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P R O C E E D I N G S

MR. KHARAS: Good morning, everybody. Thank you all so much for coming to join us, in what I think is going to be a really interesting discussion. My name is Homi Kharas, I'm the co-director of the Global Economy and Development program here at Brookings.

And today we are going to talk about: education and learning for a changing world. It's really a launch of the new World Bank World Development Report called "Learning to Realize Education's Promise." So, the basic structure is that we are going to start with a short presentation of the WDR, then we are going to have a panel discussion. I'll introduce the panelists at that time, and then I'll open it up for Q&A. And we'll aim to be out of here at about 11:00 o'clock.

So, let me first introduce the co-directors and co-presenters of this year's WDR. First, Deon Filmer, Deon has been in research department of the World Bank. We were talking beforehand; this is his third World Development Report, so he has become kind of, you know, a professional and regular at writing these things. Maybe you can ask him afterwards what actually gets achieved from these wonderful documents.

But he's spent many years in research; he has spent much of his career at the World Bank in the Africa region. He's focused on human capital and skills. He has co-authored a couple of books: "Making Schools Work," "New Evidence from Accountability Reforms," "Youth Employment in Sub-Saharan Africa." So, Deon Filmer is one of the co-directors.

The other co-director is -- and Deon will start the presentation and then hand over to his fellow co-director, Halsey Rogers. Halsey has also been in the research department. He is currently in the Education Global Practice of the World Bank. He has authored the World Bank's "Education Strategy 2020, Learning For All," he has focused on teacher effectiveness, service delivery, aid development effectiveness, and was advisor to at least two, but I suspect more, World Bank chief economists, including Joe Stiglitz and Nick Stern. Deon, the floor is yours.

MR. FILMER: Thank you, Homi. And thank you all for being here. So, in east Africa when third graders were asked to read the sentence: the name of the dog is puppy, only 25 percent of them could understand what that meant, which means that 75 percent did not.

In rural India when third graders were asked to solve this two-digit subtraction, again

about three-quarters of them could not, and by the fifth grade only half could do this. In Brazil which is often considered a fairly decently performing country in the realm of education, the PISA results have gone up from 2003 to 2015, but it will take them 75 years to reach the OECD average at the current pace, for mathematics. For reading it will take more than 260 years.

And these aren't just isolated anecdotes, if we take all the learning assessments that are being done around the world, try to harmonize them, put them on the same scale, set a minimum threshold, a minimum proficiency threshold, you see in these high-income countries over 90 percent of kids exceed that threshold. Expand out to other countries, as well in high-income countries, middle- and low-income countries you see the proportion of kids who reach that threshold falls dramatically. This is the learning crisis.

In Japan, 98 percent of kids reach this minimum proficiency level, in Mali, only 7 percent of primary school students do. And this learning crisis isn't just a levels story; it's also an inequality story. So this just shows from one learning assessment in Latin America, these gaps between rich and poor. And in Uruguay, for example, the proportion of kids who are deemed not competent on this TERCE exam, or test, is five times greater in the poorer than the richest quintile.

MR. ROGERS: So, what is driving this learning crisis? There are two sets of answers: the first is the approximate causes, what's going on at the level of the school, the community, the student. So, first of all students are often arriving to school unprepared to learn, if they are able to arrive to school at all. One indication of this is what happens when children are malnourished, when they don't get the support they need, when they're stunted, when they don't get the early stimulation they need before they arrive at school.

Here's some new evidence from brain scans of infants in Bangladesh, which shows the difference between children who have proper nutrition and those who have deprivation, who are malnourished. And we see there's an actual visible difference in the density of neural connections, and so these students are arriving, if they ever get to school, they are arriving at a disadvantage when it comes to being able to learn, because of poverty.

Secondly, teachers: teachers in many of these systems are either not skilled, not prepared to teach, or aren't given the motivation or the support to make sure they are in the classroom.

Here's an example: on any random and any typical day in these eight African countries where surveys have been done, 20 percent of teachers who are supposed to be teaching on that day are not even in the school when they were supposed to be teaching. Another 20 percent are in the school but they are not in the classroom teaching. So you are losing 40 percent of teaching time.

A third indicator is of the quality of management, so these are very challenging circumstances that these schools are working in. Often the management is not up to the challenge, and we have some new data from interesting research on the management scores, they've gone in and assessed the quality of management and management practices in random samples of schools across many countries, number of countries.

We see here, this is a distribution in the United States and Canada where a higher score is the better score, and the green indicates the distribution of school management quality. You see that in middle-income and lower-income countries the distribution is shifted well to the left, the management scores are much lower in schools in those countries.

They are also lower in schools in those countries than in the manufacturing sector in those very same countries, which is indicated by the blue line. So there's a real problem with management. But those are the approximate causes, what we can think of as the micro causes at the school and community level.

Why are these problems allowed to persist? Now one reason is barriers to learning at scale at the level of the system. We find that there are two sets of barriers that prevent this -- prevent solutions at the school level from either being sustainable or scalable. One is technical complexity, it's very challenging.

For example, if you make a desirable change to the curriculum it should improve learning, but you need to match that with a change in teacher preparation, in in-service teacher education, in student assessment to reflect the new curriculum, in teacher evaluation to reflect the ability to implement the new curriculum. And what that means is that it's very complex, often the implementation capacity is not there, so that's one challenge at the system level.

But secondly, it's political economy. Often the politics is not aligned toward a focus on learning, there are many -- each of the actors, each of the key actors in an education system, or

surrounding the education system, has many interests. One of these interests may be learning, or is learning, but there are other interests as well. Politicians want to be reelected, bureaucrats want to keep their jobs often make politicians satisfied, educators have to make the bureaucrats happy, parents have other interests beyond just focusing on the children's learning.

So there are a variety of interests, the problem is that often in these low-performing systems, these other interests dominate, and learning does not become a priority, particularly learning for all, learning with equity, often falls well down on the list of priorities, and so the system is not organized to deliver learning for all. So the systems are stuck in what you can think of as a low-learning, low accountability, high inequality equilibrium, or more simply, a low-learning trap.

MR. FILMER: But as we are getting the report, not all is lost. There are a number of examples around the world of systems breaking out of these traps, or exceeding expectations, both over the long haul like in Korea, surprising country like Vietnam when it emerged in 2012 as having a PISA test score on par with Germany. Or more micro approaches such as in Liberia, Papua New Guinea or Tonga, where learning -- where reading ability was really increased dramatically in a very short span of time.

So what do we argue in the report you can do to actually face this learning crisis? Well, countries need to take action showing that learning really matters to them. We have to move beyond the rhetoric of learning and actually move to action, and we outline three key entry points as to how you can do that.

First, assess learning to make it a serious goal. When UIS went and did an assessment of which countries had what it took to monitor the MDGs -- the SDGs, sorry, SDG indicators for learning at the end of primary and lower secondary levels, only 50 percent of countries actually had data that you could know where these countries stood on those SDGs, and fewer still had the data -- systems capable of tracking that over time.

Second, countries have to act on evidence to make schools work for all learners. This is the action at the micro, at the school level. This mirrors what Halsey was describing as the approximate or the immediate causes of the learning crisis. And here we follow that same decomposition of effects with learning at the center, ensure that learners are prepared and motivated, acting in the early years with demand-side incentives, and more generally, preparing with the appropriate stimulation.

So here, for example, a fairly well-known example from Jamaica, early childhood stimulation, enabling children to learn better resulted 20 or 30 years down the line with 25 percent higher earnings for those children, and lower crime rates and other salutary effects.

Teacher preparation: ensuring that teachers are skilled and motivated through effective professional development. The idea here, one of the guiding principles we have is closing the gap or the gaps between what happens in practice, and what this new wealth of evidence that we now have suggest should be done. We see a number of cases where there's a large gap between those two, the idea is to close those gaps.

Professional development is actually one of the places we see with this huge gap between what the evidence suggests to be done with in-class, with mentoring, with follow-up action with teachers, and the typical professional development program which takes the teachers out of the classroom, sends them away perhaps for a day, sends them back to the classroom with no follow up.

So, here for example, in Liberia, a training program, the a professional development program that taught teachers how to assess students, and then use that assessment to then tailor their teaching to those students, more than doubled students reading fluency in a very short period of time. When it comes to the other factors at the school level, either school inputs or even school management, really what we want to do is focus on that teacher learning relationship, teacher learner relationship.

Too often we see inputs that come in aren't actually complementary to that teaching learning relationship and detract from it. And as we argue in the report, to be effective inputs really need to go through there.

Or, for example adaptive learning which is sort of a bit of the rage right now, a very effective program in India which, because it's adapted software that could teach at the level of the student, really helping that learning relationship, again, more than doubled, and that's the conservative estimate, by other estimates tripled the students' rate of learning.

We also have a chapter in the report that focuses on the more jobs-facing part of the education system and preparing kids for training and what kind of training makes job training most effective. And here we argue that it's really the flexibility, but most importantly, the engagement with employers that makes those kinds of activities effective.

MR. ROGERS: At the same time, if you are going to promote learning with equity, learning for all at the system level, we need to also tackle the problem at the system level. The kinds of innovations that Deon has talked about at school level are more likely to happen often in the schools that are already better equipped, that are better linked to evidence, to accountability, et cetera.

So, if we really want to make things happen in the system level, we have to make sure this happens throughout the system by aligning actors to make the whole system work for learning. This is a complicated area but we have some ideas and this is going to be even more context-dependent than what Deon has talked about. Always, these solutions have to be adapted to context, but some entry points that we see from the successful experiences are using information and metrics, coalitions and incentives, and innovation and agility to try to escape these low learning traps.

Information and metrics: so one example, in Tanzania you had a combination of various new sources of information, you had falling school-leaving exam scores, but that was complemented by new information from citizen-led assessments by the NGO, UWEZO, that showed very low levels of learning among young children. You had service delivery indicators showing a very poor quality of service delivery in schools.

Together, those created political pressure for action that then led to the big results now in education reform program that really works across the various dimensions that we've talked about to try to promote learning for all.

In coalitions and incentives, the key is to build coalitions for learning and learning for all. There are different ways of doing this. One example, in Chile you see an increase in focus in learning for all over the long term, thanks to a long-term negotiated reform process working with the teachers' unions to build confidence, to have opt-in reforms that gradually introduce some of the types of innovations that Deon has talked about at the micro level throughout the system.

And then finally, innovation and agility: As I mentioned, these solutions are always going to be very context-dependent, you are not going to be able to import ideas from anywhere, no matter how well thought out, and apply them in your own system. What you can do, we argue, is look for inspiration elsewhere, take ideas into your own system try something, but then innovate in an agile way, make sure there's a feedback loop to learn from those.

For example, in Burundi, in a post-conflict setting when textbooks were very scarce, Burundi used an adaptive approach to successfully get -- dramatically cut down the distribution time for textbooks to schools there, by learning from the better-performing parts of the system and then applying that across the system. So they already cut the textbook distribution time for the whole system down from a year to 60 days.

MR. FILMER: So in very short summary we argue is: countries should be striving to achieve an aligned system that focuses on learning, by assessing learning to make it a serious goal; second, by acting to make all schools work for learners, and by aligning the actors in the system to make the whole system work for learning. Thank you.

MR. ROGERS: Thank you. (Applause)

MR. KHARAS: If I can ask the panel to come up, and while they are getting mic-ed, let me just introduce them. David Baker, you see at the end of the stage, is a professor of education and sociology at Pennsylvania State University, and as a visiting fellow here at Brookings for a semester. He is widely published; his most recent book is "The Schooled Society: The Educational Transformation of Global Culture."

We also have in the middle of the stage, Dasmine Kennedy. Dasmine is a visiting Echidna Scholar at our Center for Universal Education here Brookings, and she works for the government of Jamaica as assistant chief education officer in the educational planning unit in the Ministry of Education. She's been working in education for 22 years focusing on system-wide improvements in educational quality in her country.

Eric Eversmann is the senior director for basic education at Save the Children USA, so is working in education about 45 countries, or so. Eric has been there for seven years overseeing the organization's work with children, family and schools to improve their learning outcomes. And previously he worked with UNHCR, UNICEF and Catholic Relief Services.

And closest to me is Liesbet Steer, she is director of research for the Education Commission, a commission that was set up under Gordon Brown to look at the state of education in the world. They have produced a report called "The Learning Generation," so you see there's a common theme here. And Liesbet has been working in international development for many years including living

and working in Southeast Asia.

So, let's start, and we'll start perhaps with Dasmine. So, Dasmine, we just had a, you know, a terrific diagnostic, people say it's all about learning. We've got to focus on learning, put learning at the center, and do it in a way that allows for context differentiation, but also thinks about the system as a whole. You're going to go back to the Ministry in Jamaica. What are you actually going to do with this report?

MS. KENNEDY: Thank you very much, Homi. And congratulations to the team who worked really assiduously in putting this report together. I am also excited of the fact that little Jamaica was also factored in the whole mix.

We like data, and already I have sent the report off to my chief education officer, and I was extremely excited about the recommendations because most of the things that are here are things that we are actually doing in our context. We have focused a lot on ensuring access to education, but after a while realized that learning was not actually taking place at the rate that we would have liked.

And then we have realized that not everyone learns the same way, hence we have to contextualize our approach. So, for example, we have recognized the stunting problem, and some of the initiatives that are now underway is like, for example, at the primary level there's a breakfast program. Breakfast, lunch and even transportation to assist persons who are not able to afford in the way that others would be able to afford.

The report also highlighted our approach at looking at school management, and that is working very much so, even if as a manager was in school for a number of years, then that person has to go back to a series of training, and even for persons who are aspiring to be school leaders they, too, have to participate in this whole training initiative.

As it relates to more inclusion, we have recognized that many of our students come to the system unprepared to learn, so we have also extended training to our existing teachers to ensure that they learn how to treat, with these special students. And, yes, we are playing catching up and we have a long way to go, but we are using the data to inform how we move forward.

We have also realized that we weren't anywhere in terms of math, and we have overturned our strategies completely. We realized that there was a disconnect in how we teach math,

and hope persons actually understand it, so we had to go back to the drawing board and contextualize the approach. And last night I was looking at the report, and we are doing very well in terms of where we are coming from, and there is scope for further growth.

So this report is very much timely for us in our context, because as we move forward we continue to learn about our practice, and we get new insight as to how we can improve ourselves further. So in terms of who is going to use it, all or education actors, because I think we are very much committed to doing well.

MR. KHARAS: Let me just push you a little bit. The report starts by saying this is all about assessment, we need to have metrics. You said that you do in fact have metrics in Jamaica, but have you actually set quantitative targets about where you want to be in say five years' time ten years' time, by 2030 when the Sustainable Development Goals expire?

MS. KENNEDY: Yes, we do. Yes, we do, because in terms of literacy we had set our target to achieve 85 percent literacy by 2015, we have surpassed that.

MR. KHARAS: And is that defined as the puppy test?

MS. KENNEDY: Yes. (Laughter) Yes. And in terms of numeracy, at that time were like bordering somewhere, 40-something percent in numeracy, now we are at 66 percent, and we have projected to match that with literacy as well. So, yes, we are running down the figures. We are very much quantitative driven, and so at any period in time we assess ourselves to see how well we are catching up with our targets.

MR. KHARAS: Okay. Eric, let me turn to you, because, you know, Save the Children works in maybe some of the toughest places in the world. You see a report like this, it talks about you know system learning, it talks about the ability to move all actors in the system. Does that resonate with the kind of environments in which you deal?

MR. EVERSMANN: Yes, I think it does. And I just want to echo Dasmine's congratulations to the team on the report. It was really a pleasure to go through, and to see so much of what I think we all know, but so well synthesized and summarized. And I think we have been -- you know, we have been working on and talking about the learning crisis for quite a while, but we've come actually a long way, and I think we are better positioned now than we were a decade ago to be taking on

this challenge.

And first, I just want to point out that this focus on learning and equity that that we've come to through the Sustainable Development Goals, the Incheon Declaration, the Education Commission's Report, this report from the World Bank. It's a much better goal and articulation of a goal than I think we've had in the past.

And it provides clarity, it's concise, it's correct and it's more universal. And I think that with the way that the Sustainable Development Goals have been created and are being managed, that the goal of learning and equity really provides a very powerful platform for making progress, and I think we are going to see a different dynamic than we've seen in the past.

And I really like the -- I want us to say another thing about the universal piece of it because, yes, Save the Children works in remarkably disparate and difficult context, we work in the United States as well as working in Malawi, for example, but I think that the focus on learning equity breaks down a lot of artificial barriers that were previously really hampering a lot of the work that we -- or the dialogue that we had within our community, and the work that needed to be done.

And I'm a resident of the District of Columbia here, the recommendations, the findings of this report are just as germane to the challenges that we face in our system here, and that my children see when they go to school every day, as anywhere else around the world. And I really appreciate that. And again I think that when you combine that sort of clarity of vision with a commonly-held accountability agenda through the SDGs, it really provides a much more powerful platform for change than we've had in the future.

So, those are some points for optimism. I think based on what I see in our day-to-day work at Save the Children, I wonder whether we are actually prepared to address the challenge of equity. So we've been doing a lot of work on quality but still in too many systems, and in too many investments by donors and international organizations it's a general treatment, it's a one-size-fits-all approach that doesn't take into account, as you were talking about, Dasmine, the individual differences that children have, and also differences across populations.

So, when you look at funding, when you look at curricula, when you look at teacher professional development, too often they still implicitly assume that every child that's entering the

classroom is the same. And we know that from developmental psychology, from biology, from the chart that you showed about stunting, that that just isn't the case.

And so while we are responding to the learning crisis every day, I don't think we are quite there yet with equity. And I think that we know better what works, and we tend to trumpet high-quality research studies that talk about what works, but we don't yet know exactly what works for whom and what works for particular populations, because that's going to be the pathway to achieving the Sustainable Development Goals.

We can't have all the benefits from our interventions accruing to children who are already in the top half of any distribution, we have to be working across the distribution and understanding who is at risk of being better aligned. And so that inquires data to understand the issue, policies, programs, funding formula, like Dasmine was talking about in Jamaica, that effectively address equity and inequality.

And then, as you point out in the report, and I think this is probably the bottom line in every place that Save the Children works, from the United States to Vietnam, it requires the political will to do it, and nothing is going to happen really without that.

So, I guess those are the big obstacles that I see but so a mix of much better, I think, global system alignment and motivation at the moment, with a real call, I think, to this group, and people who take the report to think about the learning piece, and make that the central piece but also not lose the equity aspect of it as well.

MR. KHARAS: So, if you push towards equity, and one of the innovations I think, in the Sustainable Development Goals, is to try to put much more emphasis on disaggregated data, so we are not just talking about countries, we are talking about, sometimes maybe even individual schools. But when you think about that, are you seeing the real driver of change happening more at the micro level, at the individual school level? Or, is it being really driven?

When you say political will, what is this? Is this the minister of education? Is it the minister of finance? Is it the school principal? Who is the politics behind the political will?

MR. EVERSMANN: Well I think there are two aspects to it. I think that there is the data aspect to it, and then there is also the political will that might follow from that. And I think that when you look throughout the system, whether it is at the minister of finance, or minister of education's level, or

down to a school level, we just lacked the data on a day-to-day, annual basis to make decisions that recognize -- or to have data that recognize these disparities and to make decisions that address it.

And then even though where you have that data that exist, I mean we've been looking at disaggregation for years since what, 2007 with the "Global Education Monitoring Report" that broke out, for example, in Nigeria. How, you know, urban boys from minorities -- or majority language communities do, you know, are scoring at 80, 90 ninety percent, and you know Hausa girls in rural areas, is growing at 4 and 7 percent.

I mean, we have some of those disaggregations that have existed, but that political will also then needs to be paired up there. And I do think a lot of it starts at the top, because some so many of these disparities are at the population level, I mean schools have a responsibility at the classroom level, and systems have a responsibility at the classroom levels to prepare teachers to respond to individual difference, but there are also still very gross population-level differences that exist.

MR. KHARAS: So, Liesbet, you know, political will takes many forms, but one form it takes is being translated into real money and real resources, and at the Education Commission one of the pitches that you've been making is that education has been significantly underfunded, sometimes at both as a sector as a whole, as well as for very specific groups by the international aid community.

You've now been sort of, you know, working on this, trying to develop a momentum for changing that. Tell us a little bit, I mean, do you see that this is changing? Are you optimistic that education is going get the kind of interest that you think it deserves, when we all know the world is faced with so many other priorities? In terms of, you know, whether it's refugees, humanitarian assistance, we've got famines in the world. What do you think is going to happen?

MS. STEER: What are we going to do? What are going to do?

MR. KHARAS: What do you think is going to happen, or happen on the financing of education?

MS. STEER: Yes. But also, more generally, because the financing is obviously a consequence of understanding the problem, and knowing what to do about it; I think we have a real conundrum in education. When you do global surveys and ask what's the most important thing to you, as an individual, and to the state of the world, people will say education, but then at the same time we see,

as we've seen in this report, an excellent report by the way, and I'm surprised not to see you more tired having remembered still from a few months ago, how incredibly hard it is to do this.

So why is it, if we have such excellent reports, that nothing is happening? I think you get at it in the report. It's this issue of inertia, it's an issue of being stuck in a particular way of doing things, and we need to unstuck ourselves. We actually need disruptive change, we need transformation.

And how are we going to do that? This is one of the reasons why the Commission was set up, and I think we could break it down in three things. The first one is that need to be much better at communicating the crisis, something we haven't been very good at. We've been talking about learning and, yes, it's a problem, but the urgency of it.

If we are going to continue the way we are, the learning generation report show that by 2030 half of the world's young population will not be on track to get minimum education standards, that's 800 million children. So the urgency is incredible. We have 15 years to reach the Sustainable Development Goals, and the impact of that --

MR. KHARAS: 13 --

MS. STEER: Well, 13, yes, that's right, Homi. But by the time the data comes in we'll probably have another couple of years. So, the other piece of the communication is, how do we make it relevant to the other Development Goals? How do we point out that not achieving education is actually leading to people dying around the world? We've not been very good at that.

How does it interact with the technological change that's going on, with migration problems around the world? So that's one of the big things we need to do. We also need to be much more honest about the lack of investment. I know Deon, and I, and Halsey, have lots of conversations about this. We've been very good now as a community saying how does -- that education is so inefficient, don't put any more money into it because it's so inefficient.

We are actually doing ourselves out of business here, because if we keep going like this, we are going, not to have any money and there is serious underinvestment around the world. So the second thing is the clear statement about the solution, and I think this report does an excellent job at that.

I would say, let's put chapter four, or circle -- the outer circle in the first chapter, because I think the solutions, we've known for years that we need to train teachers, we've known for years that we

need to do something about early childhood. But it's that outer circle we've not been good at, about the sort of alignment of actors, and how do we actually create that disruptive change.

We've been working with President Kikwete in the Commission, and I want to read something which he said when he exited office. He said, "I realized that the problems may not necessarily lie in the quality of policymaking processes, or policies themselves, but on the mechanisms in place for implementation, monitoring and evaluation. I noticed that much of the time we are bogged down by processes and bureaucratic inertia."

And so what he did was trying to break through that bureaucratic inertia by coming up with this approach called the delivery approach, the delivery labs, which you also described in the report. And we should be pushing that much more strongly as an international community. We need to bring all the actors into the room and make them part of the solution much more strongly.

The Global Partnership of Education did a survey of all its education sector plans, which are supposed to be the plans that bring everybody together and so on, 25 percent of the education sector plans meet achievability standards. So we've made all this effort for decades trying to come up with sector plans we have no implementation strategy. There is no achievable implementation strategy, and we need to focus on that.

Innovation comes in here very strongly, and I want to make a plug for some of the work that Beth, who is hiding in the room there, who has done some fantastic work over the years on the education workforce.

So, we are talking about teachers, and we are talking about management, very important. We have to talk about doctors and hospital managers, but when are we talking about the nurses, and the lab assistants, and the other people who have to make the entire education workforce work.

This game, we have to think differently about how all these people work together, and think differently about the future. This is something that Jack Ma on our Commission really pushed us on. We are coming up with all these nice solutions, let's go this way, and that's where he said: If I had followed a Walmart model, which is pretty modern, it would take me 60 years to reach every consumer, but the way I'm doing it by creating Alibaba, within the next decade I will reach every Chinese person.

Finally, the third thing is about leadership. And of course we say leadership, we all say

leadership, but it is incredibly important. We've been going around, and we've looked at all these countries, we are with the Commission, visiting heads of state, and they are saying, well, actually maybe we didn't quite realize, and we need to do more about it. But it's not only about them it's obviously about the private sector as well which we haven't talked about, but it's a very important actor.

It's about the international community who has seriously been dropping the ball on education, we need to get them out of that, we are working with the World Bank, with the African Development Bank who said, no, we don't do education anymore, apart from infrastructure. It's one of the biggest issues in Africa. Why is the African Development Bank not there?

I actually, I've been inspired, and Homi knows this, by another sector called the Climate Sector, and you know why I'm inspired. We should look at them. So they've come up with this idea of the champions of 12.3.

Who knows what the Sustainable Development Goal 12.3 is about? Probably nobody; I didn't know either. It's about having food loss and waste in the world. Now this is an impossible task, and at the moment there's just huge amounts of -- 40 percent of food is being wasted, it's affecting a lot of issues.

What have they done, is they brought together a coalition of global leaders, heads of companies, Tesco, Walmart, and also obviously, government leaders, and created this movement called the Champions for 12.3, and they are thinking, each and every one, in their own organizations, what they need to do to try and make a change. I think we need Champions of 4-point, we can pick one. Let's do it.

MR. KHARAS: Thank you. Thank you. Well, maybe we'll have some champions in the - - champions in the room. But one thing you said which I thought was really interesting, is that education is really central to so many other Sustainable Development Goals, and we don't really focus on what education does for other areas. You know, a lot of the discussion is, how do we get better education, as if education was the end point, but education is, itself, an input into so many other things.

And David, I think this is something you've thought a lot about, Liesbet mentioned, you know, migration, mentioned lives saved, all of these kinds of things, but all of our societies are actually, you know, dependent on the education of these citizens, and they reflect that, and they change as that education changes. So what should we worry -- What does some of these countries have to look forward

to? Imagine they are successful.

MR. BAKER: Right.

MR. KHARAS: That Halsey really makes a difference, and Deon, with this report.

MR. BAKER: And I think it will. Since I have a little gray hair, let me do a little history before I do the future. This report is fantastic. It is an agenda-setting report along with several others, and I see it as the third generation of issues. The first was a battle in global development to get education recognized at all. And when I got involved in that, it was still going on, it still does. The second was getting everybody into a seat, everybody with a pencil in their hand; there were loans to that effect, and then some issues of starting to talk about quality.

This fantastic report -- congratulations to the whole team -- starts to look inside the process and say what's real and what's not. It starts with a crisis, they called it embracing reading, that's a little bit of a euphemism, it's shocking really. It's true, but it doesn't just end there, and I hope that the media will cover this in a balanced way because it says a lot of progress has been made, and then importantly it says, there are some real things that can be done.

And a lot of times when the education establishment talks about learning, it gets real pie-in-the-sky. This report, based on research, we know a lot about basic learning, we know a lot about what does that in schools, and there have been discussions about that on the panel already. I won't go into that, but it's great.

It's such a good report that, as you suggest, it helps us look maybe into the future, and that's in no way to take away from the immediate challenge of the report. But the world is somewhat in the last mile, if you're cynical, okay, the last 10 miles; however you want to think about it, to becoming a very schooled world, school society.

We already have countries where this has happened, Korea, Taiwan, parts of other countries where most everybody has had significant amounts of education. Right now the science is clear education by itself, separate from everything else, thoroughly transforms people neurologically, the things that were talked about here, you could talk about what school then adds neurologically, significant things, cognitively of course, but also transforms people psychologically, politically, economically and so forth.

And this lasts through their lives, you know, it doesn't transform everybody the same, but it makes a very distinctive new human actor. And when you pile those people up in a population it creates a very different society, and many of the things that we promised 23, 30 years ago, if you do mass education, and you do it right, you will get benefits, and by and large those have happened.

And in this report, one of the nice things about this report is it goes systematically through that, so it's a great introduction into: what does education do, not just for individuals, but for societies.

But with every one of those good things, comes a challenge, right, and I think it's time to start to think about that, and it's time for the assistance community to lead, start to think about a discussion with the stakeholders on what this does.

Let me give you two examples. I'll start with the Italian opera, birth and death, big dramatic things, okay, nothing more dramatic, right? Mountain of research, all different kinds of methodologies, the number one factor in fertility decline is education. Good thing, you say, having fewer children in general is a good thing for individuals and for society. Guess what? Societies grow exponentially, they also decline exponentially. We can see that in Northern Europe.

We don't know. We have not had the best minds think through what a shrinking human society is going to look like. How will it function? All of our institutions are geared towards growth. The same with death, mortality, the world has moved from the most common death is from infectious disease, to now the most common death is from a chronic disease. That's a good thing. The number one factor in that again is education. Educated populations live longer, that's expensive, all the problems with the graying population.

And it's going to happen very fast. One of the things the report shows is how developing countries are leapfrogging in their development of Education, so they are going to have significant parts of the population already going to be educated. So this is not an 80-year thing, this is a 30, maybe even 20-year thing that these kinds of trends will start to hit all over the world.

Let me do one last example, politics. When political scientists started to see the growth in education worldwide they said, oh great, this is going to make model, nice citizens. Everybody will quietly vote, a little bit left, a little bit right of center, and they'll go home and read their newspapers. Do you remember newspapers? Yeah. And that would be it.

They were absolutely wrong, education turbo-charges politics, and it does not make people left or right, that seems to be a more basic process, but what it does is an educated polity is willing to politicize more and more things in society. They are also more adept at creating political campaigns. Now this is a good thing, this is democracy, yes, but it also makes for much more intensive chaotic politics.

We always assume that education is going to be, the number one thing with social cohesion. Yes, but it also, along with that, creates a lot of potential for very divisive politics. I could go through the educated worker, the educated soldier, even the educated believer, religion does not kill -- or education does not kill religion for example, it actually broadens it, it changes it and broadens it.

So, each sector of society is going to be challenged by this coming education population, and I think the report is a fantastic platform to start to think about that. Thanks.

MR. KHARAS: Thank you. Halsey, you know, when Liesbet was talking she was saying what we really need is real transformational change, and in your report I think the way in which you set things out, you also say that you have to have change at the system level which, to me, is transforming the system.

So, can you tell us a little bit about at the World Bank, what are you guys actually going to do that, in your view, will be transformational, and should we you know look for signs that this is happening? Are there specific countries that you're going to focus on? Are there specific activities that you're going to focus on? How should we look at you, and for what do you want to be held accountable, so when you come back to this room in a year's time you can say, we are doing a good job, or we are not doing a good job?

MR. ROGERS: Great. Thank you, Homi. And thanks to all of you. Before I answer that, I just want to thank the panelists, this is a great group of panelists, and you can see how our work intersects. We've been working with Jamaica, and there's wonderful things going on, on the ground, which is very important. With Save the Children they've been very -- they've participated a lot with us in consultations, and we've recognized a real meeting of minds around the challenges.

Liesbet, we've had lots of discussions, it's fantastic, we saw this as an important one-two punch with the Learning Generation Report coming out last year, on the heels of the SDGs, which we

were all, I think, involved in, in trying to negotiate, and get learning on the agenda, it was a chance to complement what they are doing.

And then David, thank you for really emphasizing those benefits of education which, just as an advertisement, chapter one we devote to precisely that. What are the benefits across, not just wages, but for societies, for individuals, both financial and non-financial, and David has looked even farther than we have in that, and this is very, very helpful.

In terms of change, now we see this report helping us helping move this forward, we hope, in at least two ways. One is, as you say, inside the World Bank, Homi. We want to give credit very much to not only -- Deon and I, to our team. We have some team members here I think, and we want to give credit to them. This is a product of the whole team, and also of consultations with many people inside and outside the World Bank.

What we are talking about in the report it didn't spring full-blown from our heads, this came from working with governments, working with counterparts, ideas about programs that are already starting to work. We have seen cases where systems are starting to focus on learning, and where we at the Bank have tried to support them in that. For example, with information, by helping these coalitions form, et cetera.

So, we want to continue those efforts. We still have a long ways to go, and we are doing that. And our new senior director for education is very committed to making this happen on the ground in all the countries we work in.

Just in the three areas we talk about: assessing learning, that's crucial, we've been helping countries try to shine a light on learning with better -- by building up their own assessment systems or participating in international assessments.

There's a lot more to do on that as we've said, we are going to definitely push on that more, acting on evidence. Even in our own work we see areas where there's a real -- a gap as Deon described, between what the evidence suggests as most effective, and what we and the governments we are working with are doing.

One example is teacher training. Now, Liesbet says, we've known about teacher training forever. It's true, we've been investing in it for forever, that doesn't mean we've known or invested in

what's most effective all the time. We've been struck by this. When we look at projects that governments bring to us, quite often the teacher training is, whatever teacher training they've done in the past.

There's not necessarily any evidence that this makes a difference in what the teacher does in the classroom a month later or six months later, let alone whether it makes any difference for student learning.

We want to put the focus on learning, and say, if you are investing in teacher training make sure that it's the type that's most likely to improve learning, make sure that you're then following -- you are reinforcing that with mentor teachers to see whether change is happening in the classroom, and monitoring that at the system level, and make sure that ultimately, will have an effect on student learning. That's one example.

And then third, in aligning actors, I think like other players we need to pay a lot more attention to whether the political forces are aligned to real focus on learning. If we think that that's what we are striving for in our project, but it turns out that there are just these ingrained low-level traps where neither the politicians, and therefore the bureaucrats, are committed to learning for all.

Committed to, for example, getting the resources, as Eric says, to those who need it the most. And as Dasmine said, you've got to get the resources to those who need it the most. If an injection of financing is just going to lead to more funding for the best resourced schools, the urban schools, the majority populations, that's not going to solve this learning for all crisis.

So there's a lot more we can do there, at the same time the benefit of a World Development Report is that it's a megaphone to reach out to the broader development community, and we think we can reach new audiences with this.

We've already started. I mean, the panelists have said, we've known something about the learning crisis for some time. It's striking though when we reach out to, say, some of Homi's old friends, say, in finance ministries that he would have worked with, they are not aware of this. And they aren't aware of the cost, they aren't aware that it can be tackled, they aren't aware of what they have to do. They may think it's just a problem for education ministries.

But no, it's a problem for everyone; and so particularly a problem for the politicians, for the ministers of finance to say: we care about learning or all, learning with equity, and that's going to take

real focus.

And so we hope with this WDR to change, not just what we are doing, but to help in this movement to change what everyone is doing to achieve learning for all.

MR. KHARAS: Thank you. Well, why don't we open it up to the floor, questions, answers, we've got a roving microphone. I'll take one, and then two, and three.

MS. SIMPSON: Hi. I'm Heather Simpson, with Room to Read. Thank you so much. I'm so excited about this report. As I reflect on Eric's comments about our need to really figure out equity. As well as, David, your really provocative comments around the unintended consequences of improving the systems. What do we need to put in place right now as we are tackling equity and making progress?

As I think, Homi, as you are working on the SDGs and this notion of twenty-first century skills, I think starts to hint at this need to think of different skills in addition to foundational learning of literacy and numeracy. But David, what other skills do we need to put into the system as we are addressing the equity learning?

MR. KHARAS: Okay. Why don't we take a few, and then we'll come back to panelists.

MR. KLEES: Steve Klees, University of Maryland. Thank you for the presentation. Doing something about the learning crisis is going to be very expensive, 250 million kids are out of school; that costs money. Those in school, class sizes are huge, okay, in many places teacher salaries are abysmal, teachers have low qualifications, learning materials are absent, and the report raises the question about poverty and malnourishment, doing something about that is even more expensive.

The UNESCO and the Commission estimate that \$40 billion a year more is needed, and that doesn't include doing something about poverty and malnutrition. So, it's very expensive. The World Bank for decades has been doing a dance in which they say, yes, more money is needed, but then go on to talk about inefficiencies, as Liesbet pointed out.

I was shocked that Halsey and Deon did not mention finance at all. I don't understand how the World Bank and economists cannot put finance front and center in doing something about the learning crisis.

MR. KHARAS: Thank you. I'll take that as a question.

SPEAKER: Yes. I'm Larry Wolf, formerly of the World Bank. You know education is not

an isolated sector or factor in the world and I wonder if you could talk about the critical external factors impacting on education, and what are the complementary actions that should be taken outside of the education sector to help education. And in the second -- the opposite way, what can education do to impact on those external factors, in particular, population growth? As many of you know Africa's population growth is not declining as expected, and if Africa keeps on growing the way it's growing, then so many of the goals for education in Africa will not be met.

And I'm not sure if political instability and corruption is growing, or not growing, and there are issues of economic growth or potential decline, environmental degradation. What are the key elements outside of education that will impact on the education process? And in the other direction, how can education impact on these external factors?

MR. KHARAS: Thank you. Why don't we address some of these? And I'm going to direct this to the individual panel members. But you will all get a chance at the end to come back. But I wanted to start actually maybe with, Dasmine, on this question about finance. You know, tell us a little bit about, how does the budget process work in Jamaica? When you guys go and say, in order to actually do this to achieve the targets that we've set, do you put numbers? Are you getting the money? Are you constantly being told, I'm sorry we've got other priorities? How are you going to change the dynamics of that budget process in the country?

MS. KENNEDY: I sat here, and I waited for this question (laughter) because this is really one of the critical issues that is preventing a middle-income country like Jamaica from actually delivering the sort of results that we really want. And like my colleague, just steered it into the World Bank's lap, because if we don't get the level of support that we really need to produce and to achieve then we are going to be sitting here a number of years still talking about the same thing.

Yes, when we go to the Ministry of Finance, we go with the numbers, and we know what we need to do in order to obtain the sort of results that we want. And in order for us to perform in tandem with other developed sectors, already we realize that we don't have enough school places, we don't have sufficient resources. Somebody made reference to teachers, teachers are competitive. In order to ensure that a very good teacher remains in the system and not come to the U.S. or elsewhere, then we have to incite them with salary. That if not actually happening.

And then it becomes even more difficult because for those who don't really want to go away to other countries, then they will start their own practice, so time and task becomes limited. Yes, the education sector benefits from the largest chunk of the budget, but still most of that goes into taking care of human resources. So, yes, we go. We don't actually get what we need, but we get what the government can afford to give us, which is still not sufficient.

MR. KHARAS: Are you going to get more, I think is the question?

MS. KENNEDY: If we get?

MR. KHARAS: Do you think you are going to be able to get more? I mean, are we going to continue with, sort of, business as usual on this front? Or now that we have more evidence, more understanding, maybe more external sort of pressures and support, do you think you are going to get more?

MS. KENNEDY: We have seen improvement, and more so, is the fact and -- we have been able to get more this year for this financial year, and I think what drives this more, is the fact that our education minister was once a school lead leader, and now he's in politics. So, he's able to present to the system the need to get additional funding so that we can do the sort of thing that the country is expecting us to do, we are very much a knowledge-driven economy, and we are speaking about development status by 2030.

So when the position is presented that, hey, if we are not educated then we cannot contribute significantly to development, it makes a case, but still more is needed.

MR. KHARAS: All right. David, do you want to take the question about the new skills, and the issues of inequality?

MR. BAKER: Yes. Thank you. Yes, one of the big things that's been happening over the last 50 years, particularly in the Northern Hemisphere and now also in the Southern Hemisphere, is that education becomes the main driver of inequality right. It does reproduce a little bit, families, but independently now, and so what's happening, in a lot of economies is that the labor market, or the structure of jobs are forming two big bubbles.

And this one is declining, but the (inaudible) are education degrees and cognitive skills, and these people and these jobs are getting far more of the good things; right. I can tell you more what

not to do then what to do. I mean what to do are the more advanced cognitive skills, and this is why the hidden inequalities that the report talks about become so damaging, right.

What not to do is to ration education, what not to do is to pretend that you can do a vocational kind of model where you are going to give these kids X, that's dead. Although interesting, that policy comes up over and over again but that's not what's happening in the world.

So it has to be the best, what used to be called academic and higher-order thinking, that a system can manage, and it should not get sidetracked with thinking, we are going to teach skills for a job that won't be there. That's the wrong way to go.

The complexity of learning, one of the things that that I see in the literatures is, it's one thing to say, let's teach higher-order skills, it's another thing to get students ready to do that. And neural cognitive science is now very clear that a lot of emotional control, the brain is not just a cold thinking machine, right? A lot of management, mindfulness, all these kinds of things that learning theorists are now talking about, are real; and schools are going to have to start to think about those.

Particularly, as they push for younger and younger kids, kids coming in with widely different social conditions, these are going to be very difficult. We've already known for over sixty years that to school the most disadvantaged in the society costs two to three times more, this gets to your question, and that kind of investment is going to be crucial. So, I hope that answers it a little bit.

MR. KHARAS: Mm-hmm. Liesbet, there was a question on external actors' forces from outside of the system, and how those can be brought to bear to really improve the system, and it had some echoes, I think, of your champions of --

MS. STEER: Yes. And I think you were also formulating the question in a way of -- And you were referring to the question about the population as well, right?

MR. KHARAS: Yes.

MS. STEER: So, you are thinking of growing populations will challenge meeting the education goals; I would actually flip it upside-down and say, education will help solve some of those other problems. Actually Bill Gates, if you read his most recent letter that came out just recently, he said, "I'm getting really worried about health and about the progress we've been making recently. And there seems to be some kind of stagnation going on." And one of the big issues he is worried about is fertility,

and the fact that you have indeed all these growing populations, and it's not -- and it's challenging the health goals.

Now, the key solution to that is education, because if you educate a child in Africa the mother -- and if it's a girl -- the mother will not have five children on average but rather two children on average. So you'll have a reduction in fertility, and you'll have smaller populations, which helps us address the health problems, and also that woman who is educated will, in the meantime, also be able to address some of these infectious diseases.

So, why is Bill Gates not investing in education? He does in America, but globally, globally international philanthropic aid coming from foundations in this country and some others, Foundation Center data, 4 percent going to education, 50 percent going to health, now that is -- I don't know what explains that. It may be, again going back to our earlier problem, people don't know how to engage with this, they need to understand that outer circle which we have not been good at. We are pushing away the private sector, we are pushing away other actors who need to come into the space to help solve this problem.

So I think this is where I go back to the delivery approaches and needing to get everybody in the room. Talk to President Kikwete, the president of Tanzania, it's a remarkable story how he brought a hundred people for six week talking about how we are going to solve the problem in Tanzania. It was teachers' unions, it was private sector, members of the public, and so on, and so on.

That's what we need to do. Education sector plans are wonderful, they are a good basis to start from, but 25 percent are not achievable because we are missing, and I would like to come back to the finance point, by the way, because I feel passionate about this.

MR. KHARAS: Mm-hmm. And we can even do that at the end.

MS. STEER: We have no finance data, so we are now really good at getting the data on learning, but where is the finance data? I do actually somewhat agree with the person in the room who said, this is the World Bank, where is the finance data? We need to get much better at determining how much is actually needed in this sector, and what are the instruments to help Jamaica?

One of the things, the Commission is looking at middle-income countries tend to check out when it comes to getting loans for education, because they think it's too expensive to get an IBRD

loan for education. We have to think about how we can incentivize and help these countries to get access to cheaper finance for education, and that's something we are trying to do with the Commission. We are trying to set up a facility, called the International Finance Facility, which tries to address this issue.

Once you lose access to concessional finance, how do you actually keep supporting the education sector? Middle-income countries still have a lot of problems they need to address, they need money, and we need to be there to provide it.

MR. KHARAS: All right. Let's take a couple more questions. I had seen a lady right there.

MS. PFLEPSEN: Excuse me. Hi. Alison PflEPSen, from Reading Within Reach and the Global Reading Network. And my question to the panel is if you could talk a bit more about how to plan for and manage some of this transformational change that's needed? And maybe, Ms. Kennedy, given your experience you could talk about some specific examples, because any one small change to the education system can be transformational, to expand upon an example that was given about changing teacher training to involve on-site support, pedagogical coaching, mentor teachers, in a system where that never existed.

And there are really no mentor teachers in a particular subject like reading. That can take years to figure out how to do it well and in a cost-effective manner, and it really can be transformational. And then if you talk about other big disruptors like changing reading textbooks, and then you need to disrupt the publishing sector. Again, any one of those is huge, and so when you are talking about across the whole education sector what can be realistically managed well, without people actually saying: this isn't working, we are going to stop and then you have, actually, a worse situation; so some specific examples and recommendations on that?

MR. KHARAS: Thank you. And behind is -- yeah, right there.

SPEAKER: My name is (Inaudible) from (Inaudible) Solutions. My question goes to the team from the Bank. As we know, and as you talked in the report teachers do matter in student learning, and we have seen that systems that do well in education, especially in PISA, invest in their teachers. And in countries that we work, especially developing countries, we are seeing a lot of unskilled teachers, and we are doing the best we can do to support them, or to train them, but we have also a crisis of teachers

that government hire, that have not been trained at all.

And so when you have these teachers, and with the World Bank support they are hiring what they call contract teachers, who have no skill in teaching, especially to read. And I'm giving an example of the country that we work in, Cameroon, teachers are trained for six months to teach. Who becomes a teacher in six months? It's a problem.

We are addressing a learning crisis, but I feel on the other hand, the policies that we support are making the crisis more -- worse. So I'm asking whether in this report, as you were analyzing, is there going to be a change to put emphasis on training and supporting teachers than just bringing people who have no skill to be responsible for the children; because these children are only a window to improve their life.

MR. KHARAS: Thank you. And there's a lady who's been standing right at the back. So I think she deserves at least one question.

MS. RAMIREZ: Hello, there. Maria Jose Ramirez, I'm a former World Bank education specialist. Congratulations for the report. The report makes a strong emphasis on measuring learning, and it also shows that around 50 percent of the countries have learning data, and absolute learning levels are very low. But I wonder: what are the trends in learning since, for instance, year 2000 till today, based on the other 50 percent of the countries that do have data? And especially in the developing countries that do have data, is the learning crisis -- How is it changing? Is it getting better, worse, what do we know about that? Thanks.

MR. KHARAS: Thank you. So I'm going to just come back to each of the panel members. Two minutes max in your responses. Halsey, I'm going to give you the last word of this. David, maybe we can just start with you, and then come down.

MR. BAKER: Well, there are a lot of questions, and I think they are mostly for you.

MR. KHARAS: You concede your time to Halsey, if you would prefer.

MR. BAKER: I will concede my time to Halsey. (Laughter)

MR. KHARAS: Dasmine, any last thoughts, contract teachers perhaps?

MS. KENNEDY: Yes. I think I want to focus on that. In Jamaica we have -- I don't know if we would call it contract teachers -- but we do engage the services of university graduates, and these

persons are not actually exposed to teacher training, so they will come into the system for a period of time, but the incentive for them to access teacher training, basically (inaudible) to their compensation package, because while they may have a university degree, if they do not have the teacher-training component then they are paid less on the scale.

So, we have another program which gives access for them to pursue the whole methodology process for a year, this they do part-time and they are really happy to pursue that aspect of it, and then prior to that we had pre-trained teachers, but those two have faded out of the system somewhat. If it does exist then it is very minimal, maybe about like 2 percent, and then you'll find these persons in deep rural settings.

In terms of the innovations that are in place to ensure that teachers are basically mentored, we have beginning mentorship program for teachers who are living teachers colleges and actually going into the system, because many times we find that there's a disconnect with what's obtained at the teacher training level than what actually is obtained in the classroom setting.

So, in each school they are mentors that basically holding the hands of the new teachers to help them to integrate seamlessly in this system. Or we also have reading coaches dispersed in all our schools, and these are persons who are competent at their craft, so they are deployed into the system to help teachers to teach children how to learn how read, and we have the same thing for our maths. So we have math coaches, and we have reading coaches, and we have found that these levels of support have been very instrumental in helping also achieve the sort of success that we are achieving on the ground in numeracy and literacy. So I'm going to leave space for the persons to speak.

MR. KHARAS: Thank you. Do you want to come in -- Oh, no, I'm sorry, you sort of (crosstalk) --

MR. BAKER: Can I take two minutes back from (crosstalk) -- Real quick on fertility. The main trend is fertility is dropping radically around the world, that doesn't mean there aren't places where overpopulation isn't still a problem, when you model that and you look at the three big factors driving that: it's investments in health, its investment in material improvements in people's lives, and it's investments in education.

And education is the most dominant of those three, and fertility rates do not stop at

Sustainable 2.2, they go way below. So yes, there's -- still overpopulation problems, but we also have under-population problems facing us very soon.

MR. KHARAS: Thanks. Just to give a sense of the dimensions. The difference between the high fertility scenarios, and the low fertility scenarios, and demographics, is the difference between a world with 9 billion people and 11 billion people by 2100. So we are talking about 2 billion people, and it's a very big force in trend. Eric?

MR. EVERSMANN: I'd like to just come back to I think two things, picking up on the last question about what we've seen in the last 10, 15 years. I think the most important piece that I've seen is the need to think outside and beyond the primary education system.

And my title is basic education, but the importance of families, what happens within the family, and the community around learning, and what happens before a child even gets to school; early childhood care and development, early childhood education. These are huge drivers of inequality before a child even reaches school. And so, when we think about education, don't just think about what happens in the primary school system.

The second thing I would like to come back to, is I think the question that Heather asked to start us off, and the this question around what skills, and I think that you know for educators that will always be there, and will always be interested in what matters most in learning.

But I think there's also the underlying processes that we have around whatever the most important subject matter of the day may be, whether it's reading or math or social-emotional skills, or whatever, STEM, or thing that we take it, it's about how we have that love for data that you talked about, and how that the processes for analyzing who that benefits, and where, are very important. And so one of the things that we've done at Save the Children, is we've partnered with FHI 360, and RTI International, and about 20 other U.N. and civil society organizations, to create something called the Education Equity Research Initiative.

And what we are doing with this is trying to create tools for ourselves, but also that can be used by civil society, that can be used by government to improve the quality of the data that we have and the standard is -- and to standardize some of the analyses that we get about disaggregation, that you mentioned with the SDGs, to understand who is doing well, who is being left behind.

And being able to analyze that data no matter whether you are looking at social-emotional skills, or looking at reading and numeracy, and whatever other assessments we were able to bring online in rigorous ways in coming years, having that foundational practice around analyzing and investing where the needs are to ensure, again, that we come back to not just learning, but learning and equity.

MR. KHARAS: Thank you. Liesbet? One minute.

MS. STEER: Great. One minute. I just want to say thank you to Deon and Halsey, and The World Bank Team. I think we shouldn't forget, this is the first WDR ever on education. I think this is a landmark, it's the beginning of a journey we are on, and I also wanted to say even on the financing part; that will come. I actually am quite optimistic we've been in lots of discussions with The World Bank, where they are really starting to take education more seriously, and they've been among the good ones out there, but they could do more.

And we are looking forward to working with you both and the institutions, also the other MDBs on the International Finance Facility, and the other instruments that are out there to help countries invest in education.

MR. KHARAS: Thank you. Halsey? Two minutes.

MR. ROGERS: Two minutes. Thank you, Homi. And thanks to all of you for a great discussion. Just a few items on finance; we obviously think finance for education is important, most of what we do is supporting governments with finance and knowledge to build up their systems, we do a lot of that. Our point in the report was to add the most value we could, the Learning Generation Report had already gone deeply into the question of finance, we want to complement that.

Because we see, everybody believes in education in some measure, what we have to do with ministries of finance, with voters, with other key stakeholders, is convince them that education is also a good investment publicly. That we have to put more emphasis on this together, and so we are emphasizing how that can be done.

I think on teachers, a very important question, something we perhaps didn't emphasize enough, is that we focus everything on what improves the teaching-learning process in the classroom. We think that should be the focus of all education policy, so you have to have teachers who are effective,

qualified does not necessarily mean ineffective, and we see this in many places. We see qualified teachers that are not effective. The key is, and sometimes they are more effective, so we have to make sure that they are both qualified and effective.

Trends in learning, Maria Jose's question, trends in learning over the past 20 years. One problem, there is a big problem with data and learning often -- and Maria Jose knows this data better than I do -- but often we have a few points, or a point of data and learning, but we actually can't map out the trends over the past 20 years, there aren't that many systems where we can do that in.

Where we do have that, we have seen progress in some places. Peru, for example, we highlight in the report, made big progress over the last 10 years or so, but there are many countries that have not, where we have a series, and the median change in PISA from one -- from the PISA International Assessment over every three years is zero. So, in many places we don't see improvements, and so we need to have more data and learning, we also need more data on finance, we need more data on the quality of service delivery, we emphasize is not just about learning data.

Finally, looking ahead to the future, the other types of skills; I think David has pointed out, very importantly, that how everybody needs to be equipped with these foundational skills, all children. We can't leave any of them behind. We can't pack some of them off to get some vocational skills that may equip them with a job for the next five years, before technology renders that job -- eliminates that job.

We have to make sure that they all have the foundational skills that will allow them to continue learning, adapting, taking on new challenges, and right now we are not delivering those, but we can, and I'm confident we all will, together.

Final note, I did want to thank Beth King, I actually didn't see you in the audience, but Liesbet mentioned her. So, Beth was the primary author of the Learning for All Strategy here at the World Bank that helped really turn us in this direction several years ago, aside from doing lots of other great work.

And I should mention, Homi has worked with a high-level panel report that help give rise to the SDG goals, did highlight learning as part of that that whole dialogue and what was important. And that's what's given us the opening for this report and to have this report listened to. So, I thank them, and thank all of you for the work you do in this area.

MR. KHARAS: Thank you, Halsey. So, look, there's one takeaway that I wanted to make. About two or three years ago we convened a lot of education people at Brookings, and tried to ask, what do we actually know from the evidence about what works, and what doesn't work? And there were a lot of papers that were commissioned.

And there were lots of specific cases many of the things that are raised in the report, teacher training works here, but in other places it doesn't. Finance is important here, in other places it doesn't make a difference. Class size is really important in some places, in other places it doesn't make a difference. It was a mess. There was no message; there were no meta-studies.

I think one of the great things that this report has done is to basically tease out there, and identify why is it that we were having those findings, and then to actually have a message and something that can be communicated, I think the way in which you did the presentation that has been, I believe, one of the most fundamental problems in the education system.

And so I congratulate you for finally having a really clear, consistent message that is based on solid evidence, and that doesn't try to say, this is the magic bullet in education. So, thank you for that.

So please join me, thanking the panel, thanking the co-directors.

SPEAKER: Thank you. (Applause)

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