lot of things which are going to change and we are all going to witness it; we are all going to experience this. So, at regional level also like ASEAN, SAARC and all of these things; I think our own neighbor countries we have India has several a fellowship programs running for students from our neighboring countries they can come, and avail education facilities in our institutes in India. And yes, of course at global level.

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So, education targets if you see in other SDGs. So, of course, the SDG 4 is talking about education, quality education. But, other places also, other SDGs also education has found some place some relevance, like how it can contribute to those SDGs; so, for poverty alleviation if you see. Education is the easiest way, and I think is the much stronger way one can relieve themselves out of that misery, that situation. So, in this one, it is mentioned global indicator, and the no poverty; proportion of total government spending on essential services, such as education, health and social protection.

So, because more investment here, more improvement here, directly related. Health and well being: target 3.7 actually talks about by 2030, ensure universal access to sexual reproduction healthcare services, including the family planning, information and education, and integration of reproductive health into national strategies and programs. Then, we have for the fifth one, gender equality. Number of countries and laws, regulations that guarantee women aged between 14, 15 to 49 years access to sexual and reproductive health care, information and education. So, that they know about their own body and its functioning, how to take care of their health, how to how to maintain a good hygiene; how to make use of other health products and things like that, and all of those things.

Then, in the eighth one, decent work in economic growth, target 8.6. By 2020, substantially reduce the proportion of youth not in employment, education or training. So, this time has

already passed, a strong force so that people from this category can be given a help. Then, in 12th, responsible consumption and production unless and until you know what kind of impacts you are creating; your own carbon footprint or energy footprint, or pollution footprint, how can you contribute? So, empowering and enabling everybody to know their own things is also essential for fighting climate change; so, that thing information and awareness.

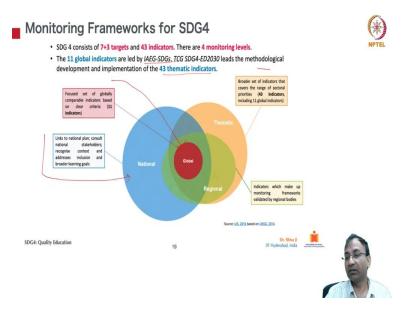
In the climate action, improve education, awareness raising about this phenomena, and peace justice, of course; this cannot be done without involving everyone and everyone's knowledge. So, of course, by obvious this is essential for the 16th one. So, now you see, interrelationship between education and other SDGs.

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Then, we have a few more monitoring of SDG 4, 4 levels of monitoring education targets. So, you can see this is sketch; this is from UNESCO. National level monitoring: linked to needs of national and sub-national of governments, adapting to a specifics of a national context, regional level. The set of indicators may be developed to take account of priorities and issues of common interest shared by countries. For example, we can have our own policy among SAARC countries and so on. Global level monitoring: relies on more limited carefully-selected group of leading indicators, harmonisation of monitoring and reporting of SDGs. Thematic monitoring: level of monitoring of comparable indicators within a specific sector education, environment, energy, health, et-cetera. Serve as a framework to track progress on a cross nationally-comparable basis.

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Now, SDG 4 consists of 7 plus 3 targets, 43 indicators; there are 4 monitoring levels that we have seen. The 11 global indicators are led by this IAEG-SDGs, and this methodological development and implementation of the 43 thematic indicators. You can see it how each one are connected. So, for national you can see here, on global you can see here, regional and thematic.

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Another relation impact of business schools on the sustainable development goals; so direct impact on these 4. Innovation fosters clean water, affordable and clean energy, life below water, life on land; and direct impact if you see for education is on your work. Depending upon your

qualification and skills what you have, you are going to seek working opportunities directly connected; there is no doubt, there is no confusion.

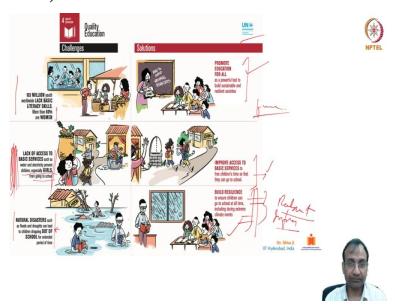
So, direct impact, and that will lead to the economic growth. Industry innovation infrastructure, where your skills would be responsible consumption and partnerships. And these, so directly impacting in these ones, then innovation based approaches you can adopt and improve on these ones. And that will ultimately lead to improvement in SDG 1, if you come from humble background, it is going to help. Bringing you above that level, handle 0 hunger, able to maintain our own bodily health, and be aware of with the health one we saw. If women are if girls students are aware of these things, they can be they can handle their hygiene related things much in a knowledgeable way and so on.

This is true for every age group, every a gender; then of course, gender equality, improvement or reduce inequalities, color based, language based, vision based those kinds of discriminations also can be addressed through this. Sustainable cities and communities for this one, I have one example. If you see KVs and Jawahar Navoday Vidyalaya, JNVs they are working at a national level. And they have this migration, like JNVs have this migration feature, where students from one region of India go to study for some time for a few years to the another region of India. And similarly, students from this region actually come to this region.

So, there is this migration for temporary migration of few years, 1, 2 years; where they learn their local language, they learn about cultures, and things they mingle. And over this sustainable several decades of its existence, now JNVs have produced lakhs and lakhs of students, who are contributing to the national integration and knowing cultures about, knowing the things from different places. So, now we are more empowered. Now, those students are they know about how the our own country actually is right at different parts in different places. And this is all ours also know; the sense of belongingness and personal connection. Then, only one can feel these national pride and things.

So, definitely, in multiple ways there is contribution of education. Sustainable cities and communities unless and until your own this thing, what how much of pollution you are creating; definitely, you can empower yourself and help yourself climate action and this thing.

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So, with this I have come to the last slide. Here we can see, what UN Environment is giving very simple 3 challenges for quality education, and 3 solutions. What are those? 133 million youth worldwide lack basic literacy skills, more than 60 percent of that are women. Like we saw, I know 2-third of that age group schoolingwala is the girl, children. Lack of access to basic services, such as water, electricity prevent children, especially girls from going to school; we saw these are the practical reasons. Natural disasters such as floods, droughts also can lead to dropping off from the school; collapse of infrastructure, or maybe a falling in the povertywala zone and things like that.

Solutions, promote education for everyone; and make it free for everyone so that no economic or such things come in the way of education. Every school must be given basic facilities of water and sanitation and healthwala things, and should be free. Then, improve access to basic services for children's time so that they can go to school. So, their freedom actually should be given back to them. So, that they can have fun, they can play; this helps them growing mentally and physical ability, so that is also essential. Then, finally, building resilience capacity to ensure children can go to school at all times, irrespective of those challenges, even during extreme climate events.

So, infrastructure robust infrastructure; so that is essential for ensuring this last point. So, with this hope now that you are aware of how SDG 4 is envisioned, and what needs to be done. So, you can have an access, an assessment of what is going on in your own locality, vicinity in your

own surrounding, place, town, city village, wherever; and we should look for in what ways that situation can be improved. Identify which are those vulnerable groups, and see if you can help them. So, with this we have come to the end of this module. Thank you all. See you all in the next time.